

**ENCYCLOPEDIA OF  
WORLD BIOGRAPHY**  
SUPPLEMENT

**21**

# ENCYCLOPEDIA OF WORLD BIOGRAPHY

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## CONTENTS

|                            |      |
|----------------------------|------|
| INTRODUCTION .....         | vii  |
| ADVISORY BOARD .....       | ix   |
| ACKNOWLEDGMENTS .....      | xi   |
| OBITUARIES .....           | xiii |
| TEXT .....                 | 1    |
| HOW TO USE THE INDEX ..... | 439  |
| INDEX .....                | 441  |



## INTRODUCTION

The study of biography has always held an important, if not explicitly stated, place in school curricula. The absence in schools of a class specifically devoted to studying the lives of the giants of human history belies the focus most courses have always had on people. From ancient times to the present, the world has been shaped by the decisions, philosophies, inventions, discoveries, artistic creations, medical breakthroughs, and written works of its myriad personalities. Librarians, teachers, and students alike recognize that our lives are immensely enriched when we learn about those individuals who have made their mark on the world we live in today.

*Encyclopedia of World Biography Supplement*, Volume 21, provides biographical information on 200 individuals not covered in the 17-volume second edition of *Encyclopedia of World Biography (EWB)* and its supplements, Volumes 18, 19 and 20. Like other volumes in the *EWB* series, this supplement represents a unique, comprehensive source for biographical information on those people who, for their contributions to human culture and society, have reputations that stand the test of time. Each original article ends with a bibliographic section. There is also an index to names and subjects, which cumulates all persons appearing as main entries in the *EWB* second edition, the Volume 18, 19 and 20 supplements, and this supplement—nearly 7,800 people!

**Articles.** Arranged alphabetically following the letter-by-letter convention (spaces and hyphens have been ignored), the articles begin with the full name of the person profiled in large, bold type. Next is a bold-faced, descriptive paragraph that includes birth and death years in parentheses. It provides a capsule identification and a statement of the person's significance. The essay that follows is approximately 2000 words in length and offers a substantial treatment of the person's life. Some of the essays proceed chronologically while others confine biographical data to a paragraph or two

and move on to a consideration and evaluation of the subject's work. Where very few biographical facts are known, the article is necessarily devoted to an analysis of the subject's contribution.

Following the essay is a bibliographic section arranged by source type. Citations include books, periodicals and online Internet addresses for World Wide Web pages, where current information can be found.

Portraits accompany many of the articles and provide either an authentic likeness, contemporaneous with the subject, or a later representation of artistic merit. For artists, occasionally self-portraits have been included. Of the ancient figures, there are depictions from coins, engravings, and sculptures; of the moderns, there are many portrait photographs.

**Index.** The *EWB Supplement* index is a useful key to the encyclopedia. Persons, places, battles, treaties, institutions, buildings, inventions, books, works of art, ideas, philosophies, styles, movements—all are indexed for quick reference just as in a general encyclopedia. The index entry for a person includes a brief identification with birth and death dates *and* is cumulative so that any person for whom an article was written who appears in the second edition of *EWB* (volumes 1–16) and its supplements (volumes 18–21) can be located. The subject terms within the index, however, apply only to volume 21. Every index reference includes the title of the article to which the reader is being directed as well as the volume and page numbers.

Because *EWB Supplement*, Volume 21, is an encyclopedia of biography, its index differs in important ways from the indexes to other encyclopedias. Basically, this is an index of people, and that fact has several interesting consequences. First, the information to which the index refers the reader on a particular topic is always about people associated with that topic. Thus the entry 'Quantum theory (physics)' lists articles on

people associated with quantum theory. Each article may discuss a person's contribution to quantum theory, but no single article or group of articles is intended to provide a comprehensive treatment of quantum theory as such. Second, the index is rich in classified entries. All persons who are subjects of articles in the encyclopedia, for example, are listed in one or more classifications in the index—abolitionists, astronomers, engineers, philosophers, zoologists, etc.

The index, together with the biographical articles, make *EWB Supplement* an enduring and valuable source for biographical information. As school course work changes to reflect advances in technology and fur-

ther revelations about the universe, the life stories of the people who have risen above the ordinary and earned a place in the annals of human history will continue to fascinate students of all ages.

*We Welcome Your Suggestions.* Mail your comments and suggestions for enhancing and improving the *Encyclopedia of World Biography Supplement* to:

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## OBITUARIES

The following people, appearing in volumes 1–20 of the *Encyclopedia of World Biography*, have died since the publication of the second edition and its supplements. Each entry lists the volume where the full biography can be found.

**ASSAD, HAFIZ** (born 1930), Syrian president, died of heart failure in Damascus, Syria, June 10, 2000 (Vol. 1).

**BALTHUS (BALTHASAR KLOSSOWSKI)** (born 1908), European painter and stage designer, died in Rossiniere, Switzerland, February 18, 2001 (Vol. 1).

**BANDARANAIKE, SIRIMAVO** (born 1916), Sri Lankan prime minister, died of heart failure in Sri Lanka, October 10, 2000 (Vol. 1).

**BLOCH, KONRAD** (born 1912), American biochemist, died of heart failure in Burlington, Massachusetts, October 15, 2000 (Vol. 2).

**DONG, PHAM VAN** (born 1906), Vietnamese premier, died in Hanoi, Vietnam, April 29, 2000 (Vol. 5).

**FIGUEIREDO, JOAO BATISTA DE OLIVEIRA** (born 1918), Brazilian president, died of heart failure in Rio de Janeiro, Brazil, December 24, 1999 (Vol. 5).

**GUINNESS, ALEC** (born 1914), British actor, died of liver cancer in Midhurst, England, August 5, 2000 (Vol. 7).

**HARTSHORNE, CHARLES** (born 1897), American theologian, died in Austin, Texas, October 9, 2000 (Vol. 7).

**LAWRENCE, JACOB** (born 1917), American painter, died in Seattle, Washington, June 9, 2000 (Vol. 9).

**LINDBERGH, ANNE MORROW** (born 1906), American author and aviator, died in Passumpsic, Vermont, February 7, 2001 (Vol. 9).

**PUENTE, TITO** (born 1923), American musician, died in New York, May 31, 2000 (Vol. 12).

**QUINE, WILLARD VAN ORMAN** (born 1908), American philosopher, died in Boston, Massachusetts, December 25, 2000 (Vol. 12).

**RICHARD, MAURICE "ROCKET"** (born 1921), Canadian hockey player, died in Montreal, Canada, May 27, 2000 (Vol. 19).

**ROWAN, CARL T.** (born 1925), American journalist, author, and ambassador, died in Washington, DC, September 23, 2000 (Vol. 13).

**SEGAL, GEORGE** (born 1924), American sculptor, died of cancer in New Jersey, June 9, 2000 (Vol. 14).

**SIMON, HERBERT ALEXANDER** (born 1916), American economist, died in Pittsburgh, Pennsylvania, February 9, 2001 (Vol. 14).

**SITHOLE, NDABANINGI** (born 1920), African political activist, died in Darby, Pennsylvania, December 12, 2000 (Vol. 14).

**TRUDEAU, PIERRE ELLIOTT** (born 1919), Canadian prime minister, died of prostate cancer on September 28, 2000 (Vol. 15).

**XENAKIS, IANNIS** (born 1922), Greek-French composer and architect, died in Paris, France, February 4, 2001 (Vol. 16).

**ZATOPEK, EMIL** (born 1922), Czechoslovakian runner, died in Prague, Czech Republic, November 22, 2000 (Vol. 20).

# A

## William Albright

**William Foxwell Albright (1891-1971) was a well-known, prolific, and gifted archaeologist and scholar of the ancient Near East. He excavated several Biblical sites, served as director of the American Schools of Oriental Research, and was a professor of Semitic languages at Johns Hopkins University for many years.**

Albright was born on May 24, 1891 in Coquimbo, Chile, to Methodist missionary parents who were stationed in the Atacama Desert. His family had very modest means. Although they were able to provide the bare necessities of life, he and his three brothers and two sisters were not brought up with any luxuries. The family lived in a missionary compound separate from the Chilean people. They were constantly reminded of their cultural differences. When Albright's parents wanted him to do errands for them outside the compound, they had to spank him in order to force him to go out and face the Chilean children, who harassed him and occasionally even tossed stones at him, calling him "gringo"; they also teased him for being a Protestant in a largely Catholic country.

Albright was different from the Chilean children in two other ways: although he was tall and strong, he had such weak eyes that he couldn't read without holding the book only inches from his face. He was so afraid of becoming blind that he taught himself to read Braille. In addition, an accident with a farm machine when he was five had resulted in his left hand being injured and rendered almost useless. Because of these afflictions, as well as his isolated

status as a missionary child, he didn't play much with other children and spent most of his time in his father's library, which was filled with books on history and theology. These formed the basis for a rich imaginary world. G. Ernest Wright wrote in *Near Eastern Archaeology in the Twentieth Century*, "His play was solitary and mental, in which he constructed ever larger and more complex historical worlds-peopled by imaginary heroes and non-heroes-an activity to which he credits his adult success in historical synthesis." Albright never forgot his childhood experience of being an outcast and a member of a persecuted minority, and throughout his life would remain sympathetic to the plight of minorities, outsiders, and the poor.

Albright became deeply interested in Biblical archaeology by age eight, and by the time he was ten, he had managed to save enough of the pennies his parents gave him to buy the recently published *History of Babylonia and Assyria* by R. W. Rogers, a professor at Drew University. At the time, the book was the most comprehensive volume on this topic in English. He read the book so many times that he virtually memorized it. He also taught himself Hebrew so that he could better understand the Bible and Biblical history.

### Hard Work and Lean Living

In 1903 Albright's parents moved the family back to Iowa, where his father was pastor of a series of small Methodist churches in the Midwest. In 1907, when he was 16, he entered Upper Iowa University, the same school his father had attended, and graduated in 1912 with a B.A. in classics and mathematics. Because his family was poor, he worked as a farm hand during the summers. The work exercised his crippled hand so much that eventually he could milk cows with it. These frugal years of hard work and

lean living taught him that he could live, and even thrive, on very little. He claimed that they toughened him for his later career as an archaeologist, because archaeologists often live very roughly when they are on expeditions to remote parts of the world. This toughness was confirmed by Wright, who commented, "Those who have ever worked with him on an excavation can certainly agree with him that this was excellent training. . . . He possessed a will and a constitution of iron."

At the same time that he was so excited by his studies, however, Albright felt guilty to be spending his meager money on his schooling, because his family was so impoverished. Nevertheless, he managed his meager finances well enough to make it all the way through school without a break, and even spent money on books, which he read secretly on Sundays—a day when all non-religious reading was banned by his strict parents.

### Academic Honors and Teaching Positions

Albright briefly worked as a principal of a small South Dakota high school, then applied to Johns Hopkins University, where he was accepted and given a scholarship based on the strength of an article he had submitted with his application. The article, "The Amorite form of the Name Hammurabi," on an ancient Akkadian king's name, had been accepted for publication by a German scholarly journal on the ancient Near East, and impressed Paul Haupt, who was head of the Oriental Seminary at the University. When Albright showed up at the university, he was already fluent in Spanish and German, had taught himself Greek and Latin, and had a fair knowledge of ancient Hebrew and Assyrian, as well as a wide knowledge of ancient history and cultures.

At the University, Albright studied the Akkadian culture. He received his doctorate in 1916, preparing a dissertation on "The Assyrian Deluge Epic," an ancient myth very similar to the story of Noah and the Flood in the Bible. By that time, he had already published twelve scholarly articles. Despite this impressive beginning, Albright didn't expect to find work as a professor immediately, and he did not. From 1916 until 1919, he held research fellowships, and he served briefly in labor battalions during World War I. He met his beloved wife, Ruth Norton, in 1916 and married her in 1921. She later earned a Ph.D. in Sanskrit literature at Johns Hopkins.

Albright continued to study and write on various Near Eastern subjects. In 1919 he received the Thayer Fellowship of the American Schools of Oriental Research in Jerusalem. He was acting director of the school in 1920–21, and in 1922 became its director, a position he held until 1936. He was a professor of Semitic Languages at Johns Hopkins University from 1929 until he retired in 1958.

While in Palestine, Albright learned to speak Arabic and expanded his knowledge of modern Hebrew. He also expanded the scope of his writing to include studies of ancient topography, but did not write only on this topic. As Wright noted, "No subject lay outside his interest, and if it interested him enough, he could and usually did write a brilliant article on it, whether or not he had specific aca-

demic training in the particular subject." He became convinced, through living and exploring in Palestine, that much of the Bible could be considered a historical document: that many of the cities mentioned in it had existed and that remnants of them could perhaps still be found.

### Discoveries and Innovations in Palestine

As a boy, Albright had worried that all the good archaeological sites in Palestine would be excavated before he was old enough to work as an archaeologist, but of course this was not the case. In fact, in 1922 he discovered that Tell el-Ful, a mound four miles north of Jerusalem, was the site of Jerusalem's first capital, and said joyfully that until this identification of the site, not one major city of ancient Israel had even been discovered. He began a small excavation there, and returned for more work at the site in 1934.

Albright is perhaps most widely known for his identification and reconstruction of the palace-fortress of Saul, which was confirmed by a later archaeologist, Paul W. Lapp, in 1964, shortly before King Hussein built his own palace on top of the ruins. Before Albright's time, archaeologists had trouble determining the dates of the ruins they found. Their chronology of sites they excavated was often vague or nonexistent. However, Albright quickly mastered a new technique, that of pottery chronology. In this technique, archeologists first determine the ages of various types of pottery, using their style, their position in various ruins, and their relationship to other items that could be dated. Then, when they find the same styles of pottery in a ruin that has previously not been dated, they use their knowledge of pottery types and the ages of those types to determine when the ancient structures were used. Albright became so skilled at this technique that he could tell, by examining pottery fragments found on the surface of a site, whether the site could potentially be an ancient site. In addition, he advanced the field of pottery chronology so quickly that other scholars couldn't keep up with him. Wright summed up Albright's contributions to this field by noting, "It must be said that Albright created the discipline of Palestinian archaeology as we know it."

In the late 1920s and early 1930s, Albright excavated a site called Tell Beit Mirsim, which he determined was the city of Debir in the Bible. In 1932 he published a detailed description of the ten layers of the site and its pottery in the *Annual* of the American Schools of Oriental Research, and added a correction and revision of the chronology of the Bronze Age layers of the site in 1933. Further descriptions of the Bronze Age layers and the Iron Age layers of the site followed in 1938 and 1943. With this work, Albright made Palestinian archaeology into a science, instead of what it had formerly been—"a digging in which the details are more or less well-described in an indifferent chronological framework which is as general as possible and often wildly wrong," according to Wright.

### Wide Influence and Scholarly Legacy

In addition to his excavation and work in chronology, Albright advanced Near Eastern archaeology through his teaching of other scholars, and also through his work as

editor of the American Schools of Oriental Research's *Bulletin*. He edited the journal from 1931 until 1968. During that time, he attracted a great deal of attention to ancient Near Eastern studies. The intense focus on discovery and learning in the journal excited readers, according to Wright, imparting a feeling of being on the cutting edge of archaeological discovery. Albright contributed articles to almost every issue, and showed his unusually deep and wide grasp of a wide range of subjects and disciplines, which he brought together in a masterful synthesis. He was a prolific writer, completing over 1100 articles and books during his lifetime.

Throughout his life, Albright was honored with numerous awards, honorary doctorates, and medals, and was given the title "Worthy One of Jerusalem"—the first time the award had been given to a non-Jew. After his death, his legacy continued as a large number of scholars, inspired by his work, became specialists in the areas Albright had pioneered. The American Schools of Oriental Research is now known as the Albright Institute of Archaeological Research, in honor of Albright's exceptional contributions to the field.

Albright died in Baltimore, Maryland from multiple strokes on September 19, 1971—a few months after celebrating his eightieth birthday. In his preface to Hans Goedicke's *Near Eastern Studies in Honor of William Foxwell Albright*, Wendell Phillips wrote, "His religious training, which began before he could walk, became his career; the Bible has been the center of all his research, particularly the Old Testament, which made such a vivid impression on him as a boy. It was his real world more than the modern world in which he lived. He believed in it as history and he identified himself with it, just as he identified himself with the Old Testament warriors and kings."

## Books

- King, Philip J. *American Archaeology in the Mideast*, American Schools of Oriental Research, 1983.  
*Near Eastern Archaeology in the Twentieth Century*, edited by James Sanders, Doubleday and Co., 1970.  
*Near Eastern Studies in Honor of William Foxwell Albright*, edited by Hans Goedicke, Johns Hopkins Press, 1971.  
*Oxford Encyclopedia of Archaeology in the Near East*, edited by Eric M. Meyers, Oxford University Press, 1997.  
*Who Was Who in America 1970-1979*, Marquis Who's Who, 1980. □

## Aldus Manutius

**Aldus Manutius (1450?-1515) contributed the first Greek and italic fonts to the publishing world. Through his printing company, he published the great works of the ancient philosophers, for the first time in their native Greek language.**

**A**ldus Manutius the Elder was a dedicated scholar of the Italian Renaissance. He established a printing company, the Aldine Press, where he produced his

first dated publication in February of 1495. The Aldine works were readily recognizable by a distinctive trademark depicting a dolphin's body wrapped around the shaft of an anchor. Early in the sixteenth century Aldus founded the Aldine Academy of Hellenic Scholars, through which he promoted the works of the great classical philosophers and scientists in their native Greek language. Aldus possessed a passion for learning and devoted his life's energy to publishing the great writings of classic literature on the newly invented printing press. In addition to his prized publications, Aldus was remembered most significantly for the many fonts (typefaces) that he designed. After the death of his grandson, Aldus Manutius the Younger, in 1598 the Aldine Press ceased operation, having published 908 editions.

## Teacher and Scholar

Details regarding the birth and early life of Aldus have been in dispute for centuries. Even his descendents proved unable to agree on certain details. He was born in the town of Bassiano or possibly in nearby Sermoneta, in the vicinity of Rome, sometime between 1449 and 1451. Of his parentage and siblings little information survived, although in adulthood he was known to have cared for three sisters. Existing historical papers and letters indicate that Aldus was educated in Rome where he studied at least into the mid 1470s. It is known that his studies included a sojourn under Gaspare da Verona at the Sapienza (University of Rome) at some time between 1460 and 1473. Aldus studied Greek at the University at Ferrara, southwest of Venice, with Battista Guarino and was presumably in his mid to late teens when the new Gutenberg printing press arrived in Rome during the mid 1460s. It created a stir among the intelligentsia and scholars.

On March 8, 1480, the well educated Aldus was granted citizenship in the town of Carpi, where he served as tutor to Alberto and Lionello Pio, two princes of that town and the nephews of Giovanni Pico della Mirandola, a prominent citizen. Aldus, it is believed, became acquainted with della Mirandola at Ferrara, where Aldus probably taught during the late 1470s until as late as 1482. He completed some writings during those years, and in particular he wrote some educational aids for the students in his tutelage. One such pamphlet, *Musarum Panegyris*, was published in a very limited edition by Baptista de Tortis of Venice. The work essentially was a letter to the mother of the Princes Pio and was intended to enhance their learning environment. Four known copies survived into the twentieth century.

Aldus moved to Venice in 1489 or 1490 for the purpose of opening a print shop; he continued also to teach, as he was a dedicated scholar. In 1494 he expanded his print shop and brought in two partners: a printer named Andrea Torresani and a financial backer or patron named Pierfrancesco Barbarigo. Much of what is known of Aldus was revealed by the scholar himself in the dedications and other front and back matter of his publications. In 1506, for example, Aldus related in the preface of his second edition of Horace that he had recently spent six days in jail in Mantua, suspected of hooliganism. His agricultural manual



of 1514, *Scriptores rei rusticae*, included a statement of his copyright privilege to be valid for a period of 15 years, as granted by Pope Leo X.

### Publications

When Aldus first envisioned the Aldine Press in 1489, he was nearly 40 years old. Scholars as a result have speculated repeatedly as to what prompted a successful teacher such as Aldus to embrace a completely new and untested profession so late in life. Many believe that Aldus was fascinated by the written word and by the basic rhythms of literary text and the sounds of different languages. To this effect he published a book of Latin grammar in 1493 and printed new editions in 1501, 1508, and 1514. The original (1493) edition of this Aldine grammar, entitled *Institutiones grammaticae*, carried an epilogue that justified the work as an effort to enhance and facilitate the teaching of young children. He subsequently spent three years, from 1495 until 1498, in compiling and publishing virtually every known work of Aristotle into a series of five *folio* (full-page format) documents. At the occasion of the Aldine quinquennial, Brigham Young University in Utah displayed among its holdings two surviving volumes of the Aldine Aristotle in its entirety and a priceless single page of another volume. In addition to his many folio publications, Aldus published *quartos* (one-quarter-size pages) and *octavos* (one-eighth-size pages). His octavos have been likened to paperback books of the twenty-first century.

In 1497 Aldus published a Greek-language version of a popular Latin prayer compilation, called *Horae Beatissimae Virgines* (Book of Hours) in a tiny, 115 by 79 mm format, even smaller than his octavo format. The following year he became the first printer to publish the works of Aristophanes and, in 1499, he released an Aldine publication of *Scriptores Astronomici veteres*. *Scriptores* contained six works, including a comprehensive astrological text, called *Mathesis* and written by Maternus. The Aldine version was the most comprehensive such publication of the times. Surviving copies of the text provide invaluable information concerning fourth century Roman society.

### Printer's Markings and Type

The now-famous anchor-and-dolphin *impresa* (printer's emblem) with the motto "fastina lente," first appeared in print in a 1499 Aldine publication, *Hypnerotomachia Poliphili*, as an illustration in the book. Two years later, the symbol became the trademark of the Aldine Press when, in January of 1501, Aldus published the same anchor-and-dolphin symbol as the Aldine *impresa* in the second volume of *Poetae Christiania veteres*. The design of the *impresa* was taken from a reproduction of an old Roman coin and bore a motto quoted from the Emperor Augustus, which read, "fastina lente" ("make haste slowly"). The proverb emphasized the tedious attention to detail demanded of the printer in the mass production of books.

Among the greatest achievements of Aldus Manutius were the Aldine fonts. He was the first printer to develop an italic roman font. The Aldine italic fonts were modeled

from the handwriting of two Italian scribes, Pomponio Leto and Bartolomeo Sanvito, who were contemporaries of Aldus. Francesco Griffo, a Bolognese type cutter, built the Aldine fonts for Aldus. In the 1500 edition of *Epistole devotissime* of Catherine of Sienna, letters appeared in the human-like italic script in the inscription below one of the illustrations in the book. Aldus introduced his first complete italic typeface when he published a collection of the works of Virgil in 1501.

In addition to the new italic fonts, the collection of Aldine typefaces included also three complete fonts of Greek characters. Of these typefaces, two were modeled from the handwriting of the Greek scribe, Immanuel Rhusotas. In November of 1502, the doge of Venice awarded a copyright to Aldus for his Greek and italic fonts, thus forbidding anyone else from use or imitation of the Aldine fonts under penalty of fine. The italic fonts were significant politically because they were used for printing government documents in Venice and other Italian city-states. Aldus published the copyright notice in his Ovid collection of 1502.

When Aldus established the Aldine Academy of Hellenic Scholars in 1502, it served as a venue for the development of his translations and typefaces. A subsequent publication of the works of Sophocles, the first such printing of the seven tragedies in the natural Greek language, was published under the auspices of the Aldine Academy. The book appeared in 1502 in the octavo (165 by 96 mm) format. The year 1502 also saw the first printing of the Thucydides history of the Peloponnesian War in its original Greek, the first Aldine publication of the works of Cicero, as well as Catullus, and the poems of Ovid. Although the Ovid publication featured an extensive index, it was left to the buyer of the book to number the pages. In 1505 Aldus printed his Aesop's Fables in an eclectic compilation containing a total of seven first editions, among them the *Hieroglyphica* treatise of Herapollo defining the Egyptian Hieroglyphics.

Aldus published the works of his Renaissance contemporaries in addition to the Greek and Latin classicists. The Dutch humanist, Desiderius Erasmus, was perhaps the most renowned among the sixteenth-century authors published by the Aldine Press. Erasmus, in fact, spent eight months in supervising the publication of an Aldine revision of his own book of adages in 1508. The 1509 Aldine publication of Plutarch's *Moralia* was edited by Demetrius Ducas with assistance from Erasmus. It was an overwhelming project, nearly scrapped on multiple occasions, and constituted the first Greek edition of the essays.

Aldus left Venice from 1509 until 1512, abandoning his printing press in the process, because a French invasion of Italy threatened his real estate holdings elsewhere. He returned to Venice in 1512, where he resumed his printing craft, having failed in his effort to oust the invading squatters. Upon his return he published the works of Julius Caesar in 1513, in what was the only Aldine publication to include multicolored maps.

Aldus's final publication, *De rerum natura* of Lucretius, went to print one month before his death. After he died he

was eulogized publicly by the members of his print shop in a written remembrance that appeared in an edition of *Lactantius selections* and *Tertullian's Apologeticum*, which went to print that same year. In the remembrance the printers hailed Aldus as a master printer with a singular devotion to the spread of learning. As his body lay in state in the Church of St. Paternian his admirers heaped huge piles of Aldine publications upon the catafalque. Although Aldus devoted himself tirelessly to his printing business for over 20 years, he owned only ten percent of the operation at the time of his death in 1515.

### The Aldine Legacy

The printed works of Aldus Manutius are representative of a wave of humanism that rippled through Renaissance Italy during the first half of the fifteenth century. From his shop in Venice, he published 134 editions during his lifetime and produced as many as two thousand copies for some editions. Among these were 68 Latin volumes and 58 in Greek. The output from his press included 30 first printings of Greek classics, among them the works of Sophocles, Euripides, Thucydides, Herodotus, and Demosthenes. He was involved in developing an Aldine grammar of the Greek language at the time of his death.

In the years immediately following the death of Aldus Manutius, the shop remained under the control of Torresani. Sadly, many serious and confusing printing errors occurred in the Aldine publications during that time. The situation improved, presumably after the young Paulus Manutius assumed control and operated the shop until 1574. Paulus Manutius was the son of Aldus and Torresani's daughter, Maria, who wed in 1505. Of the couple's five children, Paulus (Paulo) Manutius, was only two years old when his father died and was raised thereafter by his paternal grandfather. Under P. Manutius the Aldine Press served as official printer to the Catholic Church. Also published by the press during those years was a prototype of the modern thesaurus, called *Eleganze della lingua toscana e latina*. Aldus Manutius II, the grandson of Aldus Manutius and the son of Paulus Manutius, maintained the Aldine Press until his own death in 1597. So prized were the Aldine publications during the sixteenth century that a set of reproductions appeared in Paris during Aldus's lifetime. These are called the *Lyon forgeries*. Other copies or forgeries appeared elsewhere during the years of the operation of the Aldine Press.

In the aftermath of the industrial revolution, four hundred years after the death of Aldus, much was written about the early printer and the impact of his work on modern life. Among the various publications are a bibliography by A. A. Renouard, a biography by M. Lowry, and assorted analytical texts about the Aldine typefaces. "[H]is books represent the finest flowering of the era we know as the renaissance," noted librarian Ralph Stanton in an exposition on the occasion of the 500-year anniversary of the Aldine Press. An exhibition of prized original Aldine publications was collected by the Harold B. Lee Library at Brigham Young University and adapted for Internet viewing to commemorate the anniversary. The full impact of the work of Aldus Manutius and the Aldine Press cannot be underestimated as

he lived in an era when published reading matter was available only to the highest-ranking members of the clergy and the nobility.

### Books

Lowry, Martin, *The World of Aldus Manutius*, Cornell University Press, 1979.

### Online

"Aldus Pius Manutius," *Simon Fraser University Library*, <http://www.lib.sfu.ca/proj/aldus.htm> (December 20, 2000).

"In Aedibsv Aldis: The Legacy of Aldus Manutius and His Press," *Brigham Young University*, <http://www.lib.byu.edu/~aldine/> (December 20, 2000). □

## Amina of Zaria

**Amina of Zaria (1533-1610?), commonly known as the warrior queen, expanded the territory of the Hausa people of north Africa to the largest borders in history. More than 400 years later, the legend of her persona became the model for a television series about a fictional warrior princess, called Xena.**

Amina was the warrior queen of Zazzau (now Zaria). She is known also as Amina Sarauniya Zazzau. She lived approximately 200 years prior to the establishment of the Sokoto-Caliphate federation that governed Nigeria during the period of British colonial rule following the Islamic *jihad* (holy war) that overtook the region in the nineteenth century. According to most accounts, Queen Amina ruled for 34 years at the turn of the sixteenth and seventeenth centuries. Her domain of Zazzau, a city-state of Hausaland, was eventually renamed to Zaria and is the capital of the present-day emirate of Kaduna in Nigeria. Although many details of her life remain largely in dispute among historians, the fact that she existed is a matter of general acceptance, and she is presumed to have been a Moslem ruler. Much of what is known of Queen Amina is based on information related in the *Kano Chronicles*, a translation by Muhammed Bellow of pre-colonial African tradition based in part on anonymous Hausa writings. Other details were pulled from the oral traditions of Nigeria. As a result, the memory of Queen Amina assumed legendary proportions in her native Hausaland and beyond. The extent of her military prowess and her performance in battle was augmented by lore and remains unclear.

The reign of Amina occurred at a time when the city-state of Zazzau was situated at the crossroad of three major trade corridors of northern Africa, connecting the region of the Sahara with the remote markets of the southern forest lands and the western Sudan. It was the rise and fall of the powerful and more dominant Songhai (var. Songhay) people and the resulting competition for control of trade routes that incited continual warring among the Hausa people and the neighboring settlements during the fifteenth and six-

teenth centuries. It was not until later that a ruling arrangement between the Hausa and the Fulani people ultimately brought a lasting peace to the region and survived into the colonial era of the nineteenth century.

### Heir Apparent

Amina was the twenty-fourth *habe*, as the rulers of Zazzau were called. She is believed to have been the granddaughter of King Zazzau Nohir. Speculation suggests that she was born sometime during his reign, around 1533. This theory lends credence to the belief that Amina ruled Zazzau at the end of the sixteenth century. The citizens of Hausaland at that time displayed advanced skills in the industrial arts of tanning, weaving, and metalworking—in contrast to the inhabitants of the neighboring territories and surrounding cultures, where agriculture remained the dominant activity. The Hausa social hierarchy, as a result, was bound less rigidly in the social standings of tradition, which were based on hereditary factors.

Amina was born the eldest of three royal siblings. She was 16 years old when her noble parent, the powerful Bakwa of Turunku (var. Barkwa Turunda), inherited the throne of Zazzau. Historical accounts of Bakwa, the twenty-second *habe* of Zazzau, vary as to whether Bakwa was Amina's father or mother. Although the reign of Bakwa was known for peace and prosperity, the history of the Hausa people was nonetheless characterized by military campaigns for the purpose of increasing commerce. During the years between 1200-1700 Hausaland was, in fact, fraught with warring parties. These descended into neighboring territories that were inhabited by the Jukun and the Nupe to the south, in an effort to control trade and to expand the Hausa communities into more desirable environs. The Hausa, in turn, were conquered intermittently during those years by various other peoples. The Mali, Fulani, and Bornu were among the aggressors in these clashes. During the reign of Bakwa, the teenaged Amina occupied herself in honing her battle skills, under the guidance of the soldiers of the Zazzau military.

As was the custom of the region, the rule of Zazzau fell to Amina's brother, Karama, upon the death of Bakwa in 1566. Although Karama was the younger of the two, it was the male heir who took precedence in ascending the throne. The third sibling, a sister named Zaria, eventually fled the region. By the time that Amina assumed the throne, following the death of her brother in the tenth year of his rule, she had matured into a fierce warrior and had earned the respect of the Zazzau military. Amina, in fact, established her dominance as the head of the Zazzau cavalry even before she came to rule the city-state.

### Exploits in Battle

Within three months of inheriting the throne, Queen Amina embarked on what was to be the first in an ongoing series of military engagements associated with her rule. She stood in command of an immense military band and personally led the cavalry of Zazzau through an ongoing series of campaigns, waging battle continually throughout the course of her sovereignty. She spent the duration of her 34-

year reign in military aggression. Although the military campaigns of Amina were characterized as efforts to ensure safe passage for Zazzau and other Hausa traders throughout the Saharan region, the practice proved effective in significantly expanding the limits of Zazzau territory to the largest boundaries before and since. African chronicler, P. J. M. McEwan quoted the *Kano Chronicles*, which stated that Amina, "conquered all the towns as far as Kwararafa [to the north] and Nupe [in the south]." According to all indications, she came to dominate much of the region known as Hausaland and beyond, throughout an area called Kasashen Bauchi, prior to the settlement of the so-called Gwandarawa Hausas of Kano in the mid 1600s. Kasashen Bauchi in modern terms comprises the middle belt of Nigeria. In addition to Zazzau, the city-states of central Hausaland included Rano, Kano, Daura, Gobir, and Katsina. At one time, Amina dominated the entire area, along with the associated trade routes connecting the western Sudan with Egypt on the east and Mali in the north. In keeping with the custom of the times, she collected tributes of kola nuts and male slaves from her subject cities. Also, as was the custom of the Hausa people, Amina built walls around the encampments of the territories that she conquered. Some of the walls survived into modern times; thus her legacy remained entrenched in both the culture and landscape of her native Hausa city-states.

Some have suggested that a neighboring Hausa king, named Sarkin Kanajeji, held Amina at a serious disadvantage in waging battle against his army, because Kanajeji's soldiers wore iron helmets for protection. Others, however, have credited Amina with the introduction of metal armor, including the iron helmets and chain mail. It has been further suggested that she was responsible for the introduction of the new armor to the Hausa city-state of Kano. Regardless of its origin, the innovation of protective armor arrived in Hausaland during the era of Amina. Because the Hausa of Zazzau were well skilled in the metalworking crafts, it is not unreasonable to infer that Amina's army was well protected by body armor.

Some historians have credited Amina with originating the Hausa practice of building the military encampments behind fortress walls. A 15-kilometer wall surrounding the modern-day city of Zaria dates back to Amina and is known as *ganuwar Amina* (Amina's wall). Additionally, a distinctive series of walls wind throughout the countryside in the vicinities of the ancient city-states of Hausaland. These came to be called Amina's walls to the rest of the world, although not all of the walls were built during the reign of Amina.

### Conflicting Theories and Legend

Information about the history of Hausaland during the era of Amina is sketchy. Foreign visitors who traveled to Africa during the eighteenth and nineteenth centuries collected many of the historical accounts of those times. Other information was garnered from the oral traditions of the descendants of the early Hausa people.

Historians J. F. Ajayi and Michael Crowder suggested that Amina lived in the fifteenth century rather than the

sixteenth century. Ajayi and Crowder attribute their conclusion to information found in Bellow's *Chronicle*. The chronicles, which are believed to portray the history of Africa with some accuracy, date Amina back to the time of *Sarki* (king) Dauda whose father was believed to have ruled from 1421 until 1438. In this regard there may be some confusion with the reign of Da'ud, conqueror of Macina, who ruled from 1549 until 1582. Ajayi suggested that Hausaland suffered desperately from severe aggression from Songhai to the west during the sixteenth century, and it may be unlikely that the expansionist policies of Amina prevailed at such a difficult time. Likewise reports that Amina collected tribute from Bornu may be improbable in the context of the sixteenth century, as Zaria and many other Hausa city-states had, by that time, fallen to the control of Songhai and had suffered further aggression from Bornu to the east. Such domination by Songhai and Bornu, if depicted with accuracy, preclude the possibility that the Hausa achieved extensive domination during the reign of Amina, if indeed she lived at the end of the sixteenth century.

The dearth of facts combined with the significance of the conquests of Amina have defined a legendary persona for the warrior queen of Nigeria. According to oral tradition, Amina took a new husband from the legions of vanquished foes after every battle. After spending one night with the Zazzau queen, each man was slain. Additionally, it is common belief that Amina died during a military campaign at Atagara near Bida in Nigeria. In the twentieth century the memory of Amina came to represent the spirit and strength of womanhood. For her exploits she earned the epithet of *Amina, Yar Bakwa ta san rana* (Amina, daughter of Nikatau, a woman as capable as a man).

### Books

- Adamu, Mahdi, *The Hausa Factor in West African History*, Ahmadu Bello University Press, 1978.  
*Africa from Early Times to 1800*, edited by P.J.M. McEwan, Oxford University Press, 1968.  
 Davidson, Basil, *West Africa before the Colonial Era: A history to 1850*, Longman, 1998.  
*History of West Africa*, Volume One, edited by J.F.A. Ajayi and Michael Crowder, J. W. Arrowsmith Ltd., 1971.  
 July, Robert W., *A History of the African People*, Charles Scribner's Sons, 1974.

### Online

- "Amina Sarauniya Zazzua," *Distinguished Women of Past and Present*, 1998, <http://www.distinguishedwomen.com/biographies/zazzua.html> (December 28, 2000).  
 "Hausa," *Microsoft Encarta Online Encyclopedia 2000*, 1997-2000, <http://encarta.msn.com> (12/29/2000).  
 "Kaduna State," *Ngex!* 1997-2000, <http://www.ngex.com/nigeria/places/states/kaduna.htm> (January 9, 2001). □

## Anthony of Padua

**Anthony of Padua (1195-1231), a Franciscan friar, was a remarkable theologian and preacher. He became the first theology teacher in the Franciscan**



**order and is referred to as "Doctor of the Church." Anthony was canonized less than a year after this death because of the many miracles attributed to him. He is popularly known as the patron saint for lost things.**

Anthony of Padua was born Fernando de Boullion (Ferdinand Bulhom) in Lisbon, Portugal on August 15, 1195 to a wealthy and socially prominent family. His father, Martin de Boullion was a descendant of Godfrey de Bouillon, commander of the First Crusade. He worked as a revenue officer and was a knight of the court of King Alfonso II. His mother, Theresa Tavejra, was a descendant of Froila I, the fourth king of Asturia. The Pope had recognized Portugal as an independent nation for less than 20 years at the time of Anthony's birth. The crusaders were an important part of Portugal's early history and religious life was strongly encouraged. The king and queen built cathedrals and monasteries around the country, which would play an influential role in Anthony's later life.

Anthony was educated at the Cathedral School of Saint Mary near his home. His teachers suggested that he become a knight on the king's court, but his father objected. He argued that his son was not strong enough to become a knight and thought he was better suited to intellectual pursuits. He wanted Anthony to help him manage the family's estate and become a nobleman. To his father's dismay, Anthony decided to join the Canons Regular of St. August-

tine at the age of 15. He entered St. Vincent's convent of Lisbon in 1210. During his first two years in the convent he was visited often by family and friends. Anthony felt that these visits distracted him from prayer and asked to be transferred to Holy Cross Monastery in Coimbra, then the capital of Portugal.

### Joined Franciscan Order

Anthony spent eight years studying theology in Coimbra and was ordained a priest around 1219 or 1220. During this time he befriended several friars from the monastery at Olivares. These men belonged to the Friars Minor and followed Francis of Assisi. Francis had aspired to be a noble knight, but he gave up his dreams to follow Christ. He built an order of friars in Assisi, Italy around 1211 and traveled extensively, preaching to nonbelievers. According to Madeline Pecora Nugent in *Saint Anthony, Words of Fire, Life of Light*, "By simple preaching, austere lifestyle, and holy example, Francis and his followers were evangelizing the populace in fields, markets and public squares." His way of life was approved by Pope Innocent II around 1209 or 1210.

In 1220 the first Franciscan friars had been martyred. Five friars went to Morocco as chaplains to the sultan's soldiers. When they arrived and began preaching about Christ, the sultan was angered by what he had heard. He ordered them to stop preaching and leave Morocco several times, but the friars refused. In the end the sultan ordered that all five be tortured and killed. Their remains were taken to the Holy Cross Monastery in Coimbra where Anthony was living. He was so moved by their story and martyrdom that he decided to join the Friars Minor. He believed that it was his calling to become a martyr too. It was an unusual request to want to leave the Canons of Saint Augustine and his superiors at Holy Cross were reluctant to let him go. They found it hard to understand how the son of a nobleman would dedicate his life to poverty, even though this is exactly what Saint Francis did. Anthony was given permission to leave and he joined the Convent at Olivares. He was given the name Anthony after Saint Anthony of Egypt who founded the first Christian monasteries based upon the idea of renouncing the world for Christ.

Soon after joining the friars Anthony wanted to go to Morocco to continue the mission of the five martyred friars. He was granted permission and sailed to Morocco in December of 1220. Upon his arrival he fell seriously ill and had to return home. However, en route to Portugal, his ship was blown off course during a severe storm and Anthony landed in Sicily.

### A New Calling

Anthony recovered at a Franciscan monastery in Messina. It was there that he learned that a general meeting of friars was going to be held in Assisi on May 30, 1221. For a week, friars from across Europe gathered to pray together and to hear Saint Francis and Brother Elias, the new minister general of the order, speak. After the meeting, Anthony was assigned to a hermitage in Monte Paolo, near Forli, where he celebrated mass for the lay brethren.

Anthony lived a life of solitude until his gift for preaching was discovered by accident. He accompanied the Father Provincial to an ordination ceremony in Forli. The scheduled preacher did not arrive and no one volunteered to fill his role so the Father Provincial asked Anthony to speak about whatever came to his mind. He gave an incredible performance, demonstrating the depth of his knowledge of the scriptures and speaking eloquently and passionately. It was this chance opportunity that changed Anthony's calling.

When Saint Francis learned of Anthony's performance, he appointed him the first theology teacher of the friars and ordered him to travel throughout Italy preaching to the order. Saint Francis had reservations about educating the friars because he feared they would lose their humility. According to Nicolaus Dal-Gal in *The Catholic Encyclopedia: Saint Anthony of Padua*, Saint Francis sent a letter to Anthony stating: "It is my pleasure that thou teach theology to the brethren, provided, however that as the Rule prescribes, the spirit of prayer and devotion may not be extinguished."

### Preacher and Teacher

Anthony then traveled all over Italy and France preaching to the people as well as the friars. He attracted large crowds wherever he went. He was best known for his sermons against heresy, his attacks on the weakness of the secular clergy, and on the sins of society. Because of the passion with which he spoke, Anthony was called the "Hammer of the Heretics." He was well known for speaking to people directly about their sins, regardless of their social standing. In a famous story about Anthony, it is said that he was invited by the Archbishop Simon de Sully to preach at a synod in Bourges in 1225. In front of a large audience, Anthony denounced his host, the archbishop himself. His sermon was so powerful that the archbishop repented.

Anthony greatly shaped the development of Franciscan theology. For example, he is credited with introducing the teachings of Saint Augustine to the friars. He also spent a considerable amount of time with Thomas Gallo, the famous abbot of the Saint Andrew Monastery in Vercelli, discussing mystical theology. In 1223 Anthony founded a theology school for the friars, which eventually became the school of theology at the University of Bologna.

Anthony is the only early Franciscan preacher whose teachings have survived to this day. Only two sermons have been preserved—one for Sundays composed around 1228 and one for saints' feast days composed between 1230 and 1231. His speeches frequently included references to scripture that soon became an important practice in Franciscan preaching style. While these sermons are described as long and argumentative, some excerpts are straightforward and have been circulated for a lay crowd. An example taken from *Saint Anthony of Padua Our Franciscan Friend* is: "Jesus' place should always be in the center of every heart. From this center, as if from a sun, emanate rays of grace to each of us."

## Sainthood

When Francis of Assisi died on October 3, 1226, Anthony returned to Italy. He was then elected Minister Provincial of Romagna-Emilia. However, he resigned his position at the general meeting of Franciscans on May 30, 1230 so he could continue preaching. He returned to the convent in Padua that he had founded in 1227. The same year he was also given the opportunity to preach before Pope Gregory IX who was so moved by what he heard that he called Anthony the "Ark of the Covenant." Anthony also preached daily in Padua during Lent of 1231 and tens of thousands of people flocked to the city to hear him. He was preaching outside of Padua when he became ill. It was later discovered that he suffered from dropsy, where water is retained in the body tissues, but it is not known what caused this condition. Anthony knew that he was seriously ill and he asked to be taken back to Padua. However, he did not reach his final destination. Instead he died in Arcella on June 13, 1231 at Poor Clare monastery, at the age of 35. He was canonized by Pope Gregory IX on May 30, 1232 at the Cathedral of Spoleto. In 1946 Pope Pius XII named Anthony of Padua the "Doctor of the Church" for his knowledge of scripture and gift of preaching.

While Anthony is often called "the miracle worker," only one of the 56 miracles recorded for his canonization occurred during his lifetime. His fame came more from the impact of his preachings than from miraculous acts. In 1263 when his relics were moved to a church in Padua bearing his name, legend has it that his vault was opened and his body had decomposed except for his tongue, which was still intact.

Today Anthony, son of a nobleman and teacher of friars, is known as the patron saint of the illiterate and the poor, the finder of lost things, and the saint of small requests. Tuesday has become known as Saint Anthony's day because that was the day of his funeral procession in Padua. His feast day is celebrated on June 13. There are two images popularly associated with Saint Anthony. In one image he is holding the child Jesus on his arm. This is based on a story that young Jesus appeared to Anthony in 1231 as an apparition. The second image is of Saint Anthony holding a lily. There is a story that on his feast day in 1680 someone placed a cut lily in the hands of his statue at a church in Austria. Instead of dying the lily grew two new blooms the following year. The lily is a symbol of purity and innocence.

## Books

- Butler's Lives of the Saints*, edited by Michael Walsh, Harper and Row Publishers, 1985.
- Maeterlinck, Maurice, *A Miracle of Saint Anthony: And Five Other Plays*, Boni and Liveright, Inc., 1917.
- Moorman, John, *A History of the Franciscan Order from Its Origins to the Year 1517*, Clarendon Press, 1968.
- Nugent, Madeline Pecora, *Saint Anthony: Words of Fire Life of Light*, Pauline Books and Media, 1995.
- Saint Anthony of Padua: Our Franciscan Friend*, Catholic Book Publishing Company, 1991.
- The Saints: A Concise Biographical Dictionary*, edited by John Coulson, Hawthorn Books, Inc., 1958.

## Online

- "Catholic Online Saints and Angels," <http://saints.catholic.org/index.shtml> (January 6, 2001).
- Dal-Gal, Nicolaus, "Saint Anthony of Padua," *Catholic Encyclopedia*, <http://newadvent.org/cathen/01556a.html> (January 4, 2001).
- "Finding the Real St. Anthony," <http://www.americancatholic.org/Features/Anthony> (December 8, 2000).
- Portalie, Eugene, "Teaching of St. Augustine of Hippo," *Catholic Encyclopedia*, <http://newadvent.org/cathen/02091a.html> (January 6, 2001).
- Robinson, Paschal, "Saint Francis of Assisi," *Catholic Encyclopedia*, <http://newadvent.org/cathen/06221a.html> (January 6, 2001).
- "Saint Anthony of Padua," <http://www.britannica.com/soe/s/saint-anthony-of-padua> (December 8, 2000).
- "Saint Anthony of Padua," <http://www.pitt.edu/~eflst4/Anthony.html> (December 8, 2000).
- "Saint Anthony's Page," <http://listserv.american.edu/catholic/franciscan/anthony/anthony.html> (December 8, 2000). □

## Henry Armstrong

**Henry Armstrong (1912-1988) became the first boxer in history to hold world titles in three separate weight classes at the same time. After retiring from boxing, Armstrong became an ordained Baptist minister, working with disadvantaged youth. He also wrote the autobiographical *God, Gloves, and Glory* (1956).**

Born Henry Jackson, Jr., on December 12, 1912, in Columbus, Mississippi, Armstrong was the eleventh of the family's 15 children. His early childhood was spent on a plantation owned by Armstrong's grandfather, an Irishman who had married one of his slaves. His father, Henry Jackson, Sr., was a sharecropper and a butcher. His mother, America (Armstrong) Jackson was an Iroquois Indian. When Armstrong was four years old, his father moved the family to St. Louis, where he and Armstrong's older brothers found work at the Independent Packing Company. Armstrong's mother died of consumption in 1918, leaving the six-year-old under the care of his paternal grandmother. Like his mother, his grandmother hoped that he would pursue a career in the ministry. Armstrong, however, displayed no interest in fulfilling these wishes.

While attending Toussaint L'Ouverture Grammar School in St. Louis, Armstrong acquired the nickname "Red" due to his curly sandy hair with a reddish tint. Small in stature, he was often the target for teasing. In defending himself against bullies, he discovered his interest in boxing. During his years attending Vashon High School, Armstrong excelled, earning good grades and gaining the respect of his peers. He was elected class president and selected poet laureate of his class, which provided him the opportunity to read a valedictory poem at his graduation ceremony. Armstrong worked on his athletic abilities, often running the eight miles to school. After school, he worked as a pinboy at



a bowling alley. Here he gained his first boxing experience, winning a competition among the pinboys.

### Pursuit of a Boxing Career

By the time Armstrong graduated from high school at the age of 17, the Great Depression had arrived. His father, suffering from rheumatism, struggled to provide for the family. With no money for college and the need to care for his family weighing heavily, Armstrong lied about his age, claiming he was 21 years old, in order to gain employment as a section hand on the Missouri Pacific Railroad. Well aware that his meager pay would never be sufficient to attend college, Armstrong's life changed one day when the sports section of a discarded newspaper landed at his feet. Reading that a boxer named Kid Chocolate received \$75,000 for one bout, Armstrong quickly abandoned his railroad job to pursue a career as a boxer.

Working at the "colored" Young Men's Christian Association, Armstrong met Harry Armstrong, a former boxer, who became his friend, mentor, and trainer. Taking the name Melody Jackson, Armstrong won his first amateur fight at the St. Louis Coliseum in 1929, by a knockout in the second round. After several more amateur fights, Armstrong moved to Pittsburgh to pursue a professional career. Ill prepared and undernourished, Armstrong lost his first professional fight by a knockout. He did manage to win his second fight on points; however, he decided to return to St. Louis.

In 1931 Armstrong, accompanied by Harry Armstrong, hopped trains to Los Angeles to restart his amateur career. Upon meeting fight manager Tom Cox at a local gym, Armstrong introduced himself as Harry Armstrong's brother, after which he became known by the name Henry Armstrong. Securing a contract with Cox for three dollars, he had almost 100 amateur fights, in which he won more than half by knockout and lost none. When Cox sold his contract on Armstrong to Wirt Ross in 1932 for \$250, Armstrong entered the professional ranks to stay.

Standing five feet five and one half inches tall, Armstrong fought in the featherweight class. After losing his first two professional fights in Los Angeles, Armstrong began to consistently win his bouts. He became known for his whirlwind combination of constant movement and knockout punches, earning him numerous new nicknames, including Homicide Hank, Perpetual Motion, and Hurricane Henry. Because the purses were small, Armstrong fought often, usually at least 12 times a year, and supplemented his income by operating a shoe shine stand from 1931 to 1934.

### The Road to Three Titles

The road to becoming a champion was not entirely smooth. Armstrong fought his first major bout in November 1934, losing the world featherweight championship in a close decision to Baby Arizmendi. In January 1935 he lost to Arizmendi for a second time. But the tides turned later in the year when he won against former flyweight champion Midget Wolgast. Facing Arizmendi once more in August 1936, Armstrong secured his first title as the new featherweight champion, beating Arizmendi so badly that he was forced to take six months off. Armstrong went on to win his last 12 fights in 1936. Entertainer Al Jolson, who had witnessed the final bout between Armstrong and Arizmendi, was so impressed with Armstrong that he convinced New York manager Eddie Mead to take on the boxer, and Jolson supplied \$5,000 to buy out Ross's contract rights to Armstrong. In a publicity stunt, Jolson and Mead falsely advertised the buy-out price as \$10,000. When Ross demanded the full amount as publicized, entertainer George Raft put up the additional funds and became the third member of Armstrong's management team.

Armstrong and his managers realized that they needed to attract attention away from the rising fame of boxer Joe Louis. In an attempt to gain popularity and therefore more important fights with bigger purses, they set a goal of winning titles in three different weight divisions, an accomplishment no boxer had ever achieved. Through 1937 Armstrong entered the ring 27 times, winning every fight and knocking out all but one of his opponents. Jolson offered boxer Pety Sarron \$15,000 to defend his featherweight title against Armstrong, and the two boxers met on October 29, 1937, at Madison Square Garden in New York City. Armstrong won the fight, knocking out Sarron in the sixth round, thus earning his first world title as the Featherweight Champion of the World.

In 1938 with 14 consecutive wins, 10 by knockout, Armstrong achieved his goal, becoming the first boxer to

ever hold three undisputed titles at the same time. He first set his sights on the lightweight division, but his challenge to a title fight was declined by lightweight titleholder Lou Ambers. Determined to enter a title fight, Armstrong boldly offered to challenge welterweight champion Barney Ross. Having competed as a featherweight at 126 pounds, Armstrong had to increase his weight to 138 pounds in order to qualify to fight in the welterweight division. He met the minimum weight by upping his calorie intake, drinking beer the days before the bout and a lot of water on the day of weigh-in. When the promoters postponed the bout for 10 days, Armstrong accepted Joe Louis's invitation to train at Pompton Lakes, New Jersey, with Louis paying for all expenses. Ross was favored by odds makers three to one over Armstrong; however, when the two met in Long Island City on May 31, 1938, Armstrong won convincingly on points in 15 rounds, earning his second title, Welterweight Champion of the World.

To pursue his third title, Armstrong dropped back a weight class to compete as a lightweight. The title bout came August 17, 1938, just three months after his fight with Ross, when Armstrong faced lightweight champion Lou Ambers before a packed house of almost 20,000 fans at Madison Square Garden. The fight lasted 15 rounds. Ambers opened a cut on Armstrong's lower lip, and Armstrong, afraid the referee would stop the fight, swallowed the blood throughout the fight and succeeded in winning on points. However, the fight was so brutal that Armstrong blacked out at the end and could later recall very little of what happened. Nonetheless, Armstrong had achieved his goal, becoming simultaneously the undisputed champion of the featherweight, lightweight, and welterweight divisions. *The Ring*, a boxing magazine, named Armstrong Boxer of the Year for 1938.

Soon after his fight with Ambers, Armstrong, unable to meet the 126-pound limit, relinquished his featherweight title. However, he successfully defended his two other titles 12 times during 1939. Having gained the fame and fortune that was his goal as a young man working on the railroad, Armstrong was able to produce and star in an autobiographical movie, *Keep Punching*, released in 1939. On August 22, 1939, he lost his lightweight title in a rematch with Ambers, and in 1940 he defended his welterweight crown six times before losing the title to Fritz Zivic on October 4, 1940. During the fight Armstrong suffered an eye injury that required surgery. In the same year, he fought for an unprecedented fourth title in the middleweight division, but lost to Ceferina Garcia in a controversial decision. The final title bout of his career was a failed attempt to regain the lightweight title in a rematch with Zivic on January 17, 1941. Armstrong was knocked out in the 12-round fight. He continued to box actively until announcing his retirement in 1945 at the age of 32. His final professional record stood at 174 recorded bouts, 145 wins with 98 by knockout. Of 26 title fights, Armstrong won all but four (three losses and a draw). He lost by knockout only two times in his 15 years of boxing.

## Entered the Ministry

Over the course of his career, Armstrong earned more than \$1 million. However, upon his retirement he found the vast majority of his money had been lost to bad investments, management fees, and extravagant spending habits. During the final years of the 1940s he traveled to China, Burma, and India with Raft as part of a group sent to entertain soldiers. Upon his return, he became a boxing manager for a time, but his increasing use of alcohol led to his arrest in Los Angeles. In 1949 Armstrong experienced a religious conversion and turned his life around. Two years later he was ordained as a Baptist minister at Morning Star Baptist Church. His preaching drew significant crowds to revivals and other meetings. Desiring to help at-risk youth, he created the Henry Armstrong Youth Foundation and funded the organization from the profits of two books he wrote: *Twenty Years of Poem, Moods, and Mediations* (1954) and his autobiography, *Gloves, Glory, and God* (1956). He returned to St. Louis in 1972 to become the director of the Herbert Hoover Boys Club. He also continued his ministry as an assistant pastor of the First Baptist Church. Six years later he moved back to Los Angeles.

Armstrong first married in 1934. He and Willa Mae Shony had one daughter, Lanetta. After that marriage ended in divorce, Armstrong married a second time in 1960. Velma Tartt was a former girlfriend from his high school days. She died on the way to the hospital in Armstrong's arms, having suffered chest pains. After a brief third marriage, Armstrong married his fourth wife, Gussie Henry, in 1978. During his final years, Armstrong suffered from numerous illnesses, including cataracts and dementia, commonly attributed to the punishment he took as a boxer. In 1954 he became a charter member of the Boxing Hall of Fame, inducted in its opening year along with Joe Louis and Jack Dempsey. He died of heart failure on October 22, 1988 in Los Angeles. In 1990 his name was added posthumously to the International Boxing Hall of Fame.

## Books

- African-American Sports Greats: A Biographical Dictionary*. edited by David L. Porter, Greenwood Press, 1995.
- The Cambridge Biographical Encyclopedia*. edited by David Crystal, Second edition. Cambridge University Press, 1998.
- Chambers Biographical Dictionary*. edited by Melanie Parry, Larousse Kingfisher Chambers Inc., 1997.
- Garraty, John A. and Mark C. Carnes, *American National Biography, Volume 1*. Oxford University Press, 1999.
- Hickok, Ralph. *A Who's Who of Sports Champions: Their Stories and Records*. Houghton Mifflin Company, 1995.

## Online

- "Henry Armstrong," *Newsmakers 1989*, Issue 4. Gale Research, 1989. <http://www.galenet.com> (December 13, 2000).
- "Henry Armstrong," *Notable Black American Men*, Gale Research, 1998. <http://www.galenet.com> (December 13, 2000).
- "Henry Jackson," *Contemporary Authors Online*, Gale Research, 1999. <http://www.galenet.com> (December 13, 2000). □



## Desi Arnaz

**Desi Arnaz (1917-1986) is best known for the popular 1950s television show *I Love Lucy*, a situation comedy that he helped create along with his wife Lucille Ball, to whom he was married from 1940 to 1960. Arnaz played "Ricky Ricardo," a struggling Cuban-born bandleader whose high-spirited wife Lucy (played by Ball) was forever engaged in some sort of comedic mischief. Behind the scenes, Arnaz was known as a savvy businessman and producer and a trailblazer in the early years of television.**

Although network executives were at first reluctant to cast the heavily accented Arnaz alongside an all-American redhead like Lucy, Arnaz and Ball agreed to contribute \$39,000 from their salaries toward production costs of *I Love Lucy* to ensure that the series would be launched. The comedy quickly emerged as one of the most popular shows of the decade. As *Scholastic Update* noted in 1988, Arnaz's role on the show helped Americans to "accept Hispanic immigrants not just as exotic outsiders, but as Hispanic-Americans."

Desiderio Alberto Arnaz y De Acha was born on March 2, 1917 in Santiago, Cuba. His father Desiderio was mayor of Santiago and a wealthy property owner whose holdings included a cattle ranch, two dairy farms, and a villa on a small island in Santiago Bay. Desi's mother, the former Dolores de Acha, was the daughter of one of the founders of the Bacardi rum company. As a teenager, Arnaz was expected to attend college before embarking on a career in law and politics.

### Fled Cuba

However, political unrest in Cuba dramatically changed the direction of Arnaz's life. In August 1933, the Arnaz home in Santiago was burned and ransacked. While Arnaz and his mother managed to escape to safety, his father, a newly elected congressman, was put in prison. While there, he was advised by the new chief of state, Fulgencio Batista, that he would be freed if he left the country. Promising to send for his wife (whom he'd later divorce) and son, Arnaz's father set out for Miami.

In June 1934, the 17-year-old Desi arrived in America and was greeted by his father, who had established an import-export company with two other refugees in Miami. To save money, father and son lived in the company warehouse and ate cans of pork-and-beans. They used baseball bats to ward off the rats that scurried through the building. After school, young Arnaz worked cleaning bird cages for a man who sold canaries on consignment in area drug stores.

### Musical Beginnings

During this time, Arnaz was recommended to a bandleader by a girlfriend's grandfather. Armed with a used guitar purchased for \$5 from a pawnshop and a facility with



the instrument—he'd used it often in Cuba to serenade the opposite sex—Arnaz persuaded his father to let him take this new \$39-a-week job at the Roney Plaza Hotel. Xavier Cugat, the "king" of Latin dance music soon discovered the young musician. Upon graduating from high school and serving a stint in the Cugat orchestra, Arnaz debuted his own band in Miami Beach in December 1937.

The Desi Arnaz Orchestra won favorable reviews in New York and Miami. Collaborators, Lorenz Hart and Richard Rodgers, asked the young orchestra leader to audition for their upcoming Broadway musical *Too Many Girls*. Arnaz landed the part of the Latin American exchange student. Soon the 23-year-old was on his way to Hollywood to appear in the film version of the musical, starring 28-year-old studio actress, Lucille Ball.

"Lucy and Desi's first scene together in the movie *Too Many Girls* required him to take one glance at her and swoon dead away in ecstasy," commented Warren G. Harris in *Lucy & Desi*. "It didn't take much acting skill; by then, they were already in love in real life." The relationship was passionate and tumultuous from the start, punctuated by clashes of temper and jealousy. Many of the disagreements centered on Arnaz's flirtatious nature. Still, they came to care deeply for one another. Arnaz called her "Lucy" even though she had long called herself "Lucille." "I didn't like the name Lucille," Arnaz recalled in his autobiography. "That name had been used by other men. 'Lucy' was mine alone."

## Lucy and Desi

On November 30, 1940, Ball and Arnaz were married in Connecticut with a wedding ring purchased at the last minute from Woolworth's. "Eloping with Desi was the most daring thing I ever did in my life," Ball recalled, according to *Lucy & Desi*. "I never fell in love with anyone quite so fast. He was very handsome and romantic. But he also frightened me, he was so wild. I knew I shouldn't marry him, but that was one of the biggest attractions." Upon returning to California, the couple settled into a five-acre ranch in Chatsworth, just outside of Los Angeles. Mindful of the practice of naming their residence after themselves as actors Douglas Fairbanks and Mary Pickford had done, the couple decided on Desilu after eliminating such other possibilities as Arnaball, Ballarnaz, and Ludesi.

In May 1943, Arnaz received his draft notice to serve in World War II. Because of an injury, however, he saw only non-combat duty at Birmingham Hospital, 15 minutes away from Desilu. Convinced that Arnaz was being unfaithful to her, Ball filed for divorce in September of 1944. The divorce, though, was voided by a quick reconciliation.

Arnaz' officially shortened his name during his stint in the service (from Desiderio Alberto Arnaz y de Acha to Desi Arnaz). When his military service concluded, he returned to Hollywood, only to find his opportunities limited by his heavy accent. Despite critical acclaim for his performance in the movie *Batman* and gossip columnist Louella Parson's prediction that he'd be the next Rudolph Valentino, Arnaz found it difficult to secure significant parts. The new 22-piece Arnaz Orchestra, though, was getting favorable reviews, and Arnaz eventually landed a role in the movie *Cuban Pete*, in which he was touted as "The Rhumba-Rhythm King."

In 1948, Arnaz and Ball formed Desilu Productions to coordinate their various stage, screen, and radio activities. A year later, Arnaz asked Ball to marry him again—this time in an official Catholic ceremony. The ceremony was later played out again, albeit in a more fanciful manner, in an episode of *I Love Lucy*.

By 1950, Arnaz and Ball had both established themselves in the medium of radio. Arnaz first served as the bandleader for Bob Hope's radio show, then as host of the musical quiz show *Your Tropical Trip*; Ball portrayed the scatterbrained housewife on the radio serial *My Favorite Husband*. When the CBS television network decided to turn *My Favorite Husband* into a TV series, Ball insisted that Arnaz be cast as her husband. As the show's producer as well as its leading man, Arnaz helped bring movie-quality techniques to live television and negotiated a deal whereby Desilu retained full ownership of the show.

## Fame and Fortune

Ball gave birth to the couple's first child, Lucie Desiree, on July 17, 1951, just as scriptwriters were putting the finishing touches on *I Love Lucy* for the show's October 15, 1951 premiere. The principal characters were Ricky Ricardo, a struggling Latin bandleader who would burst into Spanish whenever he got particularly exasperated, and his

wife Lucy, a wacky housewife with showbiz aspirations but no real talent. Before long, *I Love Lucy* was a smash hit, televised around the world. "Rather than repelling audiences as CBS had feared," wrote Harris, "Desi's flamboyant Cuban-ness apparently had the opposite effect of attracting viewers." Casting Arnaz as a TV husband was "a case of awkwardness being recognized as an asset," observed a critic for the *New York Times*. The show won Emmy awards in 1952 and 1953 for best situation comedy.

As stars of the most popular show in America, Arnaz and Ball were under constant pressure to live up to the happily married image of their TV counterparts. But while tensions in the marriage increased, the series' popularity continued to grow. More Americans watched the January 13, 1953, episode featuring the birth of "Little Ricky" than tuned in to the inauguration of President Eisenhower, according to the *New York Times*. Lucille Ball gave birth to Desi Jr., the very same day.

Arnaz attributed the success of the show mostly to his wife's performance as the daffy Lucy. Madelyn Pugh Davis, a writer for the show, said in *People* magazine in 1991: "He always knew she was the star. Never in all those years did I ever hear him say, Where's my part?" Under Arnaz's direction, Desilu Productions became a media giant. In 1955 *I Love Lucy* began re-broadcasting earlier episodes—the first reruns ever shown of a current prime-time show—because so many viewers with brand-new televisions had missed the show's early years. As the *New York Times* observed, "The appeal of reusable filmed programs led eventually to a seismic shift in television production from New York to Hollywood, and made the program's creators millionaires."

In addition to *I Love Lucy*, Desilu produced such hits as *Our Miss Brooks*, *The Untouchables*, and *The Danny Thomas Show*. Arnaz and Ball also appeared together in movies such as *The Long, Long Trailer* and *Forever, Darling*. In 1957, Desilu bought RKO Studios, where he and Ball had met in 1940. By the mid-1950s Desilu was an empire that grossed about \$15 million annually and employed 800 people.

## Personal Struggles

Arnaz's personal life, however, was less healthy. Diagnosed with diverticulitis, a disease of the colon, he worked out a deal with CBS to replace *I Love Lucy* with a series of one-hour specials. Of greater importance, though, was the state of his marriage with Ball. Arnaz's well-documented drinking and womanizing took a tremendous toll on the relationship. "The more our love life deteriorated, the more we fought, the more unhappy we were, the more I drank," Arnaz wrote in his autobiography. "The one thing I have never been able to do is work and play concurrently and in moderation, whatever that means."

On March 2, 1960, Arnaz's forty-third birthday, *I Love Lucy* was brought to a close after 179 half-hour episodes, 13 one-hour specials and nine years on the air. Ending with the usual kiss-and-make-up ending, the last show gave no inkling about the state of the marriage off the air. On the following day, March 3, 1960, Ball filed for a divorce, which, for the sake of the two children, was amicable. Two

years later, in 1962, Arnaz pulled out of Desilu Productions, selling his stock to Ball for \$3 million. Running Desilu had “ceased to be fun,” he said in his autobiography. “I was happier cleaning birdcages and chasing rats.”

Arnaz spent much of his time immediately after the divorce on his 45-acre horse-breeding farm in Corona, California. Still, his bond with Ball was never completely severed, and, in the fall of 1962, he was brought in as executive producer of his ex-wife’s new series *The Lucy Show*.

Throughout the 1960s and 1970s, Arnaz remained active in show business. In 1967, he launched the NBC series *The Mothers-in-Law*, starring Eve Arden and Kaye Ballard. In 1976, Arnaz published his autobiography, *A Book*, which included an epilogue about Ball that stated, “I loved her very much and, in my own and perhaps peculiar way, I will always love her.” Arnaz appeared on *Saturday Night Live* with Desi Jr. to promote the book.

### Lonely End

In 1986, after years of smoking four or five Cuban cigars a day, Arnaz was diagnosed with lung cancer. Ball stayed with him for several hours before he lapsed into a coma. He died in the arms of his daughter, Lucie, on December 2, 1986. He was “a good daddy, but a lonely man at times, one who chose a difficult path,” she said of him in *Lucy & Desi*.

### Books

Harris, Warren G., *Lucy & Desi*, Thorndike Press, 1992.

Metz, Robert, *CBS: Reflections in a Bloodshot Eye*, Playboy Press, 1975. □

## Charles Atlas

**Charles Atlas (1893-1972) embodied the nineteenth-century ideal of the self-made man—a dream of self-improvement and rapid transformation that began with a strengthened, healthy body. By 1942, more than 400,000 copies of the Atlas program of self-development had been sold.**

According to published accounts, Atlas was born Angelo Siciliano on October 30, 1893, near Acri, in Calabria, Italy. He came to the United States in 1903 with his father, Santo Siciliano, a farmer, who soon returned to Italy. His mother, Teresa, a devout Roman Catholic, raised him in a waterfront section of Brooklyn, New York, while working as a seamstress in a sweatshop. However, Santo Siciliano’s naturalization papers state that Angelo was born April 20, 1893, in Brooklyn, New York. They suggest that he lived much of his childhood with his father. Lacking interest in his studies, Angelo left high school in 1908, taking a job as a leather worker in a factory that made women’s pocketbooks.



### Early Humiliation

Frail and possibly anemic as a youth, Angelo was twice victimized in incidents that shaped his life and career. At age fifteen he was attacked and beaten on the streets. The following year, still the “ninety-seven-pound weakling” of future advertisements, he was humiliated when a Coney Island bully kicked sand in his face and he was unable to respond. That summer, while touring the Brooklyn Museum, Angelo learned that the muscles he had observed on statues of Greek and Roman gods were the result of exercise. Determined to develop muscles of his own, Angelo joined the YMCA, where he worked on stretching machines, fashioned a set of homemade barbells, and began reading Bernard Macfadden’s *Physical Culture* magazine. Though disappointed by the results, Angelo nevertheless remained open to other solutions. At the age of seventeen, on his regular Sunday trip to the Prospect Park Zoo, he stopped to admire a muscular lion. Its physique, he reasoned, must have developed in a more natural way, perhaps from the animal pitting one muscle against another.

Using a system of isotonic exercise that he derived from this observation, Siciliano transformed his body and, with it, his life. By the age of nineteen, he was able to earn a living by demonstrating a chest developer in a storefront on Broadway. His growing resemblance to a hotel (or bank) statue led his peers to start calling him Atlas—a name he took legally in 1922. Beginning in 1914, Siciliano performed feats of strength in vaudeville with Young Sampson,

with Earle E. Liederman in The Orpheum Models, and in the Coney Island Circus Side Show.

In 1916, while doing the Coney Island show, Siciliano was seen by an artist and introduced to New York City's community of sculptors, including Arthur Lee, Mrs. Harry Payne Whitney, and James Earle Fraser. In 1918 he married Margaret Cassano; they had two children. Until 1921, Siciliano was one of the nation's most popular male models, his physique serving as the basis for some forty-five statues, including one of George Washington in New York City's Washington Square and another of Alexander Hamilton at the Treasury Building in Washington, D.C.

### Started Bodybuilding Business

Siciliano's career took another turn in 1921, when he won \$1,000 as the victor in Macfadden's contest for the "World's Most Perfectly Developed Man." He won again the following year at Madison Square Garden—provoking Macfadden's lament, "What's the use of holding them? Atlas will win every time." Late in 1922, he used his prize money to open a mail-order bodybuilding business to market his exercise methods. The Atlas course required no special equipment, stressed a holistic approach that included advice on diet, grooming, and personal behavior, and held out as an ideal a body that, like Atlas's own, was "perfect" in its symmetry and proportions (5 foot 10 inch; 180 pounds; neck, 17 inch; chest, 47 inch; biceps, 17 inch; forearm, 14 inch; waist, 32 inch; thigh, 23 3/4 inch) rather than heavily muscled.

For several years the enterprise foundered, even while competitors thrived. The amicable and obliging Atlas—a poor businessman, by most accounts—spread himself too thin. He opened and then closed a Manhattan gymnasium, and for two years served without compensation as the physical director of a summer camp. The turnaround began in late 1928, when he hired Charles P. Roman, a young advertising executive whose firm had serviced the Atlas account. Charles Atlas Ltd. was incorporated in February 1929, with the two partners holding the stock in equal shares. This arrangement held until 1970, when Atlas sold his interest to Roman and retired.

### A Successful Partnership

Under Roman's management, the Atlas company prospered. Atlas ran the addressing machine, bent thousands of railroad spikes and removed his shirt for awestruck visitors. Through a series of publicity stunts—in 1938 he pulled the

observation car of the Broadway Limited along 112 feet of Pennsylvania Railroad track—he became a celebrity. Roman coined the term "Dynamic Tension" to describe Atlas's methods and, in the 1930s, wrote the famous ad depicting a young man who, having taken up the Atlas system, avenges his humiliation at the hands of a beach bully.

These and other advertisements appeared in *Popular Science*, *Moon Man*, and other pulp magazines aimed at lower- and middle-class males. The advertisements, which had great appeal for young men coming of age during the Great Depression, offered more than a thirty-dollar set of bodybuilding exercises. Atlas embodied the nineteenth-century ideal of the self-made man, a dream of self-improvement and rapid transformation. This was not unlike the Clark Kent/Superman character which first appeared in 1938. The transformation began with a strengthened, healthy body but also encompassed confidence, ambition, and worldly success. Moreover, the advertising copy reflected Atlas's own deeply held belief in the importance of bodily health to general well-being.

The company weathered investigations by the Federal Trade Commission in 1932, 1937, and 1938—the last for "misrepresentative advertising." A London branch was opened in 1936. One in Rio de Janeiro followed in 1939. By 1942, when Atlas Ltd. received another stimulus from the predictable wartime enthusiasm for physical fitness, more than 400,000 copies of the Atlas program of self-development had been sold.

Despite continued financial success and international celebrity, Atlas lived a private, simple, and patterned life—not unlike the one advocated in his course materials. His routine consisted of morning exercises, work at the office, an evening with the family, and more exercises. Atlas died of a heart attack in Long Beach, Long Island, not far from his home in Point Lookout, New York on December 23, 1972.

### Books

Gaines, Charles, *Yours in Perfect Manhood: Charles Atlas*, 1982.

### Periodicals

*American History Illustrated*, September 1986.

*Boys' Life*, October 1983.

*Fortune*, January 1938.

*Men's Health*, October 1991.

*New York Times*, December 24, 1972.

*Saturday Evening Post*, February 7, 1942.

*Time*, February 22, 1937. □

# B

## Robert Baden-Powell

**Robert Baden-Powell (1857-1941) was a military officer who helped protect Britain's imperial empire for over 30 years. He was especially talented in military scouting. Baden-Powell was a prolific writer who often chose his military experiences as the subjects of his works. He is best known for starting a worldwide scouting movement.**

Robert Baden-Powell was born Robert Stephenson Smyth Powell on February 22, 1857 in his parents' house in London, England. His father, Professor H.G. Baden Powell was a vicar and a professor of natural science. His mother, Henrietta Smyth, was Professor Baden Powell's third wife. The couple had seven living children together, of whom Robert was the fifth, and they also raised three children from the vicar's previous marriage. Baden-Powell's father died just after his last child was born, when Robert was only three years old. In 1869 Henrietta changed the family name to Baden-Powell out of respect for her late husband.

Mrs. Baden-Powell educated her children in the outdoors. Through long walks in the country, she taught them about plants and animals. They were also allowed to read books from their father's collection on natural history. Baden-Powell's formal education started with a Dame's School in Kensington Square. In 1868 he attended the Rose Hill School in Tunbridge Wells, where his father was also educated. Two years later he won a scholarship to the Charterhouse School in London. In 1872 the school moved to Godalming, which was surrounded by woodlands known

as "The Copse." The wilderness was an important part of Baden-Powell's childhood experience. As a schoolboy, he did not excel either academically or athletically. He was mainly interested in the outdoors and theater.

### Joined the Army

By 1876 Baden-Powell had to decide upon a career. He was denied admittance to Balliol College in Oxford, where two of his older brothers had attended. Without much forethought, Baden-Powell decided to participate in an open examination for an army commission. Of the 700 people who took the exam, he finished second for cavalry and fourth for infantry. On September 11, 1876 Baden-Powell became a sub-lieutenant in the thirteenth Hussars. On December 6 of the same year, he joined his regiment in Bombay, India.

Baden-Powell took his new profession seriously and excelled in the military. He became a captain at the young age of 26. In 1884 his regiment returned to England for two years. During this time he published a book called *Reconnaissance and Scouting*. He also worked as a spy, traveling to Germany, Austria, and Russia to learn about their latest technological and military advances. In 1887 Baden-Powell's uncle, General Henry Smyth, was appointed governor and commander-in-chief of South Africa. He asked his nephew to be part of his staff. Baden-Powell participated in several non-combative missions with the Zulu and, in recognition, was promoted to brevet-major. In 1889 General Sir Henry Smyth was sent to Malta as governor and commander-in-chief and he again took his nephew as part of his staff. However, Baden-Powell was anxious for combat and, therefore, resigned from his position as military secretary in Malta in 1893 and rejoined the thirteenth Hussars in Ireland.

In 1895 Baden-Powell was sent to command a campaign against the Ashanti, whose king had broken British treaties. He thought he would have an opportunity for military action, but in the end there was no fighting. Due to his success on this mission he was promoted to brevet-lieutenant-colonel at the age of 39. Despite the honor of the promotion, Baden-Powell was disappointed that he had not yet had any combat experience in the military. He thought this was the key to having his own command in Africa. Based on his experiences with the Ashanti, Baden-Powell published a book called *The Downfall of Prempeh* in 1896. In 1889 he wrote his next book called *Pigsticking or Hog Hunting* about boar hunting.

Baden-Powell was next sent to deal with the Matabele Rebellion in the African nation of Rhodesia, as the chief of staff of Major-General Sir Frederick Carrington. Since there was not a corps of scouts available for this mission, Baden-Powell conducted his own scouting trips to learn about the terrain and the people. He would later publish his experiences in a book called *The Matabele Campaign*. Baden-Powell cited the adventure as a crucial learning experience in the ways of scouting.

After returning home from Africa, Baden-Powell was offered command of the Fifth Dragoon Guards back in India. He dedicated much of his position to training the troops in tracking and surveillance techniques. In 1899 he published *Aids to Scouting*, which was intended for the military, but had also gained surprising interest among the general public. In the same year, the commander-in-chief of the British army sent Baden-Powell back to South Africa to deal with an expected war between the British and the Boers.

### Became a Hero

The Boer War was a bloody struggle between English-speaking and Afrikaans-speaking whites for control of South Africa's mineral wealth—the world's richest gold reefs. While the chief of the British army, Lord Wolseley, wanted to send 10,000 troops to South Africa, the British cabinet disagreed and instead sent 20 special service officers to organize a defense of the frontiers, one of whom was Baden-Powell. He was assigned to raise a small regiment to protect Rhodesia and to deceive the Boers into thinking that more British forces were on the way. The Boers surrounded Baden-Powell and his men in Mafeking, a small town about 175 miles west of Johannesburg. Baden-Powell managed to defend the town against over 7,000 Boers for 217 days. Some viewed this as the first real victory for the British against the Boers and Baden-Powell was considered a hero.

Mafeking was an important experience for Baden-Powell in two respects. First, he finally experienced real military action that he had desired for so long. The experience also gave him the respect of the military he was looking for and the recognition as a leader. He was promoted to the rank of major general because of his success with this mission. Second, Mafeking was the beginning of Baden-Powell's idea for boy scouts. Because the men were busy protecting the city, Baden-Powell organized the boys into a Mafeking Cadet Corps to take care of the smaller tasks

around town. Mafeking became the subject of a 1907 book by Baden-Powell called *Sketches in Mafeking and East Africa*. In 1900 Baden-Powell was appointed head of the newly created South African Constabulary, a military police force, for three years. He was named inspector general of the cavalry from 1903 until 1907.

### Founded Scouting

It was during this last appointment that Baden-Powell really began to develop his ideas about the scouting movement. In 1904 he attended the Annual Drill Inspection and Review of the Boys Brigade in Glasgow, where the founder, William Smith, had recruited over 54,000 boys. Smith had asked Baden-Powell to rewrite his book *Aids to Scouting* for a younger audience. According to Michael Rosenthal in *The Character Factory*, this gave Baden-Powell "the vision of a British society made strong by legions of well-disciplined, morally upright, patriotic youth who found their satisfaction in defending the interests of the empire and following the orders of their superiors."

Since Baden-Powell was still occupied as inspector general of the cavalry, it took a few years to put his ideas into action. In 1906 he wrote a short paper called "Scouting for Boys," where he put some of his ideas into print. His vision for scouting was strongly influenced by three of his contemporaries, William Smith, Ernest Thompson Seton, and Dan Beard. Seton and Beard had started similar youth organizations in the United States. This small paper turned into a six-part series called *Scouting for Boys*, which was published between January and March of 1908. The series included the first publication of the Scout Oath and Scout Law. This series then led to an official weekly magazine, called *The Scout*, which increased the visibility and appeal of the scouting movement in the public's eye.

In the summer of 1907 Baden-Powell acted upon his ideas and ran a demonstration camp for boys on Brownsea Island off the coast of Dorset. Twenty-two boys, from ages 10 to 17, took part in the weeklong exercise, which consisted of camping, cooking, tracking, singing, and storytelling. This was the beginning of what was called "unquestionably the most significant youth movement of the twentieth century" in Michael Rosenthal's *The Character Factory*.

### Created an International Movement

In 1910 Baden-Powell resigned from the Army and became the chairperson of the Executing Committee of the scouting movement. This movement quickly spread to other countries. Baden-Powell traveled extensively to promote scouting, including trips to South America, Russia, Canada, and the West Indies. Interest in the movement was not limited to boys. By 1910 over 8,000 girls had registered with the scouts. Baden-Powell convinced his sister, Agnes Baden-Powell, to organize the girls into their own movement, which he called the Girl Guides. In 1912 Robert and Agnes Baden-Powell published the *Handbook for Girl Guides*. In the same year, the Boy Scout Association was granted a charter of incorporation.

In 1912 Baden-Powell met his future wife, Olave St. Clair Soames, on a voyage to the West Indies. The couple was married on October 30, 1912 and went on to have three children together: Peter (1913), Heather (1915), and Betty (1917). His wife was a strong supporter of the continuing development of the scouting movement.

In 1914 Baden-Powell created the Wolf Cubs for younger boys aged 9 to 12. During World War I he published several books including *Quick Training for War*, *The Adventures of a Spy*, *Young Knights of the Empire*, and *The Wolf Cub's Handbook*. After the war he created a third group of scouts for older boys (over the age of 16) called the Rover Scouts. In 1920 Baden-Powell organized the first International Jamboree in London. He wanted a special event to celebrate the tenth anniversary of scouting. According to Tim Jeal in the book *Baden-Powell*, the chief scout wrote that the goal of the Jamboree was "to make our ideals and methods more widely known abroad; to promote the spirit of brotherhood among the rising generation throughout the world, thereby giving the spirit that is necessary to make the League of Nations a living force."

Baden-Powell spent the later years of his life travelling and supporting the movement. He continued to write throughout his life with such books as *Birds and Beasts in Africa* (1938), *Paddle Your Own Canoe* (1939), and *More Sketches of Kenya* (1940). Baden-Powell died on January 8, 1941 and was buried at Nyeri in view of Mount Kenya.

The legacy of Baden-Powell lies in the popularity of the scouting movement throughout the world. However, its founder has also faced his share of criticism. In 1999 Baden-Powell's character came under attack when the Barolong-Boora-Tshidi Tribal Authority of South Africa sued the British government for millions of dollars in compensation for his alleged mistreatment of blacks during the Mafeking Siege. Despite this problem, the scouting movement has continued to grow. By the year 2000 there were over 25 million members in more than 216 countries.

## Books

- Jeal, Tim, *Baden-Powell*, Century Hutchinson, Ltd., 1989.  
 Mac Donald, Robert H. *Sons of the Empire: The Frontier and the Boy Scout Movement, 1890-1918*, University of Toronto Press, 1993.  
 Plaatje, Sol T., *Mafeking Diary: A Black Man's View of a White Man's War*, Meridor Books, 1990.  
 Reynolds, E.E., *A Biography of Lord Baden-Powell of Gilwell*, Oxford University Press, 1943.  
 Rosenthal, Michael, *The Character Factory: Baden-Powell and the Origins of the Boy Scout Movement*, Pantheon Books, 1986.  
 Saunders, Frederick *Mafeking Memories*, Associated University Presses, Inc., 1996.

## Periodicals

- Guardian*, July 24, 1999, p. 1.  
*Independent*, October 21, 1989.  
*Los Angeles Times*, July 24, 1999, p. 1.  
*New Republic*, September 29, 1986, p. 33.  
*Ottawa Citizen*, October 11, 1999, p. A7.  
*San Diego Union-Tribune*, February 20, 2000, p. G-1.  
*Smithsonian*, July 1985, p. 33.

- Sunday Telegraph*, October 10, 1999, p. 33.  
*U.S. News and World Report*, January 14, 1991, p. 50.

## Online

- "Founders of Scouting and the Boy Scouts of America," <http://www.scouting.org/factsheets/02-211.html> (December 6, 2000).  
 "Historical Highlights," <http://www.scouting.org/factsheets/02-511/1910.html> (December 6, 2000).  
 "History of Scouting," <http://www.scoutbase.org.uk/library/books/history/index.html> (December 25, 2000).  
 "Sir Robert Baden-Powell," <http://users.aol.com/randywoolbsahis/b-p.html> (December 25, 2000).  
 "Scouting Archives," <http://www.scoutingarchives.com> (December 25, 2000).  
 "Scouting Is . . .," <http://www.scout.org/wso/scoutis.html> (December 25, 2000). □

# Roger Bannister

**Roger Bannister (born 1929) was the first person ever to run a mile in under four minutes.**

"I just ran anywhere and everywhere—never because it was an end in itself, but because it was easier for me to run than to walk," Roger Bannister said of his childhood, according to Corder Nelson and Roberto Quercetani in *The Milers*. When he was 12, 13, and 14, he won his school's cross-country run three years in a row. At the age of 16, he decided to become a runner. However, when his studies in medicine began at Oxford University in the fall of 1946, he had never run on a track or worn spiked running shoes.

Bannister's only training that first winter at the university was a weekly workout and a seven-and-a-half-mile cross-country race. However, he was so immensely talented that even on this meager schedule, he ran a mile in 4:30.8 in March of 1947; by June of that year he had decreased his time to 4:24.6. In 1948, Bannister was selected as a "possible" runner for the Olympic team, but he felt that he was not yet ready to compete at the Olympic level.

## "Restless and Anxious to Compete"

In June of 1948 Bannister ran in his first major race, the Kinniard Cup. He came in fourth with a time of 4:18.7. In the Amateur Athletic Association (AAA) race he came in fifth with 4:17.2. That year, the Olympics were being held in London, and he watched them with great interest. When Bannister saw the athletes compete, he felt inspired to become a great runner like them. According to Corder and Quercetani, he decided "New targets had to be set and more vigorous training programs prepared. I was restless and anxious to compete. There were four years to wait before my chance would come at Helsinki [Olympics] in 1952."

In June of 1949, Bannister ran the 880 in 1:52.7, and traveled to the United States to compete in the mile, which



he won with times of 4:11.1 and 4:11.9. He took six weeks off from training, but came in third with a time of 4:14.2.

Bannister began using a new training method called *Fartlek*, in which runners alternate bursts of speed with steady running, and rapidly improved. On July 1 of 1950, he ran a mile in 4:13, but in the last lap his time was 57.5. This was the first sign of his impressive “kick”—a burst of speed in the last quarter of a race.

At the Penn Relays in April of 1951, he began slowly, trailing the other runners, but took the lead after two and a half laps, running the last lap in an amazing 56.7, with a total time of 4:08.3. He later said, according to Corder and Quercetani, “I knew from my fast finish that I was now capable of a time near 4 minutes five seconds.”

Bannister’s philosophy of training was to train lightly and stay fresh. For the rest of that spring he felt over-trained and somewhat burned-out. Nevertheless, in July, he ran 4:07.8, a record for the AAA championships. After this, feeling utterly exhausted, he took training for five weeks, then raced again, but was beaten by a Yugoslavian runner.

### 1952 Olympic Games

Bannister ran in the 1500 meters at the 1952 Olympics in Helsinki, Finland. He shared a room with his friends from Oxford: Chris Chataway, Nick Stacey, and Alan Dick. He wrote in *The Four Minute Mile* that the room they shared must have been the messiest one in the whole Olympic Village, and that he and his friends spent most of their time simply lying on their unmade beds, reading, and talking. “It

was not that we lacked the energy to make our beds or tidy the room,” he wrote. “We simply existed in a state of complete suspension, in which nothing seemed important until our races were over. We were thinking all the time about the precious fractions of seconds that would make us champions or failures.” In the semifinals of the 1500 meters, Bannister came in fifth, and was disappointed with his performance. He wrote, “The following night was one of the most unpleasant I have ever spent. My legs ached and I was unable to sleep. I felt I hated running.” The next day, before the final, Bannister was pale and weak with anxiety. From the start, he ran “sensibly,” and was in second place before the final curve. “This was the crucial moment,” he wrote, “for which I had waited so long. But my legs were aching, and I had no strength left to force them faster.” Sickened, he watched as others passed him, and came in fourth. Later, however, he was proud of his result and glad that he had learned that “the important thing was not the winning but the taking part—not the conquering but the fighting well.”

### Attempted to Break Four-Minute Barrier

Bannister spent two months after the Olympics deciding whether he wanted to keep running. He eventually decided to continue, but with a new goal: to run the mile in under four minutes. This feat had never been accomplished by any runner. He trained for half an hour a day, running intense speed workouts. Bannister realized that in order to meet his goal, he would have to make sure that he was keeping up a hard pace throughout the race. He arranged for another runner, Chris Chataway, to keep track of his timing and be his pacer. At a meet at Oxford, paced by Chataway, he ran the mile in 4:03.6, which made him certain that he could break the four-minute barrier. After a brief period of rest following an injury, he began running again. On June 27, 1953, paced by his friends Chris Brasher and Don Macmillan, he ran 4:02. Despite the fact that this time was faster than any British miler’s, the authorities would not allow it into the record books because the use of pacers was frowned on: runners were expected to win without such aid. According to Nelson and Quercetani, Bannister later said, “My feeling as I look back is one of great relief that I did not run a four-minute mile under such artificial circumstances.” Throughout 1953, however, he remained undefeated.

### The Moment of a Lifetime

In 1954, Bannister decided to make another attempt to break the four-minute barrier. He trained more intensely, and reached a plateau at which, no matter how much he trained, he couldn’t improve his time. Frustrated, he took time off and went mountain climbing with Chris Brasher for three days. When he came back, he beat his time by two seconds.

Bannister planned to make the sub-four-minute attempt on the Iffey Road track at Oxford during an AAA event on May 6. He rested for five days before the event. “I had reached my peak physically and psychologically,” he later



said, according to Nelson and Quercetani. "There would never be another day like it."

On May 6, he spent the morning at St. Mary's Hospital, where he worked as part of his medical studies, then took the train to Oxford. He was concerned about the weather: a strong wind had come up, and it could affect his time. At 5:15 in the evening, it began to rain lightly. By race time, the wind was about 15 miles per hour and Bannister decided to run. After 220 yards, he felt as if the race was effortless, as if he were flying.

When the bell rang, marking the last lap, Bannister's time was 3.07. The crowd was roaring and he knew he would have to run the last lap in 59 seconds. Chataway led, then Bannister sped past him at the beginning of the final straightaway, with only 300 yards to go. In his book *First Four Minutes*, quoted by David Levinson and Karen Christensen, he later wrote, "I felt that the moment of a lifetime had come. There was no pain, only a great utility of movement and aim. The world seemed to stand still or did not exist, the only reality was the next two hundred yards of track under my feet."

Although he was exhausted, Bannister kept running, forced on by an immense effort of will and aided by his years of training. When he was only five yards from completing the race, the tape marking the end of the race seemed to be moving farther away from him. He wrote, "My effort was all over and I collapsed almost unconscious. The stop-watches held the answer, the announcement came—'Result of the one mile time, 3 minutes'—the rest was lost in the roar of excitement." His time was 3 minutes, 59.4 seconds.

Later Bannister wrote, according to Nelson and Quercetani, "I felt suddenly and gloriously free of the burden of athletic ambition that I had been carrying for years. No words could be invented for such supreme happiness, eclipsing all other feelings. I thought at that moment I could never again reach such a climax of single-mindedness."

### "The Mile of the Century"

Track fans still talk about the "Bannister-Landy 1-Mile Duel," which was the number one choice for "Six Most Dramatic Events in Sports History," in the *Book of Lists*, according to David Levinson and Karen Christensen. The event was known as "The Mile of the Century" at the time, and took place at the Commonwealth Games in Vancouver, Canada in 1954, where fans anxiously awaited the contest between the two best milers in the world. Bannister was the first person to break the four-minute mile. John Landy of Australia, was the only other runner to have completed a mile in under four minutes; he held the world record. Landy was in front from the start. Bannister was in third, then moved up to second. He had planned to run easily through the third lap, but became nervous when Landy stayed in front, so he began speeding up at the halfway point. Nelson and Quercetani wrote, "With great poise, he spread his effort evenly over the entire third lap. In the middle of the backstretch he had cut Landy's frightening lead in half. As they reached the bell he had closed the gap." When the bell rang to mark the last lap, Landy was in the lead, with

Bannister right behind him. When Landy turned to see where his opponent was, Bannister passed him. He poured on his powerful "kick," and won the race in 3:58.8, against Landy's 3:59.6. The moment when Bannister passed Landy is commemorated by a statue of both men outside the Empire Stadium in Vancouver, marking the "Miracle Mile Games."

Bannister later wrote in *Four Minute Mile*, "[Running] gives a man or woman the chance to bring out power that might otherwise remain locked away inside. The urge to struggle lies latent in everyone. The more restricted our society and work become, the more necessary it will be to find some outlet for this craving for freedom. No one can say, 'You must not run faster than this, or jump higher than that.' The human spirit is indomitable."

### Books

- Bannister, Roger, *The Four-Minute Mile*, Lyons Press, 1981.  
*Encyclopedia of World Sport*, edited by David Levinson and Karen Christensen, ABC-CLIO, 1996.  
 Hanley, Reid M., *Who's Who in Track and Field*, Arlington House, 1973.  
 Nelson, Cordner and Roberto Quercetani, *The Milers*, Tafnews Press, 1985. □

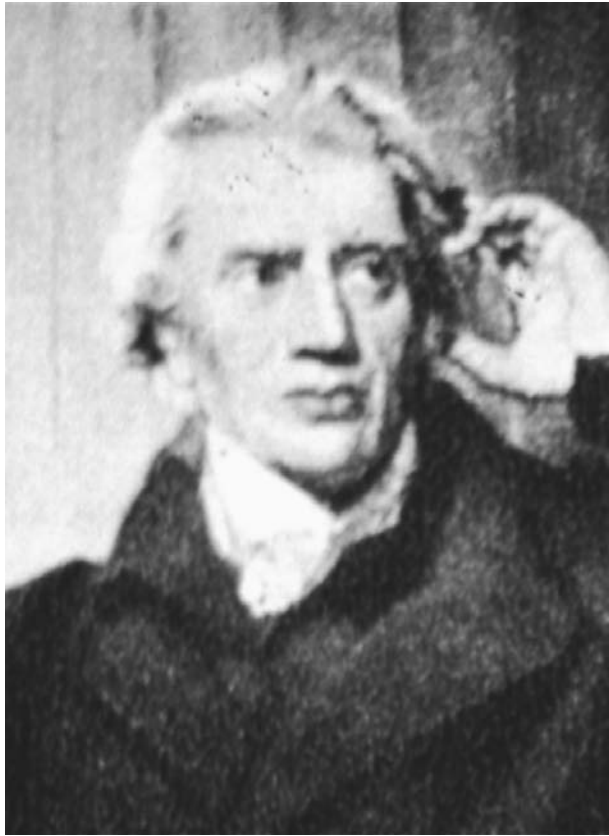
## Francis Baring

**Francis Baring (1740-1810) was the founder of Baring Brothers and Company, England's oldest merchant bank. Esteemed as a trustworthy and stalwart financier, Baring rose to a position of great influence during the reign of King George III. His wealth grew commensurately with his stature.**

**A**n 1810 obituary written by one of his contemporaries, Lord Erskine, in *Gentleman's Magazine* called him "unquestionably the finest merchant in Europe; first in his knowledge and talents, and first in character and opulence." The Baring firm survived for another 185 years until insider fraud was uncovered in 1995 and the bank collapsed after more than \$1 billion in losses. It was a tragic end for a firm whose success had long been attributed to the estimable character of its founder.

### Thriving Exeter Merchants

The Baring clan originally came from Germany. Baring's grandfather had been a Lutheran pastor in the north German city of Bremen, but he died shortly before his son, christened Johann, was born. As a result, the boy was raised by his mother's family, who were wealthy cloth merchants in Bremen. Johann Baring was sent abroad in 1717 to apprentice with the English cloth merchant with whom they did business, and liked it so much that he decided to stay and become a cloth importer himself. Settling in Exeter, he became a British citizen in 1723 and married Elizabeth Vowler, the daughter of an English tea



and coffee wholesaler. John Baring, as he was now called, amassed a small fortune from his business dealings and real estate holdings to become one of the wealthiest commoners in his city.

At their modest manor home outside Exeter, Francis Baring was born on April 18, 1740. He was the third of five children, and was slightly hard of hearing from an early age. In 1748, his father died, and his formidable mother then took over the family's wool import business. Baring was sent to London around 1755 as an apprentice to a trader there. He proved himself an academically gifted and commonsensical youth who earned accolades from the adults who knew him. He was also remembered for an ability to calculate large sums in his head. Unfortunately, he was not first in line to take over the family business; his two older brothers, John and Thomas, did so. However, Thomas died in 1758 and the youngest Baring son, Charles, who was also an apprentice in London, was recalled to Exeter to help out. However, Francis Baring liked living in London and was happy to remain there until his apprenticeship ended in 1762. An opportunity to prove himself arose when the family's longtime agent in London suggested that he take over the work upon the older man's imminent retirement. In an agreement signed with John and Charles, Baring set up the new firm as a separate but equal branch of the family's Exeter business. He purchased materials for Exeter, and looked for new markets for its goods. He also did the same for other Exeter manufacturers, and even traded goods himself.

## Business Grew with International Economy

In 1767 Baring married Harriet Herring, who came from a wealthy family. By the time they began their own branch of the family business, his offices were located in Mincing Lane within The City, as London's financial district is known. The Barings would have twelve children in all, two of which died. Many of them were born at home in quarters located above the Mincing Street offices. The Baring firm's evolution into merchant banking came about when the office collected money that was due clients in Exeter, or secured credit for others. It also pioneered the practice called "acceptances," by which Baring, acting as trusted middleman, guaranteed both a price and the payment between a merchant in the colonies and a London wholesaler. Popular commodities of the time were cargoes of tea or cochineal, a South American insect that yielded a brilliant red dye for cloth.

From 1763 to 1777 Baring remained in partnership with his brothers in Exeter, but lost money in eight of those years. Even his mother disapproved of his business dealings, but Baring realized his errors came from inexperience, and sought to learn from his errors. His brother Charles, however, was known for leading the Exeter branch into spectacularly unprofitable deals. After one ill-advised scheme to build mill factories in Devonshire with partners of questionable financial stability, Baring suggested that Charles be cut loose. The ties between the Exeter and London Baring firms were severed, but John Baring remained a part of both for a number of years. Baring himself, however, earned a reputation for honesty and perception among his fellow merchants and traders, and his profits expanded along with his reputation.

Around this time, Baring became an investor in the East India Company, a trading company chartered by the British crown in 1600 to trade with Asia. It secured exclusive privileges from Mogul emperors that allowed British merchants to export textiles and tea. It was a vastly profitable operation, and had even evolved into a formidable political force by this time. There were problems within the organization, however, and Baring became one of its directors in 1779. He was also achieving some measure of political clout through his brother-in-law, John Dunning, the one-time Solicitor General of England. Dunning introduced Baring into political circles that included the Earl of Shelburne, later Lord Lansdowne. During Shelburne's tenure as prime minister between 1782 and 1783, he began consulting with Baring on financial questions relating to Indian affairs.

## Entered Politics

Baring won a contract with the Crown to supply victuals for British military forces in the final years of the War for American Independence. His deal saved the government money and earned him a profit at the same time. His firm was experiencing a period of tremendous growth; its capital, listed at 20,000 pounds in 1777, more than tripled to 66,000 pounds by 1793. The press sometimes criticized Baring for his profits, and England's landed aristocracy viewed bankers as a whole as somewhat suspect.

Lord Lansdowne urged Baring to enter politics, which he argued would elevate him above his profession and create a more impressive aura for his name. Both of Baring's brothers had tried to win election to England's House of Commons, but had failed; Baring succeeded in 1784 as a Whig candidate from Grampound, and later held seats from Chipping Wycombe and Calne. In all, he served as a Member of Parliament for much of the next 22 years, where his reasoned, well-informed views on finance and trade matters earned him the respect of colleagues. An ardent supporter of free, unrestricted trade, Baring even wrote a book on the matter, *The Principle of the Commutation Act Established by Facts*, published in 1786.

Baring was made chair of the East India Company from 1792 to 1793, which he found the most difficult job in his career. "The more I work, the greater degree of jealousy and difficulty I have to encounter amongst the Directors, who are in general composed of either Fools or Knaves," he wrote Lansdowne. For his services, however, he received a baronetcy, which added the title of "Sir" to his name. The connections with the company also allowed him to place his sons abroad for important training: Thomas went to Bengal in the early 1790s, followed by Henry's departure for China. Both sons were being groomed to take over the Baring firm, and its founder relied heavily upon other family connections to give the bank its insular, sober atmosphere. The larger Baring clan had produced a number of nephews, who entered the firm as junior staffers. Among the older generation, Baring's brother John was involved until 1793. Eight years later Baring was asked to disentangle his brother John and the problematic Charles' messy financial situation. He used the opportunity to write Charles and excoriate him for years of business blunders that brought the end of their father's original wool import business. "Your unceasing projects, by absorbing so large a part of the family and of the Bank, hung as a dead weight and impeded my progress for many years," he wrote his brother.

### The Next Generation

Baring named his eldest son, Thomas, as a partner after his return from Bengal in 1801. Despite his years with the East India Company, the younger Baring was disinterested in the family business, and made no secret of his plan to collect art and spend much of his time on his country estate. Two younger sons, Alexander and Henry, showed more promise and aptitude. A fourth boy, William, died in 1806. The youngest of Baring's five sons, George, gambled heavily before deciding to become an Anglican cleric. He then went on to found his own sect, went bankrupt by 1827, but was rescued by his brothers and sent away to Italy, where he lived a dissipated life.

Baring retired at the age of 63 in 1803, passing control to Thomas, Alexander, and Henry. He himself became a country gentleman in 1796 when he bought a manor house called Lee, near Lewisham, Kent, which possessed an admirably distinguished pedigree. In 1801, Baring acquired an even grander estate near Micheldever in Hampshire. He spent his retirement years collecting art—particularly works from Dutch Masters like Rembrandt and Rubens—and tended

to his large farm on the estate as well as a prized flock of sheep. He was said to have longed for a peerage, which would have given the family a perpetual seat in the House of Lords, but such an honor was still unlikely for a banker in the era. He died at his Lee home on September 11, 1810, and was buried in a family vault at Micheldever nine days later. After beginning life with a legacy of just 2,000 pounds that were inherited from his father, he left an estate valued at 625,000 pounds.

### Books

Ziegler, Philip, *The Sixth Great Power: A History of the House of Barings, 1762-1929*, Knopf, 1988.

### Periodicals

*Economist*, February 24, 1996; July 3, 1999. □

## Marguerite Ross Barnett

**When Marguerite Ross Barnett (1942-1992) was appointed president of the University of Houston, she became the first black and the first woman chief administrator of the flagship of the four-campus Houston system. She had already made her mark at the University of Missouri, St. Louis, where she was chancellor and tenured professor in political science. The distinguished political scientist has boosted the prestige of both institutions—at St. Louis as one of its most successful fundraisers and at Houston as a major player in a \$350 million fundraising campaign.**

Born May 22, 1942, in Charlottesville, Virginia, Barnett is the daughter of Dewey Ross and Mary (Douglass) Barnett. She completed elementary school and in 1959 graduated from Bennett High School, both in Buffalo, New York. In 1964, she graduated from Antioch College with an A.B. degree in political science. She continued her studies in political science at the University of Chicago where, in 1966, she received an M.A. degree and, in 1972, a Ph.D.

As a child Barnett planned to become a scientist. While studying a course on Indian politics, she changed her career interests. As a part of her doctoral studies, she conducted research in south India for two years. For her subsequent book on ethnic and cultural pluralism, *The Politics of Cultural Nationalism in South India* (Princeton, N.J.: Princeton University Press, 1976), the American Political Science Association awarded her its top book prize in 1981.

### Academic Appointments

Barnett's career as teacher of political science began with her appointment as lecturer at the University of Chicago, a position that she held from September 1969 to Sep-



tember 1970. She was then assistant professor of political science, 1970-1976, and James Madison Bicentennial Preceptor, 1974-1976, at Princeton University. Barnett became professor of political science at Howard University in 1976, and chaired the department of political science there from July 1977 to June 1980. In 1980, while still at Howard, Barnett was co-director of the Ethnic Heritage Project, which studied the historic black community of Gum Springs, Virginia. The U.S. Department of Education funded this project. Barnett moved to Columbia University and from August 1980 to August 1983 she was professor of politics and education, professor of political science, and director of the Institute for Urban and Minority Education. In 1982-83 she was co-principal investigator on the Constitution and American Culture and the training program for special project directors, sponsored by the National Endowment for the Humanities. From February to August 1983, Barnett was also consultant for the Presbyterian Church of the United States. She was appointed professor of political science and vice-chancellor for academic affairs at the City University of New York, for the twenty-one college system that serves 180,000 students. She remained there from September 1983 to May 1986. Barnett was then named chancellor and professor of political science, University of Missouri-St. Louis. She held the post from June 1986 to September 1990. During the spring of 1990 she was appointed president of the University of Houston.

## University of Houston

Barnett became the first black and the first woman to head the University of Houston. Her appointment resulted in widespread press coverage. An article in the March 6, 1991, issue of the *Chronicle of Higher Education* put her in the national spotlight as head of an institution that she says is "literally on the cusp of greatness" (Mangan, A-3). Barnett is one of three women to lead universities with more than thirty thousand students. The fact that she is the only black leading a major research institution is less significant to her than her agenda at the University of Houston and her belief in the role that public urban universities should play in addressing a wide range of issues, from homelessness to space exploration. Barnett believes that urban research universities should help society "solve its key conundrums," They must do so "in the same way land-grant institutions helped solve the problems of the 19th century" (Mangan, A-3).

Barnett has been described as "an animated women" who outpaces her highly energetic colleagues, an effective school booster, and a woman with strong views as well as a willingness to hear the views of others before making a decision (Mangan, A-3). Self-confident, though not conceited, Barnett is as comfortable in the corporate boardroom as she is in her staff meetings and has been praised equally by business people and academics.

During her career Barnett has been involved with numerous community activities and has served on a number of boards. Her board memberships have included the Monsanto Company, the Educational Testing Services, the Student Loan Marketing Association (SALLIE MAE), the American Council on Education, and the Committee on Economic Development. Her cultural affiliations have included membership on the board of directors of the Houston Grand Opera and the board of advisors of the Houston Symphony. In addition to her involvement with various political science and South Asian studies associations, Barnett is a member of the Overseas Development Council, the Council on Foreign Relations, and the Cleveland Council.

## A Noted Author

The author of fifty articles, Barnett is also the author or editor of five books. In addition to her award-winning book on South India she co-edited *Public Policy for the Black Community: Strategies and Perspectives* (Los Angeles: Alfred Press, 1976); *Readings on Equal Education*, vol. 7 (New York: AMS Press, 1984); *Comparing Race, Sex, and National Origin Desegregation: Public Attitudes of Desegregation*, *Readings on Equal Education*, vol. 8 (AMS Press, 1985); and *Educational Policy in an Era of Conservative Reform*, *Readings on Equal Education*, Vol. 9 (AMS Press, 1986).

Her awards include Bethune-Tubman-Truth Women of the Year Award, 1983; Association of Black Women in Higher Education Award for Educational Excellence, 1986; American Political Science COBPS Award for Excellence in Scholarship and Service to the Profession, 1986; Golden GAZELLE Award from the Project on Equal Education of the

NOW Legal Defense Fund (1987); and Award of Achievement, Jefferson City NAACP, 1988. The St. Louis Variety Club named Barnett Woman of the Year in 1989. In 1990 the Women's International Leadership Forum presented her with the Woman Who Has Made a Difference Award. While at the University of Missouri-St. Louis, she designed and implemented the Partnerships for Progress Program and, in 1991, the American Council on Education recognized the program and awarded it the Anderson Medal. Barnett developed a similar program at the University of Houston called the Texas Center for University-School Partnerships.

Marguerite Ross Barnett was the mother of one daughter, Amy (Douglass) Barnett, born on December 18, 1962, during a previous marriage to Stephen A. Barnett. On June 30, 1980, Barnett married Walter Eugene King, a former member of Parliament in Bermuda and a former professional golfer. In November 1991 Barnett took a medical leave of absence to seek treatment for cancer. She died on February 26, 1992 in Wailuku, Hawaii.

### Books

*Who's Who Among Black Americans*, 1990/91, 6th ed. Gale Research, 1990.

*Who's Who in America*. 46th ed. Marquis, 1990.

*Who's Who of American Women*. 16th ed. Marquis, 1988.

### Periodicals

*Chronicle of Higher Education* 37, March 6, 1991. □

## Bartholomaeus Anglicus

**The Franciscan professor of theology, Bartholomaeus Anglicus (fl. 1220-1240), provided scholars with one of the first encyclopedias in the civilized world.**

**T**he exact birth and death dates of Bartholomaeus are not known. It is believed that he lived in the first half of the thirteenth century from 1220 to 1240, during which time he wrote his 19 volume reference work *De proprietatibus rerum*, a treatise on the natural sciences. It was organized as an encyclopedia and the work survived many translations including Spanish, French, Dutch and English, as well as numerous printings and handwritten manuscripts.

Bartholomaeus was also known as Bartholomew the Englishman or Bertholomew de Glanville. Born in Suffolk, England, he was an English friar who studied the natural sciences and theology at Oxford University, under the direction of Robert Grosseteste. Bartholomaeus went on to the University of Paris, where he taught theology. In 1224 or 1225, with fellow theology professor Haymo of Faversham, he joined the newly organized Franciscan order in Paris. Bartholomaeus continued to teach theology until 1231

when he was sent to Magdeburg, Germany as lector at the request of the minister general, John Parenti.

### Enhanced Educational Opportunities

Educational opportunities blossomed in thirteenth century Europe with the appearance of two scholars: Bartholomaeus Anglicus of the Franciscan order and Vincent of Beauvais of the Dominican order. Each set for himself the goal of organizing and cataloging the knowledge of his time.

Vincent's book, *Speculum majus* was the larger of the two efforts, covering all knowledge to 1250. Bartholomaeus, on the other hand, focused his work, *Liber de proprietatibus rerum* (also referred to as *De proprietatibus rerum*) on the knowledge of all sciences of his time. The book is an alphabetical listing of trees and herbs, concerned primarily with their medicinal uses and values. Similar to the *Speculum majus*, Bartholomaeus treats each topic with theoretical considerations.

### *De proprietatibus rerum*

*De proprietatibus rerum* consists of 19 books in 400 manuscript pages, organizing the subjects of astronomy, botany, chronology, geography, medicine, mineralogy, philosophy, theology and zoology. It is considered by many to be the first important encyclopedia of the Middle Ages. *De proprietatibus rerum* was the first to combine the works of Arabian, Greek and Jewish physicians and naturalists into one reference work. Bartholomaeus cited the works of Aristotle, Isaac Medicus, Hippocrates, Theophrastus and the Arabian, Haly.

*De proprietatibus rerum* was extremely popular, with many manuscript copies made and distributed throughout Europe. In the fourteenth century, it was translated into many languages. The Occitan version was dedicated to Gaston Phoebus, Count of Foix and in 1372, Jean Corbechon translated a copy into French for Charles V. More than 43 copies of Corbechon's translation have been identified. The National Library at Paris currently possesses 18 copies. *De proprietatibus rerum* was kept in manuscript form for over 200 years and was the accepted reference work for those studying the natural sciences. John Trevisa produced an English translation in 1398 entitled *Properties of All Thyngs*. This translation was a source of information for numerous writers of the time, including William Shakespeare. Students at the University of Paris, as well as lay people, had access to the work and Bartholomaeus was considered to have exerted considerable influence on the world in which he lived.

### Important Legacy

Bartholomaeus' contribution to education is undeniably one of the most important in history. Although by today's standards, his work barely scratched the surface of the world's collective knowledge of natural history, it represents one of the best references to life in the Middle Ages. It is through this door that we learn a great deal about how people survived during these times. It provides an understanding of numerous aspects of life in twelfth and thirteenth

century Europe. The large number of copies made available to students and scholars alike is a testament to its importance.

Although his exact death date is not known, Bartholomaeus is believed to have died in France in the middle of the 13th century.

### Books

*Catholic Encyclopedia*, volume II Robert Appleton Co., 1907  
*Merriam-Webster's Biographical Dictionary* Merriam Webster, Inc., 1995

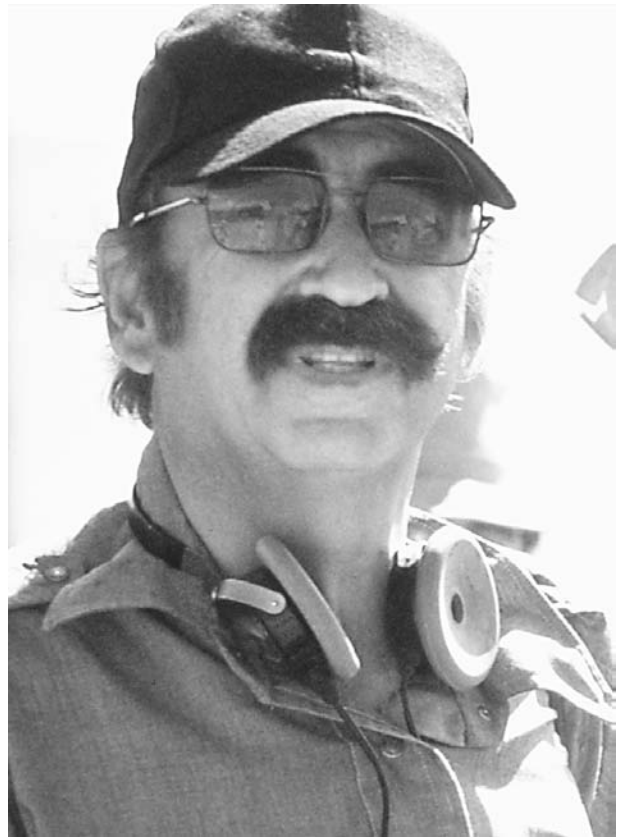
### Online

- "Bartholomaeus Anglicus," *Encyclopedia Britannica* <http://www.britannica.com/seo/b/bartholomaeus-anglicus/> (November 15, 2000)
- "Bartholomew de Glanville" *Columbia Encyclopedia*, sixth edition 2000 <http://www.bartleby.com/65/ba/BartholoG1.html>, (December 11, 2000)
- "Bartholomaeus Anglicus (late 12th Century England)" <http://www.franciscan-archive.org/index2.html>, December 11, 2000)
- "Bartholomaeus Anglicus" *Catholic Encyclopedia Volume II* <http://www.newadvent.org/cathen/02313b.htm>, (November 15, 2000)
- "Bartholomaeus Anglicus 12th Century," <http://www.hcs.ohio-state.edu/hort/027.html>, (November 15, 2000)
- Liber de proprietatibus rerum (On the Properties of Things)* by Bartholomew the Englishman and its French translation by Jean Corbechon [http://www.bnf.fr/enluminures/texte/atx2\\_oy.html](http://www.bnf.fr/enluminures/texte/atx2_oy.html), (November 24, 2000) □

## Saul Bass

**The contributions of American designer Saul Bass (1920-1996) initiated a revolution in the film advertising industry. Where motion picture advertising was once an unrefined and artless trade, Bass endowed the craft with the sophistication of a bona fide art form.**

In the world of Saul Bass, letters walked, and roses turned to raindrops; analogous correspondence between unrelated objects was a way of life. He was a master of presentation and communication. He extracted simple and unassuming moments in time, raising each to the level of great art. With his great knack for exposing a magic meld between image, typography, and motion, he held seasoned filmmakers in awe as repeatedly he captured the naked essence of a two-hour feature-length film and condensed the emotion of the drama into a brief title track of two minutes or less. Bass possessed a heightened sense of expression and an ability to convey atmosphere, theme, and story line through the preliminary title sequence of a feature film. For four decades he grabbed the attention of the movie going public, holding spectators riveted to the silver screen, eager to follow the title track into the substance of the plot. As an advertising designer he endowed similar extensions of



form and perception to products other than motion pictures. With deftly coordinated combinations of advertising and product packaging, he transformed the corporate image into a cohesive personality, poised to seduce the consumer.

Bass was born in New York City on May 8, 1920. He learned his way around the big city and developed a sense of sophistication that accompanies life in a world-class metropolis. From 1936 through 1939, in preparation for a career in graphic design, he studied modernism at New York's Art Students League under the direction of Howard Trafton. Bass worked also as a freelance designer during that time. Near the end of the Second World War, and still freelancing, he enrolled at Brooklyn College where he studied with Gyorgy Kepes in 1944-45. In 1946 he moved to Los Angeles, California, where he established and operated a more permanent business venture, a design firm called Saul Bass and Associates.

### Master of Movie Titles

Bass entered the film industry in 1954 when he developed the advertising campaign for *Carmen Jones*, an Otto Preminger production. The central image devised by Bass for that movie was a simple but evocative rose in flames. The image served as a cohesive motif for the film promotion and led to a successive assignment from Preminger. He was asked to create the promotion motif for a 1955 Frank Sinatra film, called *Man with the Golden Arm*. Bass developed a graphic symbol for the film's advertising promotion by designing a logo that was shaped like an arm and intended to

represent addiction. Preminger approved the logo and requested bass to create the title track sequence for the movie as well. As devised by Bass, the film's title track initially called for a series of animated rectangular shapes that marched into position to form an arm. The arm, continually distorted, accented further the movie's central theme of drug addiction. The design of the arm developed into the basis of an advertising campaign, although the smoothly animated quality of the sequence, as it was originally designed, was eliminated from the final track. Interestingly, it was a tug-of-war relationship between Bass and Preminger that resulted in the final version of the movie opener with disjointed animation of the arm. While Bass argued that the sequence fell flat without animation, Preminger stubbornly opposed the idea. The final compromise, staccato-like movements as the arm segments maneuvered through the visual progression, quickly earned a spot in the annals of classic moments in American film.

Decades later, critics concurred that the title sequence of *Man with the Golden Arm* revolutionized the film advertising industry by selling the film, as a unique and individualized commodity. A new concept emerged, which aligned the title sequence with a symbolic representation of the movie. Prior to the arrival of Bass and his ideas, the title track served little more purpose than that of an announcement posted on a bulletin board. Every new sequence by Bass was an artwork of itself, and a microcosm of the full-length feature to follow. Pamela Haskin said of Bass in *Film Quarterly*, "His titles are integral to the film. When his work comes up on the screen, the movie itself truly begins." Bass's ingenious use of morphs grabbed filmgoers instantaneously with a micro summary of the story line of the film to follow. The laconically morphing flower-turned-teardrop at the opening of Preminger's *Bonjour Tristesse* left the audience mesmerized in 1957.

In 1958 the opening sequence of William Wyler's *Big Country* marked a further evolution for Bass in his unique craft of filming title shots. Bass acted on an inspiration to set the scene of the feature film by creating a video prologue to the movie proper. It was an interesting notion and one that proved highly successful. In the opening moments of *Big Country* he introduced the premise that the main character left his home for the wide open space of the American West and simultaneously defined the extreme remoteness of the location wherein the story takes place.

Among the more memorable title shots by Bass was an ingenious cacophony of text and graphic fills that introduced Alfred Hitchcock's *North by Northwest* in 1959. That same year, when Preminger's *Anatomy of a Murder* appeared, the Bass-produced title sequence hit hard, with a cartoon-like silhouette of a segmented human body.

After a decade of honing his vocation, Bass's life and career quickened in the late 1950s, when he met and hired Elaine Makatura, an artist and composer. Over the course of several years the two developed an intimate professional relationship, a collaborative effort that endured for over 40 years. As the 1950s merged into the 1960s, Saul Bass and Associates developed title designs for over one dozen films, while critics rained relentless praise on his creative output.

Bass, with his distinctive touch of emotion, created an unsettling display of parallel lines ad infinitum, which served to crank up the audience tension in the opening moments of a 1960 Hitchcock production, a classic horror thriller, called *Psycho*. The following year brought the acclaimed musical drama *West Side Story*. With deceiving simplicity, the story unraveled to a disturbing climax. It was at the end of the film that Bass seized the moment of listing the credits in graffiti, to mesmerize and calm the audience from the impact of the story. In 1962, Bass conceived another major mini-hit and film-land classic in presenting the skillfully orchestrated cat fight that consumes the brief preliminary moments of the title sequence of Edward Dmytryk's story of urban vice, called *Walk on the Wild Side*. In the 1964 title sequence for *The Victors*, Bass grabbed the viewer with a montage of historical images—with the final image shifting from the potpourri of the montage to become the first scene of the film proper.

### Direction of Shorts

Seemingly limitless in creativity, Bass found expression in short film sequences beyond the movie openers, closing credits, and advertising logos that brought him to prominence. His mastery of the understated film short led film directors to consult him in the filming of climactic moments in movies. In that regard, his input to Alfred Hitchcock's *Psycho* was among the most reverberating and dramatic. Bass received recognition in the credits listing with regard to his direction of the filming of the terrifying murder in the shower. Although the entire scope of his role in the filming remained a topic of dispute decades afterward, indisputable was the notion that the scene became an established classic of horror film hysteria and mesmerized generations of movie viewers. That same year, in 1960, Bass assisted Stanley Kubrick in filming the final battle in *Spartacus*. Later, in 1966, Bass was largely responsible for the filming of the car racing scenes in John Frankenheimer's *Grand Prix*. Bass used the opportunity to bring the audience to reflect on the race from the first person point of view of the drivers.

Bass, as might seem inevitable, went on to direct complete films, mostly of the genre known as "shorts." In his first such foray in 1962 he produced a film called *Apples and Oranges*. Six years and five productions later, Bass won an Academy Award for his 1968 short, *Why Man Creates*. Two others of his films received Academy Award nominations in 1977 and 1979 respectively. In all, Bass and Makatura introduced a steady output of film shorts to the international film festivals throughout the 1960s, 70s, and 80s, and for much of the 1990s. They directed a feature length science fiction film in 1973, called *Phase IV*.

### Four for Scorsese

Bass developed title cuts for four of Martin Scorsese's films: *GoodFellas* in 1990, the ominous *Cape Fear* in 1991, *The Age of Innocence* in 1993, and *Casino* in 1995, which was Bass's final movie title completed before his death. The *Casino* opener depicts an explosive reverie, wherein actor Robert De Niro transcends earth and symbolically dives into

hell. With the surreal imagery Bass created an atmosphere of unscrupulous depravity and greed, intended to characterize the aura of Las Vegas that reveals itself as the movie unfolds. Bass movie title art established clearly and succinctly the theme and emotional premise of each film, and it became clear to film promoters that audiences appreciated the underlying appeal to their sophistication.

### More Than a Film Career

Bass and his design firm, which was renamed Saul Bass/Herb Yager and Associates in 1978, earned honors and distinction beyond the film industry, for a variety of corporate designs and promotional campaigns. Major corporations such as American Telephone and Telegraph, Rockwell International, and Warner Communications were numbered among his prominent clients. His logo designs for the Girl Scouts of America, United Airlines, and others were readily recognized in the United States and abroad. For Bass, every project was a concerted effort at cohesive packaging, in keeping with his singular appreciation for detail. Memorable creations from his design repertoire included the 1983 U.S. postage stamp commemorating art and industry, publicity posters for five academy award ceremonies, and the poster designs for the 1984 Olympic Games in Los Angeles.

Bass collected an impressive assortment of international honors from both the advertising and movie industries. He was named Honorary Royal Designer for Industry from the Royal Society of Arts of London in 1964, and he received an honorary fellowship from Bezalel Academy in Jerusalem in 1984. Prestigious art institutes such as the Philadelphia College of Art and the Los Angeles Art Center College of Design awarded honorary doctorate degrees to Bass. He held a membership in the Sundance Film Institute in Utah and served as an executive board member of the International Design Conference in Aspen, Colorado.

Exhibitions of his work appeared at the Rotterdam Film Festival in 1981, at the Cinematheque Francaise in Paris in 1982, and at the Zagreb Film Festival in Yugoslavia, in 1984. In 1987, as a professor at the University of California in Los Angeles department of art, he was named a Regents Lecturer for 1986-87, and a retrospective of his work appeared on exhibit at the school. Collections of his work are displayed internationally—at the Museum of Modern Art in New York City, at the U.S. Library of Congress in Washington, D.C., in Amsterdam at the Stedelijk Museum, and in Czechoslovakia at the Prague Museum. His writings appeared internationally in publications such as *Graphis* of Zurich, Switzerland; *Film Dope* of London; and *Banc-Titre* of Paris, as well as *American Cinematographer* of Hollywood and *Cinema* of Beverly Hills. G. Nelson published a book on Bass, entitled *Saul Bass*, in 1967. Bass earned listings in *International Dictionary of Films and Filmmakers* in 1985 and 1991, *Conran Directory of Design* in 1985, and *Who's Who in Graphic Art* in 1982.

Bass died in Los Angeles on April 25, 1996, of non-Hodgkin's lymphoma. His wife-and creative partner, Elaine Makatura, survived him. The couple had been married for 35 years; they had two children, Jennifer and Jeffrey.

### Periodicals

*Film Comment*, April 1997, p. 72.

*Film Quarterly*, Fall 1996, p. 10.

*Los Angeles Times*, April 27, 1996, p. 22. □

## Pierre Beauchamps

**Early ballet dancer Pierre Beauchamps (1636-1705) was the ballet tutor of King Louis XIV of France and was regarded among the finest dancers of his time. He was the first to define the five basic positions of ballet.**

Early ballet dancer and choreographer Pierre Beauchamps made significant contributions to the art form of ballet as it evolved into modern times. The art of ballet, which originated in Italy during the 1400s, had migrated to France through the effort of Queen Catherine de Medici in the 1500s but remained nebulous as an art form for another hundred years. It was not until the arrival of Beauchamps and the Academie Royale de Danse in France, at the behest of Louis XIV, that the dance became a codified discipline. Beauchamps was considered to be among the finest dancers, and it was during his lifetime that ballet was transformed from a popular pastime of royalty into a serious art form that attracted large public audiences.

Pierre Beauchamps was born in 1636 in Versailles, France. His family members were traditionally musicians and dancers who entertained the monarchs of France. He was also a distant cousin to the playwright Jean-Baptiste Moliere, a member of the Mazuel family that also was popular with French royalty. Over several generations, the two families had established a dominant position within the royal court of France. Perhaps most prominent among the Mazuels was a great-uncle to Beauchamps-and great-grandfather to Moliere—named Guillaume Mazuel. Along with violinist Christophe de Beauchamps (an uncle to Pierre Beauchamps), Mazuel was a member of the orchestra of Louis XIII. As the Beauchamps and the Mazuels performed regularly for the king, the influential relationship between the two families and the French monarchy had solidified by the time that Pierre Beauchamps was born.

By early adolescence Beauchamps, with his extraordinary affinity for the dance, had attracted the attention of the royals. As early as January 23, 1648—no more than 11 years old at the time—he appeared on the bill of the *Ballet du dereglement des passions*, a performance at the Palais Cardinal. He possessed a natural ability for the execution of graceful ballet movements and leaps that defied gravity. By 1650 he had received an appointment as the private ballet tutor of Louis XIV of France and thereafter worked with the king daily for approximately two decades. In 1660 Beauchamps performed personally in the ballet of Cavalli's *Xerse* at the celebration of the royal wedding of Louis XIV to the Spanish Princess, Maria Theresa (the Infanta).



Also as a teenager Beauchamps began to perform for his cousin, Moliere, who produced a number of comedie-ballets. The Moliere troupe operated initially under the name of the Illustre Theatre, and later as the Troupe de Monsieur. After extensive research, recent experts have failed to determine the full extent of Beauchamps's earliest involvement with the Moliere productions. It is certain that he danced in nine of the Moliere-Lully premieres and received top billing in the *livres* (libretto) on multiple occasions. John S. Powell suggested in *Music and Letters* that it was a very young Beauchamps who composed the music for Moliere's royal production of *Les Facheux* in the 1650s. It has been established with reasonable certainty that by 1659 the relationship between the dancer and the playwright assumed an increasingly formal and professional nature. Beauchamps spent the ensuing 12 years working with Moliere's troupe and performed as a dancer in a wide variety of roles, ranging from dramatic to comic characters, and portrayed a number of beings, from sprites to heroes of epic proportion.

Also performing in the Moliere programs during the 1660s were Louis XIV and the members of his court. Beauchamps and the king were seen in performance together specifically in *Le Mariage forcé* in 1664, *Le Sicilien* in 1667, and in *Les Amants magnifiques* in 1670. By 1670 when Louis XIV abandoned his dancing because of his aging constitution, the art form of ballet had evolved into a professional discipline. Subsequently in 1674 Beauchamps assumed a position with the Academie Royale de Danse, founded by his former pupil, the king. It was Beauchamps who first defined the five basic positions of the dance, making it possible to choreograph increasingly intricate movements and simplifying the process of teaching the art form to new dancers. Largely as a result of the teaching innovations associated with Beauchamps, the casual pastime of ballet began a centuries-long evolution into a serious art form.

### Dancer Turned Choreographer

Still in his teens, Beauchamps began to work as a choreographer. It was the occasion of a masquerade presented on February 3, 1656 that marked the approximate beginning of his career in choreography. The program, produced by the royal choreographer Jean-Baptiste Lully, was followed within one month by another Beauchamps-choreographed Lully production, *La Galanterie du temps*. Soon afterward Beauchamps choreographed the 1657 *Ballet des plaisirs troubles* at the Louvre, and from that time forward his skills were widely recognized.

On May 18, 1659 he choreographed a performance to celebrate the engagement of Louis XIV and the Infanta. The earlier production of Moliere's *Les Facheux*, to which Beauchamps may have contributed both music and choreography, was performed at least two more times for the royals, including a commissioned presentation in 1661 for a gala hosted by the French minister, Nicolas Fouquet. The production surfaced again, in November of 1661, and played for 44 public performances in Paris at the Theatre du Palais Royal. When in 1661 King Louis established the Academie Royale de Danse and placed Lully in charge,

Beauchamps stepped into an appointment as *Intendant des Ballets du Roy* (royal choreographer).

As Beauchamps contributed to the advancement of ballet as a pastime for the denizens of the royal court, the dance as a fine art evolved simultaneously in the public sector. There, too, Beauchamps left the distinctive mark of his talent. Records that have survived through the centuries from the account books of Moliere's theatre company indicate that Beauchamps received payment for his services—presumably choreography—for a number of Moliere's ballet productions in the 1660s and later. When *Le Manage force* opened on February 15, 1664 and played for 15 performances at Theatre du Palais Royal in Paris, Beauchamps was on the payroll. In 1671, Beauchamps ascended to the post of Moliere's ballet master near the end of a 146-performance run of *Pomone*. Beauchamps replaced the original choreographer, Anthoine Des Brosses, for that show, which opened on March 3 in a Left Bank facility known as the Jeu de Paume de la Bouteille, marking the debut of the Moliere Academie d'Opera in Paris. Beauchamps continued with the Moliere Academie during the summer of 1671, simultaneously involved not only as a choreographer, but also as the orchestra conductor and as dancer for Moliere's *Psyche*. That production had opened on January 17, 1671 in the Grand Salle des machines at the Tuileries Palace. The production and its elaborate scenery moved to the Palais Royal where it opened on July 24, with performances continuing into October. The show reopened again in late January of 1672 and continued into March of that year. Two months later, beginning on May 24, it was Beauchamps who commandeered a series of ten performances in a revival of Moliere's production of *Le Bourgeois Gentilhomme*. He then choreographed *Le Mariage force*, which opened for the first of 14 performances on July 8. The production featured all-new music by Marc-Antoine Charpentier. Also that summer, Beauchamps signed a contract with Moliere, extending their collaboration through 1672. Thereafter Beauchamps and Moliere continued in a collaboration that lasted until Moliere's untimely death in February of 1673. Their work during that time included a production of *Psyche* that ran from November 11 until January 22, followed by *Le Malade imaginaire*, which was Beauchamps's final work with Moliere. *Le Malade* premiered on February 10, one week before the death of Moliere. Beauchamps remained with the troupe to assist with the transition while Moliere's widow prepared to assume control of the company. At that same time, and quite unexpectedly, Lully—who coincidentally had resuscitated the Academie Royale de Danse from an earlier bankruptcy—usurped the Moliere's playhouse venue by royal decree, leaving Moliere's troupe without a stage.

Beauchamps, who had fallen from Lully's favor during his earlier collaboration with Moliere, was left with few options other than to contribute his services as a choreographer with Lully's royal academy troupe. For the remainder of the 1670s Beauchamps worked in choreography and dance at the Academie, along with Moliere's former one-time choreographer, Des Brosses. Beauchamps was intricately involved in the instruction of the dance, and it was during that time that he began to define and to codify the art

of ballet. He described the five basic postures and devised a system for describing each move. Although he failed to seek publication for his system of ballet, it served nonetheless as the basis for later systems and brought the art to a new level of grace and creativity.

In 1680, Beauchamps succeeded the original director of the Academie, Francois Galand du Desert, by royal appointment; and in 1687, coincidental with the death of Lully, Beauchamps retired from the Academie. He relinquished his post as director to his pupil, Guillaume-Louis Pecor. According to eighteenth century critic Raguenet, as quoted by Powell, "They [Beauchamps and Lully] have carried these [ballet] pieces to a higher degree of perfection than anyone in the world will ever attain." In semi-retirement, Beauchamps worked privately on demand as a dance teacher for the high-ranking bourgeoisie and as a composer and choreographer for the Jesuits in Paris. Even in his 60s, it was said that Beauchamps retained his remarkable agility and continued to perform high leaps with apparent ease.

### Footnotes

It was during the era of Beauchamps and Lully that many dramatic improvements came about, which helped ballet in its evolution as one of the major cultural arts of the twenty-first century. It was during Beauchamps's lifetime that public performance venues—beyond the confines of the royal courts—began to appear. During much of his career dance remained the exclusive domain of men, and Beauchamps often performed in the role of a female character, opposite Louis XIV. It was not until 1681 that female dancers were introduced into the ballet. Yet even with the debut of the first prima ballerina, Mlle. Lafontaine in the 1800s, some time elapsed before the heavy clothing and high-heeled costumes were replaced. Another two centuries would pass, however, before the perfection of the dramatic art of toe (pointe) dancing, a feat that was perfected by Marie Taglioni in the 1800s.

Beauchamps's codification, although never published, served as the basis for a subsequent system that was devised by one of his students, Raoul Auger Feuillet. The Feuillet, published as *Choregraphie ou l'art de decrire la dance*, appeared in 1700; it was among the first such systems to see publication. An English translation appeared in 1706, entitled *Orchesography*. It is interesting to note that Beauchamps made no secret of the fact that he found his inspiration as a choreographer from watching the birds on the Paris streets. He insisted that by strewing grain for the pigeons and observing the movements of the flock in the scramble for food, he was inspired to choreograph the ballet. Beauchamps died in 1705.

### Periodicals

*Christian Science Monitor*, September 25, 1998.  
*Music and Letters*, May 1995, p. 168(19). □

## Balthasar de Beaujoyeux

**The sixteenth-century Italian violinist, dancing master, and choreographer Balthasar de Beaujoyeux (ca 1535-1587) went to France from Savoy in about 1555 in the suite of the Marechal de Brissac, and was employed by several royal households. He was rapidly noted for his talent at organizing court entertainment, and was appointed *valet de chambre* to Catherine de Medici, wife of Henri II. He served her and her three sons for 30 years.**

Born Baldassare de Belgiojoso, he later became known as Beaujoyeux or Beaujoyeux. It is thought that he may have collaborated in the masquerade *Paradis d'Amour* (1572). The following year he choreographed *Le Ballet des Polonais* to celebrate the election of Catherine's second son, the Duc d'Anjou, as King of Poland. Beaujoyeux's most famous work is *Le Ballet Comique de la Reine*, which Queen Louise discussed with him personally beforehand. It was produced at the Louvre in Paris in 1581. He too was responsible for the libretto of the ballet, published the following year.

### Academie de Musique et de Poesie

Beaujoyeux is generally acknowledged to be the father of French Court ballet. He was much influenced by the theories of the Academie de Musique et de Poesie (1571), led by the poet, Jean-Antoine de Baif. In this society, poets, artists, musicians, and choreographers exchanged ideas in their desire to emulate the artistic achievements of antiquity. Inspired by the aims of the Academie to recreate classical drama and "vers et musique mesures a l'antique", in which verse, music, and dance were closely correlated, Beaujoyeux attempted to synthesize dance steps with each musical note and phrase. Following the Pythagorean-Platonic belief that the underlying principle of the universe is to be found in numbers, he created his choreography according to mathematical and geometric floor patterns that had mystical and symbolic meanings. These patterns were designed to be seen from above, so that their meaning could be clearly understood. He described dance as the geometrical arrangements of several people dancing in a group, to the varying harmony of several instruments. His love of music is attested to by his frequent references to the beauty and novelty of the music of the *Ballet Comique*—in particular, that of the consorts in the *Voulte Doree*. He compares it to the celestial music of the spheres, which ravishes the soul with its exquisite harmonies. This praise suggests that the Academicians had made great progress in their attempts to create a more expressive musical style which would have beneficial ethical and emotional effects upon the listener.

### Cosmic Order and Harmony

Beaujoyeux's choreography was envisaged as a visual expression of this celestial music, an imitation of the movements of the heavenly spheres, in which the courtly ladies

exhibited cosmic order and harmony on earth. The emphasis was on accuracy of timing and absolute precision in the use of space and floor patterns. The stylistic qualities were those of grace, charm, and elegance of movement. Beaujoyeux praises the dexterity of the ladies' dancing in the *Ballet Comique de la Reine*, saying that one would have thought they were in battle formation, so well did they keep in time to the music and in their place. Everyone thought that Archimedes himself would not have had a better understanding of geometrical proportions than did these princesses and ladies in this ballet. It has been suggested that the dancing in the court ballets was no different from ordinary social dancing. But although the same steps were used, the dances were especially choreographed for a specific occasion and theme. The description of the numerous figured dances in the *Ballet Comique de la Reine* shows the considerable complexity of the choreography.

### Unity of the Arts

In a laudatory poem on the publication of *Ballet Comique*, Billard addressed Beaujoyeux as "Geometre, inventif, unique en ta science." Geometrically patterned dance was not, in fact, a new invention. In the *Ballet des Polonais*, for example, the dancers trace figures in triangular and square formations. From earliest times and right through the Middle Ages, mathematics and number symbolism had been accorded a mystical status. But Beaujoyeux's harmonizing of music, verse, and dance was generally acknowledged to be a new invention, one in which the Academy's aim to achieve a unity of the arts was fully realized. Moreover, this collaboration of poets, composers, and scenic designers under his overall direction marks the central importance of the choreographer in sixteenth-century French court ballet. Beaujoyeux retired in 1584 and died in Paris around 1587.

### Books

- Anthony, J.R., *French Baroque Music from Beaujoyeux to Rameau*, revised edition, London, 1973.  
 Kirstein, Lincoln, *Dance: A Short History of Classic Theatrical Dancing*, New York, 1935.  
 Kirstein, Lincoln, *Movement and Metaphor: Four Centuries of Ballet*, New York, 1970.  
 Lacroix, P., *Ballets et Mascarades de Cour de Henri II a Louis XIV*, vol. 1, Geneva, 1868.  
 McGowan, Margaret M., *L'Art du Ballet de Cour en France 1581-1643*, Paris, 1963.  
 Prunieres, H., *Le Ballet de Cour en France*, Paris, 1914.  
 Yates, Frances, *The French Academies of the Sixteenth Century*, 1947.

### Periodicals

- Musica Disciplina*, vol. 1, no. 2, 1946.  
*York Dance Review*, Spring 1976. □

## Martin Behaim

**Martin Behaim (1459?-1507) fashioned a globe depicting the known world in 1492. In the twenty-first**



**century the restored globe remained on display at Nuremberg, and is the oldest surviving relic of its kind on earth.**

**M**artin Behaim distinguished himself as a skilled mathematician and astronomer during the late fifteenth century. In 1490 he accepted a commission to manufacture a terrestrial globe for his hometown of Nuremberg, Germany. The globe, which survived into the twenty-first century, is believed to be the oldest such artifact of its kind. Prior to constructing the globe, Behaim spent time in Flanders and Portugal. In Portugal he was favored among the mathematicians of King John II's court. Behaim then spent two years as a cosmographer on a sailing expedition along the West African coast, before settling briefly in the Azores where he founded a Flemish colony.

### A Well-Traveled Merchant

Martin Behaim was born in Nuremberg, Germany, sometime around 1459. In his youth, it is believed that he studied mathematics with the noted German astronomer and mathematician, Johann Mueller, commonly known as Regiomontanus. Behaim, the son of a wealthy merchant, then traveled through much of Western Europe as a merchant's apprentice in the textile business and became a merchant by trade. He traveled to Antwerp and elsewhere as a student and was an apprentice weaver in Flanders in 1477. During the course of his travels he arrived in Lisbon,

Portugal some time in the early 1480s, where he quickly found favor at the court of King John II. Also in Lisbon, Behaim made the acquaintance of the explorer Christopher Columbus. According to John Noble Wilford in *The Mapmakers*, Behaim might have exaggerated or completely concocted many of the tales about him that were handed down, including his claim of tutelage under Regiomontanus. According to Wilford, evidence suggests that Behaim might have devised these and other misrepresentations about his background in an attempt to impress the king of Portugal. Regardless, Behaim displayed an extensive knowledge of mathematics and an intimate familiarity with Regiomontanus's *Ephemerides*. Likewise Behaim's accomplishments among the Portuguese proved acceptable to King John.

Because of his knowledge of mathematics and navigation Behaim received an appointment to the king's council of mathematicians in 1483 and under that auspices assumed responsibility for a variety of research projects as assigned by the king. Among them Behaim was requested to develop improvements to existing navigational instruments. The exact innovations suggested by Behaim remain unclear. It is believed that he demonstrated the use of Levi ben Gerson's cross-staff apparatus as a means of determining ship's altitude. The cross-staff (also called a Jacob's staff or ballestilla) resembles an Arabian *kamal* and works on the principle of coordinating the declination of the sun with the horizon. The cross-staff proved an appropriate enhancement to a navigator's astrolabe when used in conjunction with the sun declension tables of Regiomontanus, called *Tabula directionum*. It is possible that Behaim suggested to the Portuguese to construct astrolabes of brass, to replace the older wooden models in Portugal. According to some scholars the Portuguese already were well versed in the use of solar declension tables and brass instruments by the 1480s when Behaim arrived in Portugal. Regardless, his innovations proved highly satisfactory, and in 1484 King John II dubbed Behaim with the honor of knighthood in the Portuguese Order of Christ. In 1485-86, according to most reports, Behaim was then invited to travel as cosmographer with Diego Cam (var. Diogo Cao) on a southbound expedition to explore the West Coast of Africa. The Cam expedition continued past the mouth of the Congo River, reaching Walvis Bay (var. Walfisch Bay) in southern Africa.

In 1486, while on a return voyage from Africa, the Cam expedition stopped at Fayal in the Azores, where Behaim remained for several years. In Fayal he married the daughter of the governor, Jobst von Hurter, and established a Flemish colony before returning to his hometown of Nuremberg in 1490. It was upon his return to Nuremberg, that Behaim completed construction of the Nuremberg Terrestrial Globe as a commission from the city. Soon afterward he departed for Portugal where he spent his later years as an emissary.

### Nuremberg Terrestrial Globe

Martin Behaim's globe was the first known terrestrial globe to be manufactured since the time of the ancient Greeks. If globes older than Behaim's existed, they failed to survive into the twenty-first century and the history of their

existence remained obscure as a result. Behaim spent nearly one year in constructing the globe, beginning in 1491 at a cost of approximately \$75. Glockenthon, an artist, created the actual map drawings according to Behaim's specifications. The completed globe, which came to be called *Erdapfel* (earth apple) by the townspeople, was restored in 1825 and preserved at the city hall in Nuremberg. The German National Museum, also in Nuremberg, later took possession of the globe, which is commonly known as the Nuremberg Terrestrial Globe.

The globe is slightly less than 21 inches (51 cm) in diameter; it is fashioned from a type of papier-mache and coated with gypsum. The ball is supported on top of a wooden tripod. Glockenthon's map drawings were detailed onto parchment strips and pasted into position around the sphere. The map appears as a nautical chart, depicting a total of 1,100 geographical locations, although no coordinates appear. Two full circumferences are described on the globe, one being latitudinal and representing the equator; the other representing the *ecliptic* (the path of the earth with respect to the sun). The tropics of Cancer and Capricorn appear also on the globe, which is decorated with a number of miniature ornamental paintings. Among the decorative illustrations the globe features representations of the zodiac symbols, which punctuate the path of the ecliptic on the globe. Other tiny drawings depict kings, saints, sailing ships, wild animals, and fish. Forty-eight banners and 15 coats of arms appear also among the many decorations. The paintings were created originally in six colors, including a dark-blue sea, brown and green forests, and silver areas of ice and snow. The vicinity of the Cape Verde islands is adorned with a mermaid and a merman, and a single meridian cuts across the globe, spanning 180 degrees from the North Pole to the South Pole at a longitude that is 80 degrees west of Lisbon.

The map of the world as depicted on the Behaim globe represents the known world as described in the second century by Ptolemy, who based his work on the knowledge of the ancient Greeks and Romans. The Behaim globe however dispenses with the longitudinal and latitudinal markings described by Ptolemy. Decorative medieval influences also permeate Behaim's work, including the depiction of several mythical islands. Otherwise the geographic aspects of Behaim's map vary from Ptolemy's description with only some minor revisions in keeping with new knowledge accumulated between the third and fifteenth centuries.

With respect to the geographical representations of the globe, there are some indications that Behaim might have referenced the writings of Marco Polo. The map also bears some resemblance to the Florentine maps of the cartographer Henricus Martellus Germanus. As for the inaccuracies of the map, some cartographers have speculated that a large and indistinct island positioned to the west of the Azores on Behaim's map might have been intended to represent Brazil and the East Coast of South America. If that is true, then Behaim's globe was the first known map to depict the continent of South America, by way of correcting earlier maps, although the first depiction of South America is usually credited to Martin Waldseemüller in his map of

1507. Others have presumed the obscure island on Behaim's globe to represent the Antilles, while the few small islands near Greenland are interpreted as the only possible indication of the existence of North America that appeared on Behaim's globe. Also inaccurate is a distorted extension of the Asian continent that protrudes disproportionately eastward on the globe, in keeping with the surmise of the times as to the location of that continent. As a result, there appears only a slim slip of ocean to separate the western coast of Europe from the easternmost part of Asia on the globe, and the location of Japan on the globe more accurately describes some territory in northwestern Mexico.

It is known that Behaim was acquainted with Christopher Columbus and that the two shared similar beliefs regarding the geography of the world. History leaves no reasonable indication to suggest that any commonality beyond coincidence exists, however, between the construction of the globe by Martin Behaim in 1492 and the voyage of Columbus to the East Indies in that same year. Historians suggest rather that Ferdinand Magellan might have referenced the world map as depicted on Behaim's globe in soliciting sponsorship for his historic voyage that resulted in the circumnavigation of the world in 1519-22. The globe, as it was, described the world not only as Columbus very likely perceived it to be, but also as most reasonable Europeans of the fifteenth century believed Earth to be. Already the educated members of the European population were sufficiently enlightened and accepting of the fact that the surface of Earth is spherical as opposed to being flat. It has been suggested that Behaim may have consulted with the German humanist, Hartmann Schedel, also of Nuremberg in order to insure the scientific accuracy of the globe.

Some historians cite the globe and raise questions concerning the true extent of Behaim's travels; they challenge in particular whether or not in reality Behaim accompanied Cam along the coast of Africa. These suspicions arise because of inaccuracies in that aspect of Behaim's globe, along the western coast of Africa. There are those also who infer that serious inaccuracies on the Behaim globe indicate that he never traveled at all, and that the tales he related to others were the empty boasting of a charlatan. Still others maintain a completely opposing viewpoint, contending that Behaim's positioning of the large island west of the Azores indicates not only that Behaim was well traveled, but also that he might have traveled to South America even before Columbus crossed the Atlantic.

### Later Life

After completing his terrestrial globe, Behaim continued his travels and returned to Portugal in 1498. There he served as an emissary to Belgium and the Netherlands. Reportedly Behaim journeyed in a political capacity between Portugal and the Low Countries on several occasions, but he was captured eventually by the English and taken to England. He escaped from Britain and returned to Portugal where he remained until his death in Lisbon on July 29, 1507. The craft of globemaking increased in popularity in the years following Behaim's death.

Modern-day attempts to reproduce the Nuremberg Globe as a two dimensional image have proven unacceptable, although 510 copies were distributed with Ernest George Ravenstein's book-length biography, *Martin Behaim, his life and his globe*, published in 1908 by G. Philip and Son Ltd. An Internet display at <http://www.themaphouse.com/millencat/wld2821.html> also depicts a two-dimensional reproduction of the map.

### Books

- Dictionary of Scientific Biography*, edited by Charles Coulston Gillespie, Charles Scribner's Sons, 1970.
- Waldman, Carl and Alan Wexler, *Who Was Who in World Exploration*, Facts on File, 1992.
- Wilson, James Grant and John Fiske. *Appletons' Cyclopaedia of American Biography*, D. Appleton and Company, 1898.

### Online

- "Martin Behaim," *Catholic Encyclopedia*, New Advent, <http://www.newadvent.org/cathen/02391b.htm> (January 30, 2001). □

## Robert Russell Bennett

**Robert Russell Bennett (1894-1981) was an arranger, composer, and conductor who orchestrated the scores of more than three hundred Broadway musicals over a period spanning four decades**

Bennett was born into a musical family. His father, George Robert Bennett, played the trumpet and the violin in the Kansas City Philharmonic orchestra. His mother, May Bradford, was a piano teacher. He had one sister. Bennett began to exhibit his musical gifts at the age of three, when he picked out on the piano the melody of a Beethoven sonata that he had heard his mother play. The following year the family moved to a farm south of Kansas City to aid Bennett's recovery from polio. His parents provided most of his schooling. During this period his mother taught him to play the piano and his father gave him lessons on a number of brass and woodwind instruments. When the senior Bennett organized a local band, his son was proficient enough to sit in for any absent member.

When Bennett was fifteen, his family returned to Kansas City, where he became a student of the Danish-American musician Carl Busch, studying harmony, counterpoint, and composition. Between lessons he played second violin in the Kansas City Symphony under Busch's direction. (He also played third base for a local semipro ball team.) To pay for his musical education, Bennett played piano in dance halls, movie theaters, and theatrical pit orchestras—discovering in the process his affinity for popular music.

In 1916 Bennett moved to New York City with just \$200 in savings in his pocket. Again, he supported himself playing the piano in restaurants and dance halls. His first serious musical employment was with the music publishing house of George Schirmer, Inc., where he was hired as a



copyist. When the United States entered World War I, Bennett was able to enlist in the army infantry despite some lingering disabilities from polio. Assigned to a headquarters unit back in Kansas City because of a crippled foot, Bennett organized and conducted army bands and scored dance arrangements. After the armistice, Bennett returned to New York where, on 26 December 1919, he married Louise Merrill, daughter of the headmistress at a finishing school where he had given music lessons. They had one daughter, Beatrice Jean.

Bennett applied for a position as orchestrator at T. B. Harms and Company, at that time the top music publisher in Tin Pan Alley, the center of Manhattan's music industry. The interview won him a chance to audition; he was instructed to orchestrate a Cole Porter tune, "An Old Fashioned Garden," which became the biggest hit of 1919, and Bennett was hired. Soon he was orchestrating entire productions.

### Orchestrated Work of Major Composers

It has been said that Bennett is the reason why musical arrangers get their names on theater programs today. His orchestrations embraced the work of every major composer of Broadway musicals for an entire generation: Rudolph Friml (*Rose Marie*, 1924); Vincent Youmans (*No, No, Nanette*, 1925); Jerome Kern (*Show Boat*, 1927; *Roberta*, 1933; and *Very Warm for May*, 1939); George Gershwin (*Of Thee I Sing*, 1931, and *Porgy and Bess*, 1935); Irving Berlin (*Annie Get Your Gun*, 1946); Cole Porter (*Kiss Me, Kate*, 1948); Burton Lane (*Finian's Rainbow*, 1947); and

Kurt Weill (*Lady in the Dark*, 1941). He even re-orchestrated Georges Bizet's opera *Carmen* for the all-black production, *Carmen Jones* (1943). Perhaps his best-known work was with Richard Rodgers, for whom he orchestrated *Oklahoma!* (1943), *Carousel* (1945), *South Pacific* (1949), *The King and I* (1951), and *The Sound of Music* (1959), among others. The best-known works of the latter part of his career are his orchestrations for Fritz Loewe's *My Fair Lady* (1956) and *Camelot* (1960). For both of these shows, Bennett collaborated with Philip J. Lang.

Bennett's astonishingly rapid method of orchestration was legendary. Watching a number two or three times in rehearsal, he was able to score it from memory, often turning out eighty pages of orchestrations a day. Thus, he occasionally had more than twenty shows running at the same time and almost never fewer than four or five per season.

### Studied in Paris

In 1926, after successfully orchestrating more than sixty musicals, Bennett threw over this lucrative career to go to Paris to study classical composition with Nadia Boulanger. In 1927 and 1928 he won Guggenheim Fellowships enabling him to continue these studies. During this period he composed two symphonies, a ballet, and a one-act opera. In 1931 he was among the winners (along with Aaron Copland, Ernest Bloch, and Louis Gruenberg) of a contest sponsored by RCA for the best musical work by an American. The following year he collaborated with Robert A. Simon on a full-length opera, *Maria Malibran*, which opened at the Juilliard School of Music in New York City in 1935 to mixed reviews. Ironically, the RCA award led to many commissions as an arranger; so many, in fact, that his work as a composer languished. However, in the late 1930s Bennett provided original music as well as orchestrations for a number of Hollywood productions, including *Show Boat* (1936), *The Hunchback of Notre Dame* (1939), and *Rebecca* (1940). During this period he composed the music for the Lagoon of Nations at the New York World's Fair in 1939 and 1940. In 1943 Bennett was commissioned by the *Saturday Evening Post* to write a symphony on *The Four Freedoms*, based on the famous Norman Rockwell painting done for that magazine. Eugene Ormandy, conductor of the Philadelphia Orchestra, played it many times, as did other orchestras throughout the country during World War II.

The new medium of television gave additional scope to Bennett's abilities. In 1952 he orchestrated the Richard Rodgers score for the naval history of World War II, called *Victory at Sea*. Recordings of this score continued to sell well for many years. During the 1950s Bennett again worked periodically in Hollywood. For one of his orchestrations, *Oklahoma!* (1955), he won an Oscar. Tall, slender, and distinguished, Bennett was sometimes likened to the film star Ronald Coleman. His hobbies were tennis, baseball, and pool, and every morning he studied the racing form to place bets. He died in New York City at the age of eighty-seven.

### Structured and Melodic Compositions

Conservative in both style and outlook, Bennett avoided the atonal mode of much serious twentieth-century music. His compositions are generally structured and melodic. Unlike the many composers with whom he worked, Bennett did not place great value on his efforts as an orchestrator. "The orchestrator's value is his sensitiveness to melody," he said once. "If the melody has something to say, he can put colors into the outlines. If the melody has nothing to say, he is powerless." Bennett took a rather snobbish view of Broadway show tunes. "Don't confuse this with music," he once told an interviewer. "I make my living with the Gershwins, the Porters, and the Kerns, but for my own consumption, no. When I have time to myself, I study the scores of the great masters." The passage of time has proven him wrong on two counts: both on what constitutes "music" and on the value of his contribution to it.

### Periodicals

*New York Times*, October 24, 1943; August 19, 1981.  
*Opera News*, July 1993. □

## Bernadette of Lourdes

**Bernadette of Lourdes (1844-1879), a young peasant girl, saw 18 visions of the Virgin Mary, in a grotto in Lourdes, France. These visions, and the curing waters that still flow there, led to the creation of a religious shrine that millions visit each year. Bernadette later became a Roman Catholic nun, and was canonized as a saint in 1933.**

On January 7, 1844, in Lourdes, France, Marie Bernarde Soubirous was born to Francois and Louise (Casterot) Soubirous. She was the eldest of their six children (three other children died as infants). According to the *Catholic Online* website, "because of her small stature, she was always referred to by the diminutive form of her name, Bernadette." As a child, she was considered cheerful and pleasant, but was malnourished. She was also sickly, suffering from asthma her entire life.

As noted by Brother Ernest in his book *Our Lady Comes to Lourdes*, in the mid-1800s, Lourdes "was most certainly a very uninviting place." Many of the people were poor, and their homes were cold and uncomfortable. Religion, family, and hard work were important, but the people did not always have enough to eat. The Soubirous family were very poor peasants.

As noted by Frances Parkinson Keyes in *Bernadette of Lourdes-Shepherdess, Sister and Saint*, Bernadette's father had been the owner of a mill in Lourdes; the mill had been part of his wife's dowry. Although considered "a good-natured, easy-going man," Francois Soubirous was not a good businessman. His generosity often led to financial trouble. Keyes also noted that he was "described as surly,



which led to business problems." Bernadette's mother, known to be sharp with her children, was according to Keyes, "gregarious and large-hearted." With a failing business and a rapid succession of babies to care for, the family struggled throughout Bernadette's childhood. Concerned about their eldest child's health and frailness, her parents would often try to give her extra food to eat. Most of the time, she would share all of it with her younger brothers and sisters. Eventually, because of her poor health and the family's financial problems, her parents began to send Bernadette away to live with relatives and friends.

Between the ages of 12 and 14, Bernadette was hired out as a servant, working the lonely job of a shepherdess, with the sheep and her rosary as her only companions. She had a difficult life due to hard work, poor health, and a minimal education. However, Marie Lagues, her foster mother reflected (on the *Lourdes France official website*), "Bernadette, in spite of the tiredness which was caused by her shortness of breath and difficulty in breathing, always appeared happy and cheerful." An assistant priest of the Parish of Lourdes added, "Everything about Bernadette radiated naivety, simplicity, goodness." As recounted by Brother Ernest, a few weeks after her fourteenth birthday, Bernadette returned to her family in Lourdes. He described her as "still a frail child, greatly troubled by asthma, quiet, devoted to the recitation of her rosary." Her life was about to dramatically change.

## Visions of the “Lady”

It was the evening of February 11, 1858. Because of the cold weather, Bernadette and two companions were sent out to gather twigs and sticks for the fire. Eventually their path led them to the Grotto (cave) of Massabielle. In his book, Brother Ernest noted that a “a wilder, more savage or solitary spot could not be found in Lourdes.” As retold on the *Lourdes France official website*, “Bernadette heard a noise like a gust of wind and saw a light. She saw a young girl, dressed in white, with a blue sash around her waist, a yellow rose on each foot, rosary beads on her arm. It was the Virgin Mary.” Bernadette began to pray. Her companions were confused by her actions, as they did not see anything. Bernadette returned home, and told her parents of the vision. They were troubled, and forbade her to return to the grotto.

Bernadette went to confession at church, telling the priest who was preparing her for First Communion, that she had seen the “Lady.” He asked her permission to discuss it with his superior, the parish priest. Three days after the first vision, on February 14, Bernadette returned to the grotto and had her second vision. Although all the visions were significant, the third vision, on February 18, touched young Bernadette personally. On this day, it is believed that the “Lady” revealed herself to Bernadette, and asked her to make a promise: to return to the grotto every day for 15 days. Bernadette promised the “Lady” she would. Then, as noted on the *Catholic Online website*, the “Lady” shared with Bernadette, “I do not promise to make you happy in this world, but in the next.”

The stories of Bernadette’s visions began to spread to people in Lourdes, as well as to the local authorities. As noted by Brother Ernest, skeptical local officials questioned her. They tried to trick her, hoping to catch her in a lie. They threatened her with prison. Bernadette continued to tell the truth, sharing the story of her visions.

For the most part, the people of Lourdes believed her. As noted by the *Lourdes France official website*, the Grotto quickly became “a place of prayer, of gathering and of devotion.” Small to very large crowds began to gather when Bernadette went to the grotto. As noted by Keyes, observers recounted that when she was having a vision she had a “strange exalted loveliness.” The visions continued. The *Online Anglican resources website* stated that the “Lady” continued to give Bernadette the messages of prayer and penitence to share with the world. As noted by Brother Ernest, during the ninth vision, on February 25, the “Lady” asked Bernadette to drink water that was bubbling from the ground, as well as wash in it. She also asked her to eat an herb from the ground. As she did, the water began to flow in a stream towards the crowd. Miracles and cures began to occur for the people who used the water.

On March 2, during the thirteenth vision, the “Lady” asked Bernadette to go to the priests and ask that a chapel be built at the grotto. On March 25, the day of the sixteenth vision, the “Lady” revealed to Bernadette, “I am the Immaculate Conception.” On July 16, the Catholic Feast Day of our Lady of Mount Carmel, the “Lady” made her last ap-

pearance to Bernadette. In all, Bernadette had 18 visions over a five month period.

## Life After the Visions

Bernadette’s visions subjected her to much skepticism and curiosity. Some people did not believe in her visions; others sought to make money off them. Bernadette did attend the free school (for poor children), but often had to stay home to assist her mother. Keyes noted that it was the custom for poor girls like Bernadette to end their education after they made their Holy Communion.

Bernadette continued to be bothered by curiosity seekers. Her poor health was also a concern. Local officials met with the sisters, and it was decided that Bernadette should be allowed to return to school—this time as a free boarding student. As told on the *Catholic Community Forum website*, Bernadette moved in with the Sisters of Nevers. She lived and worked there, and learned to read and write. The sisters cared for the sick and poor, and Bernadette enjoyed being a caregiver, when her health would allow her to work. However, the sisters were reluctant to admit her into their order, while Bernadette, for her part, wondered about her vocation.

## Became a Nun

Bernadette did face some serious obstacles to being admitted to a religious order to become a nun. As Andre Ravier, SJ, noted in his book *Bernadette*, those obstacles included her notoriety, poor health, lack of education, and poverty. However, after a meeting with the Bishop of Nevers, Bernadette was allowed to enter the Sisters of Nevers.

In July of 1866, Bernadette received the religious habit with 43 other postulants, and joined the Congregation of the Sisters of Charity of Nevers. She became known as Sister Marie-Bernarde. Shortly thereafter, she became very ill, but slowly recovered. In October of 1867, she made her religious profession in the Congregation of the Sisters of Charity of Nevers with the other postulants.

From July of 1866 to April of 1879, Bernadette lived at the convent of Saint-Gildard, and suffered from periodic bouts of poor health. Ravier noted that she received “Extreme Unction” (last rites) several times. The *Catholic Online website* stated that “in the convent, she would beg the nuns to tear open her chest that she might breathe.” Bernadette was secluded, but not totally protected, at the convent. As Keyes noted in her book, people would come to the convent, wanting to see the Bernadette who had the visions of the Virgin Mary. She in turn would pretend to be someone else, offer to find Sister Marie-Bernarde for the person, and slip away.

Although Bernadette suffered from poor health, it appears she was content with her life as a nun. She was a caregiver to the ill and enjoyed her private times of prayer. Ravier noted she was prone to “sudden outbursts of good spirits,” and was “very active, stubborn, and opinionated.” Bernadette did not get along with the novice-mistress at the convent, and was often subjected to “sharp words, bitter sarcasm, hurtful outbursts, and painful humiliations.” Ravier added that she might have been singled out



because the priests did not want her to receive any special treatment because of the visions. Despite this, the novice-mistress considered Bernadette to be "modest, pious, devout, and orderly."

As noted on the *Online Anglican resources* website, Bernadette was encouraged by many to go to Lourdes to be healed. She refused, stating the healings "were for others, not for her, and that her business was to bear her illness." In 1879, Bernadette's health continued to deteriorate. She died on April 16, 1879 in Nevers, France.

### Canonized a Saint

According to the *Lourdes France official website*, long after her death, Bernadette's body was exhumed three times, in 1909, 1919, and then in 1925. Since August of 1925, Bernadette's totally preserved (the doctor's consider her body to be "mummified") body has been in a Shrine in the Chapel of the Convent of St. Gildard, in Nevers, France. She was beatified (declared "Blessed") in 1925. Pope Pius XI canonized Bernadette as a saint on December 8, 1933. Her feast day is April 16. Ten years after sainthood, she was the subject of the 1943 Academy Award-winning song, "Song of Bernadette."

In writing the introduction in Ravier's book, Patrick O'Donovan, wrote of Bernadette, "She may have been an inelegant and muddy peasant girl with a quarrelsome family; she became by training, suffering, and conscious acceptance, one of the greatest ladies in the hierarchy of history and heaven."

### Lourdes Today

Lourdes is one of the most popular destinations for Catholics around the world, as well as for those seeking cures for their illnesses. In the mid-1990s, it was drawing four million visitors per year. As noted on the *Lourdes France official website*, visitors can see a plaque that marks the exact spot where Bernadette stood. It reads "here Bernadette prayed on 11 February 1858."

### Books

- Ernest, Brother, C.S.C., *Our Lady Comes to Lourdes*, Dujarie Press, 1954.
- Keyes, Frances Parkinson, *Bernadette of Lourdes-Shepherdess, Sister and Saint*, Julian Messner, Inc., 1953.
- Ravier, Andre, *Bernadette*, Collins, 1978.
- Saint-Pierre, Michel de, *Bernadette and Lourdes*, Farrar, Straus and Young, Inc., 1954.
- Sandoval, Annette, *The Directory of Saints-A Concise Guide to Patron Saints*, Signet, 1996.
- Trouncer, Margaret, *Saint Bernadette-The Child and the Nun*, Sheed and Ward, 1958.

### Online

- "Bernadette," *Catholic Online Marian Pages*, <http://www.catholic.org/mary/berndtte.html> (November 9, 2000).
- "Bernadette Soubirous," *Lourdes France official website*, <http://www.lourdes-france.com> (November 9, 2000).
- "Biographical sketches of memorable Christians of the Past-Bernadette of Lourdes, Nun and Visionary," *Online Anglican resources at SoAJ (Society of Archbishop Justus)*, <http://www>

[justus.anlican.org/resources/bio/137.html](http://justus.anlican.org/resources/bio/137.html) (November 9, 2000).

"Patron Saints Index: Bernadette of Lourdes," *Catholic Community Forum*, <http://www.catholic-forum.com> (November 9, 2000). □

## Billy Bitzer

**Often associated with the success of film director D.W. Griffith, pioneer silent film cameraman Billy Bitzer (1872-1944) is credited with having discovered or improved upon many cinematic techniques.**

Billy Bitzer was born John William Bitzer in Roxbury, Massachusetts, on April 21, 1872. He was baptized Johann Gottlieb Wilhelm Bitzer, adopted George William as his formal name, and was known as Billy or G.W. during his career in film. His parents, Johann Martin and Anne Marie (Schmidt) Bitzer, were German immigrants who had settled in the Roxbury section of Boston, where his father worked as a blacksmith and harness maker. Bitzer's younger brother was photographer John C. Bitzer.

### Began Filming Newsreels

Bitzer was trained as a silversmith, but in his early twenties he worked as an electrician in New York City. He took night classes at Cooper Union, studying electrical engineering. In the mid-1890s Bitzer went to work for Magic Introduction Company, which soon became American Mutoscope and then Biograph Company. This early motion picture enterprise produced movies and made cameras, projection equipment, and flip-card viewing machines. Initially hired as an electrician, Bitzer took on the role of photographer and began filming newsreels when Magic Introduction Company acquired Mutoscope Camera.

Among the big events Bitzer filmed early in his career at Biograph Company was the presidential nomination of William McKinley on McKinley's front lawn in Canton, Ohio. This film was shown on Biograph Company's first program in 1896. He was the projectionist at the premier showing of the company's motion pictures in October of that year. Capturing footage of the Spanish-American War, Bitzer became the first cameraman to shoot a war in motion picture. He filmed *USS Maine, Havana Harbor* in 1898 for the William Randolph Hearst organization. Another early accomplishment was Bitzer's lighting of the boxing match between Jim Jeffries and Tom Sharkey in 1899. Using more than 40 lights over the ring, Bitzer took credit for the first successful artificially-lighted indoor film.

Bitzer's first short fiction movies were shot in 1900. His initial effort, *The Interrupted Message*, was a film Bitzer wrote, photographed, and directed himself. He soon became the head cameraman for Biograph Company, photographing films both for projection and for the Mutoscope flip-card viewers. As a cinematographer, he was responsible for the lighting and photographing of images in the making of a film. Cinematography developed as a separate craft



early in the history of film, and Bitzer rose to prominence and was regarded as a leader in his field.

### Teamed With Griffith

Actor D.W. Griffith turned to directing at Biograph Company in 1908. He teamed with Bitzer to form the best-known director-cameraman pair in the history of American film. As close as brothers, the two men had chemistry unmatched in the industry. Griffith's intricate stories were brought to life by Bitzer's photography, and their creative force involved some tension amidst the harmony. Despite their occasional differences, the duo's collaboration lasted 16 years. Their work demonstrated the potential of film as an art form.

### New Cinematic Techniques

Bitzer and Griffith's movie-making partnership fostered the development of numerous cinematic techniques. Bitzer's soft-focus photography involved the use of a light-diffusion screen in front of the camera lens, thereby softening the subject. The pair's *Broken Blossoms* (1919) employed diffused, softened lighting with this method and made the film an artistic success.

As one of the first photographers in film to effectively use perspective, Bitzer improved the way close-ups and long shots were handled. He was also a pioneer in lighting, using sunshine and firelight as special effects in his photography. Bitzer was the first cinematographer to shoot a film

using entirely artificial lighting, thus ending the need to rely on natural light.

The iris shot is Bitzer's best-known innovation. This technique involves the frame slowly opening in a widening circle as a scene begins, or slowly blacking out in a shrinking circle to end a scene. This process was used throughout Griffith and Bitzer's Civil War epic masterpiece *The Birth of a Nation* (1915), and extensively in *Intolerance* (1916). Both of these films are considered to be among the most brilliant of the 1910s.

### Collapse of a Partnership

Despite great success during that era, the film industry began to change and Griffith and Bitzer did not adjust well. World War I spawned cultural changes in the United States, and German expressionism in film was incompatible with the duo's style. Griffith began to recruit younger cameramen to work with his chief cinematographer. This was especially offensive to Bitzer, as he had remained with Griffith during difficult financial times, sacrificing his salary to help potentially successful films to be completed. As a veteran, Bitzer did not appreciate Griffith's hiring of 16-year-old Karl Brown to assist him. The young newcomer recalled the friction this caused between Griffith and Bitzer in his book *Adventures with D.W. Griffith*: "I was young and ignorant, and I had no reputation to maintain or protect; I could fail repeatedly and it didn't matter because nobody expected me to do anything else *but* fail. But if I should just happen accidentally to make something good enough to go into a Griffith picture, I was a genius, no less, at least for that one brief moment. But if Bitzer ever failed at all to produce his incomparable best, such as one scene out of a thousand that was not quite superlatively fine, then the old man was slipping and it would be well to look around for a replacement to have handy just in case."

When special effects cameraman Hendrik Sartov was hired by Griffith in 1919, Bitzer was forced to share his billing. Sartov's forte was a soft focus close-up which very much impressed Griffith. Bitzer's once-thrilling techniques were no longer moving. Brown noted Bitzer's disappointment in *Adventures*, "And now Griffith had brought in Sartov to make a fool of Bitzer at his own specialty, the big beautiful close-ups of Lillian Gish. This must have been a real crusher for Bitzer, who had taken Griffith under his wing back in the old Biograph days and had patiently taught Griffith which end of the camera took the pictures."

Bitzer became depressed and began drinking and disappearing for days at a time. He recalled those days in his biography *Billy Bitzer: His Story*, "With the entrance of Sartov, I became the pupil." Another nail in the filmmaking duo's coffin was Griffith's insistence on creating a star out of Carol Dempster. An actress of questionable talent, Dempster was Griffith's leading lady in numerous films, all of which Bitzer reluctantly photographed. He disliked Dempster and resented the attention Griffith lavished on her, but the team continued to work together through the making of Griffith's last silent film, *Lady of the Pavements* (1926).

### Union Organizer

Bitzer founded the International Photographers of the Motion Picture Industry in New York in 1926. He held the union's presidency twice. The union later became the International Alliance of Theatrical Stage Employees. Since 1975 an annual Billy Bitzer Commendation Award is presented to one of its members. Bitzer was honored with the award posthumously in 1976. Cinematographer and recipient of 1987's award remembered Bitzer in *Back Stage*, "I think Bitzer would be proud of his union today. Remember he started the union during difficult times. I am very honored to be associated with a cinematographer like Billy Bitzer." A union chapter was established in Hollywood in 1929, and Bitzer was blacklisted by the film industry.

### Contributed as Film Historian

During the Depression era, Bitzer worked for the government-funded Works Progress Administration (WPA) as a cameraman. He also prepared filmstrips and recorded lectures. In the 1930s his work for the Museum of Modern Art in New York included contributions to a history of the Biograph Company. He also reconstructed antique cameras and restored old movies for the museum's film archive.

Bitzer's image was one of a short man who wore a rumpled hat, baggy pants, and a thin tie, who stood on his camera box to film his shots. He used a hand-cranked Pathe camera, and usually Griffith was at his side shouting directions to the actors. Bitzer converted to Roman Catholicism in middle age, having been raised Lutheran. After his 20-year common-law marriage to Elinore Farrell dissolved, he married Ethel Boddy in 1923. He and Ethel had a son, Eden Griffith Joseph Bitzer. Bitzer's death on April 29, 1944, was due to a heart attack. He had been living at the Motion Picture Country Home in Woodland Hills, California, and was buried in Cedar Grove Cemetery in Flushing, New York.

### Books

- Billy Bitzer: His Story*, Farrar, Straus and Giroux, 1973.  
Brown, Karl, *Adventures with D.W. Griffith*, Farrar, Straus and Giroux, 1973.  
*The Columbia Encyclopedia*, Columbia University Press, 1993.  
*Dictionary of American Biography, Supplement 3: 1941-1945*, American Council of Learned Societies, 1973.  
*International Dictionary of Films and Filmmakers, Volume 4: Writers and Production Artists*, St. James Press, 1996.

### Periodicals

*Back Stage*, January 9, 1987, p. 1.

### Online

- "Bitzer, Billy," *Encyclopedia Britannica*, <http://www.britannica.com/seo/b/billy-bitzer/> (December 12, 2000).  
MacIntyre, Diane, "Did You Get That, Billy?," *The Silents Majority*, <http://www.mdle.com/ClassicFilms/BTC/camra3.htm> (December 12, 2000). □

## Blackbeard

**Edward "Blackbeard" Teach (1680-1718) was a legend in his own time. Born in England, he plundered ships traveling to and from the American colonies—as well as vessels in the Caribbean Sea. Although his reign of terror lasted only two years, he became one of the best-known sea robbers in all of history.**

Edward Teach, better known as Blackbeard the pirate, was probably born somewhere near Bristol, England. Little is known of his early life—except that he went to sea as a young man. As a privateer (legalized pirate) during the War of the Spanish Succession (1701-13), he robbed ships in the West Indies. When the war ended in 1713, he turned to piracy, like many former privateers.

By 1716, Teach was serving under the command of Benjamin Thornigold, a pirate captain. On Thornigold's ship, he sailed from the pirate colony of New Providence in the West Indies to the American mainland. The pirates captured a number of ships, whose cargo ranged from flour and wine to silk and gold bullion (gold still in raw or unrefined form). In 1717, after the pirate crew attacked a large merchant ship headed for the French island of Martinique, Teach took over as the captured vessel's captain. Equipping the boat as a warship, he added some forty guns and renamed it the *Queen Anne's Revenge*.

Shortly after Teach became the captain of his own ship, Thornigold gave up piracy. Captain Woodes Rogers, the British-appointed governor of the Bahamas, had been given the power to pardon pirates who agreed to mend their ways. Thornigold—and other members of Blackbeard's circle—sailed to New Providence to accept the King's pardon. Edward Teach, however, had just begun his short but active career as a pirate.

### Smoking Black Beard

A tall man with a booming voice, Teach deliberately developed a terrifying appearance. He had an enormous black beard, which he tied up with black ribbons and twisted into braids. According to some accounts, it covered his entire face and grew down to his waist. Before going into battle, he tucked pieces of hempen rope (rope made from fibers of the hemp plant)—which were soaked in saltpeter and lit—into his hair. The slow-burning chords of rope gave off clouds of thick black smoke that gave him the appearance of a living demon. Captain Charles Johnson, the author of a pirate history that was published six years after Teach's death, wrote what is probably the best-known description of the infamous pirate: "Captain Teach assumed the cognomen [nickname] of Black-beard, from that large quantity of hair, which, like a frightful meteor, covered his whole face, and frightened America more than any comet that has appeared there in a long time."

Johnson went on to say: "This beard was black, which he suffered to grow of an extravagant length; as to breadth, it came up to his eyes; he was accustomed to twist it with



ribbons, in small tails . . . and turn them about his ears: in time of action, he wore a sling over his shoulders, with three brace of pistols, hanging in holsters like bandoliers [a belt worn over the shoulder]; and stuck lighted matches under his hat, which appearing on each side of his face, his eyes naturally looking fierce and wild, made him altogether such a figure, that imagination cannot form an idea of a fury, from Hell, to look more frightful."

Teach's actions also contributed to his reputation as a monster. He disemboweled captives and fed their entrails to the sharks. He cut off the fingers of victims who were too slow to hand over their rings. He sliced up a prisoner's ears—and then forced him to eat them. What's more, he turned on his crew with no forewarning. He shot randomly at the pirates on his ship and marooned them when he didn't feel like sharing the bounty. Although there's no telling where the facts end and legend begins, it is probably safe to say that Blackbeard deserved his reputation as "the devil's brother."

### The Charleston Blockade

Like most pirates, there was a seasonal pattern to Teach's voyages. In the warmer months, his crew robbed ships off the coast of Virginia and the Carolinas. Operating out of Ocracoke Inlet—off the island of Ocracoke in the Outer Banks chain of islands that extends along the coast of North Carolina—his ships anchored in shallow waters that prevented other ships from attacking. As winter approached, Teach headed south, to the warmer climate of the

Caribbean. Sailing on board his flagship, the *Queen Anne's Revenge*, he traveled with a fleet of other boats—many of which, like his, had been stolen and converted to pirate boats.

Having spent the winter of 1717 in the Caribbean, Teach's crew landed in Charleston, South Carolina, in the spring of 1718. With three other pirate sloops (small, one-masted ships), the pirates blockaded the city's harbor and attacked any ship that attempted to leave or enter. They also took prisoners and put ashore a landing party that had instructions to bring back medical supplies to treat diseases that plagued the crew. Teach promised to release the prisoners in exchange for the supplies. After he received a chest full of expensive medicine, he made good on his word (but not until after the captives had been robbed of their possessions). The governor of South Carolina described the incident in a report to officials in London, England: The pirates "appeared in sight of the town, took our pilotboat and afterwards 8 or 9 sail with several of the best inhabitants of this place on board and then sent me word if I did not immediately send them a chest of medicines they would put every prisoner to death, which for their sakes being complied with after plundering them of all they had were sent ashore almost naked. This company is commanded by one Teach alias Blackbeard who has a ship of 40 odd guns under him and 3 sloops tenders besides and are in all above 400 men."

### A Royal Pardon

Shortly after the Charleston blockade, the *Queen Anne's Revenge* sank. Sailing on another ship, a ten-gun vessel called the *Adventure*, Teach headed up the Pamlico River to the town of Bath in North Carolina—in search not of treasure but of a royal pardon. (England's King George I, who reigned from 1714 to 1727, offered to pardon pirates who gave up their profession. As a British colony, North Carolina was able to extend the king's pardon to pirates.) Charles Eden, the governor of North Carolina, granted Teach a pardon, and then ordered the court to declare him a privateer. As a privateer, Teach was able to continue to plunder ships in Carolina waters with no fear of being punished—provided he shared his loot with Governor Eden and his secretary and collector of customs, Tobias Knight. Sailing up and down the Pamlico River, Teach stole from ships he encountered as well as from local plantations.

Unable to appeal to Governor Eden for assistance, local traders asked Thomas Spotswood, the governor of Virginia, for protection from the pirates. In November 1718, Spotswood issued a proclamation offering rewards for the capture—dead or alive—of Teach and his shipmates. He also enlisted the help of British navy officers to organize an expedition to capture the infamous pirate, even though the Carolina shoreline was well beyond his jurisdiction.

### Blackbeard's Last Stand

Under the charge of Lieutenant Robert Maynard, an experienced officer, two ships sailed to the Carolina coast with specific orders to rout the pirates. Because the pirate ships were anchored in shallow waters that were difficult to

navigate, Maynard took small vessels that had no guns, which meant his crew would be forced into hand-to-hand combat with knives and swords. Having learned from other seamen that Teach was anchored in a sheltered spot off Ocracoke Island, Maynard reached the area on the evening of November 21, 1718. Anchoring his ships nearby, he waited until morning to attack.

Maynard's ships—the *Jane* and the *Ranger*—headed for Ocracoke Island at dawn. Spotting the approaching ships, the pirates sounded the alarm and pulled in the anchor. Maynard's vessels chased the pirate ships, using oars since there was very little wind to sail by. Navigating shallow waters that were filled with sandbars and submerged obstacles, Maynard's ships ran aground.

Next came a shouting match between the navy lieutenant and the pirate captain. In his pirate history, Captain Johnson describes the exchange: "Black-Beard hail'd him in this rude Manner: Damn you for Villains, who are you? and from whence come you? The Lieutenant make him Answer, You may see by our Colours [the flags that identified a ship] we are no Pyrates. Black-beard bid him send his Boat on Board, that he might see who he was but Mr. Maynard reply'd thus; I cannot spare my Boat, but I will come aboard of you as soon as I can, with my Sloop. Upon this Black-beard took a Glass of Liquor, & drank to him with these Words: Damnation seize my Soul if I give you Quarters [a place to stay], or take any from you. In Answer to which, Mr. Maynard told him, that he expected no Quarters from him, nor should he give him any."

Eventually, Maynard's crew managed to free its two vessels. Rowing toward Teach's ship, the crew was hit by a broadside volley that killed several men and wounded others. (Broadside could be devastating: firing at the enemy, a ship discharged all the guns on one side of the boat at once—and at close range.) Maynard ordered the remainder of his crew to conceal itself below deck.

Teach assumed that most of Maynard's men had been killed by the broadside attack. But when he climbed aboard the *Jane*, he was surprised by Maynard's sailors. The fight that followed was Blackbeard's last battle. According to Captain Johnson's account, he "stood his ground and fought with great fury till he received five and twenty wounds." Of Teach's twenty-five wounds, the last was fatal: the pirate had been decapitated.

The year after Teach was killed, the *Boston News Letter* published a detailed account of the pirate's last battle: "Maynard and Teach themselves began the fight with their swords, Maynard making a thrust, the point of his sword went against Teach's cartridge box, and bended it to the hilt. Teach broke the guard of it, and wounded Maynard's fingers but did not disable him, whereupon he jumped back and threw away his sword and fired his pistol which wounded Teach. Demelt [another sailor] stuck in between them with his sword and cut Teach's face pretty much; in the interim both companies engaged in Maynard's sloop, one of Maynard's men . . . engaged Teach with his broad sword, who gave Teach a cut on the neck, Teach saying well done lad; [the man] replied If it be not well done, I'll do it better. With

that he gave him a second stroke, which cut off his head, laying it flat on his shoulder."

Maynard's crew threw Teach's headless corpse overboard. (According to local legend, his headless body swam around the ship before disappearing into its murky grave.) They hung the bearded head of the infamous pirate from the bowsprit of Maynard's boat as a warning to other sea robbers. The head also offered concrete proof of Teach's death, something that made it easier for Maynard to collect the reward on the pirate's head.

## Sunken History

In June 1718, shortly before Teach was captured, his flagship—the *Queen Anne's Revenge*, a 103-foot forty-cannon vessel—became grounded on a sandbar off the coast of North Carolina. It eventually sank, taking with it secrets about the day-to-day existence of one of the world's most infamous sea robbers. But on November 21, 1996, one day before the anniversary of Teach's death in 1718, archaeologists found what they believe to be Teach's long lost flagship.

The wreck of the *Queen Anne's Revenge* probably doesn't contain any of the pirate's treasure. Historians believe that Teach had already hidden most of his loot. Members of his crew could easily have hidden anything else of value as they jumped ship. What is most valuable about the find is the history that it may reveal—such as insights into the daily workings of life aboard a pirate ship. It may also fill in missing pieces about what is known of the eighteenth-century. For example, the chest full of medicines that the pirates received as a ransom payment could provide valuable clues about medicine and health care in Teach's day.

The wreck was discovered in just twenty feet of water two miles off the North Carolina coast near Beaufort, in an area called the "Graveyard of the Atlantic" because of the number of ships that are wrecked there. Towing an underwater metal detector over an eight-square-mile area, a team of archaeologists discovered numerous metal objects—including a bell dated 1709, large anchors, and a number of cannons. It may take four to five years to determine whether the wreck is what remains of the *Queen Anne's Revenge*, but evidence suggests that the submerged vessel is, in fact, the flagship of the infamous Edward Teach.

## Hidden Treasure

According to legend, "Blackbeard's treasure" is buried at various spots along the eastern seaboard. But chances are, there is no such treasure: a typical pirate's plunder consisted of silk, cotton, tools, and assorted sailing supplies. Archaeologists are still hoping to recover the wreck of the *Adventure*—the vessel that carried the pirate to his last battle—and one other ship in his fleet. In those wrecks they hope to find not chests full of gold and jewels but a treasure of information on the age of piracy.

## Books

Cordingly, David. *Under the Black Flag*. Random House, 1995.  
Nash, Jay Robert. *The Encyclopedia of World Crime*. Crime Books, 1990.

Pirotta, Saviour. *Pirates and Treasures*. Thomson Learning, 1995.  
Platt, Richard. *Pirate*. Alfred A. Knopf, 1994.

### Periodicals

*Current Events*, May 5, 1997.  
*New York Times*, March 4, 1997; March 11, 1997.  
*People Magazine*, March 17, 1997.  
*Time for Kids*, March 14, 1997. □

## Antoinette Brown Blackwell

**Antoinette Louisa Brown Blackwell (1825-1921)  
made history when she became the first woman in  
the United States to be ordained by a recognized  
congregation.**

In addition to her career as a preacher, Blackwell spent many years delivering speeches on behalf of the temperance movement, the abolition of slavery, and the right of women to vote. She often toured with well-known suffragists Susan B. Anthony and Elizabeth Cady Stanton. Blackwell was particularly influenced and emboldened by her friendship with abolitionist and suffragist Lucy Stone, a friend from college who later became a sister-in-law.

### Religious Upbringing

Antoinette Louisa Brown was born May 20, 1825, in Henrietta, New York, the seventh of Abigail Morse and Joseph Brown's ten children. The family had a strong religious tradition. Together they frequented the Protestant revivals of Charles Grandison Finney in Rochester, New York. Blackwell's pious leanings were evident at an early age when the nine-year old girl asked to become a member of the family's Congregational Church. As Blackwell's faith grew, her mother and minister encouraged her to become a foreign missionary. Even though such a profession was unheard-of for a young woman at that time, Blackwell harbored the dream of becoming a minister.

### Fought for Education

At the time Blackwell finished her secondary education, Ohio's Oberlin College was the only institution of higher learning in the United States open to women. Therefore, in the spring of 1846, Blackwell traveled there to further her education. She completed a non-degree "Ladies Literary Course" in 1847. At Oberlin she developed a friendship with Lucy Stone, a staunch abolitionist and feminist who had begun her studies three years before Blackwell. The two women bristled against the college's strict rules for women, which included barring women from public speaking and forbidding women from walking with members of the opposite sex. As resistance to the school's paternalistic control, the women organized a secret debating society; they later claimed it was the first organized club for college women.

Blackwell's studies kept her from attending the first Women's Rights Convention in Seneca Falls, New York, in 1848. In Ohio, Blackwell was busy forging her own path as a feminist by petitioning for acceptance into Oberlin's theological department. Lucy Stone wrote to her in 1849 lamenting Blackwell's decision to continue her education by studying theology. Stone was concerned that her friend's spirit would be destroyed by the difficulty of forcing her way into what was seen as a man's world. "The fact that you have entered a field forbidden to women, will be a good to the sex, but I half fear it will be purchased at too dear a rate," Stone lamented in a letter reprinted in *Friends and Sisters: Letters Between Lucy Stone and Antoinette Brown Blackwell, 1846-93*. "You have been tried there, and the trial, has brought to light noble traits in your character, and I love you all the better for what you have so nobly suffered. But do keep a free spirit my dear dear Nette."

For Blackwell, the desire to become a preacher outweighed the trouble she knew she would have to endure. "From the time in her youth when she declared her intention to enter the ministry," Carol Lasser and Marlene Deahl Merrill wrote in the introduction to *Friends and Sisters*, "her desires to prove woman's intellectual capacity and to insure the social equality of women and men were framed in religious and theological terms. Her ordination in 1853 represented the culmination of the first stage of her development, marking for both herself and the world the competence of woman to pursue a pastoral role."

Much as Stone had earlier feared, Blackwell's struggles nearly got the best of her. Although Blackwell finished her theological coursework in 1850, and was allowed to preach just as her male colleagues, her professors would not grant her degree. She never received an official diploma, even though nearly sixty years later, in 1908, the president of the college would invite Blackwell back to Oberlin to receive an honorary Doctor of Divinity degree.

### Eventual Ordination

Blackwell's struggles continued after she left Oberlin. She searched in vain for a church to serve, finally becoming the minister of a church that was notorious locally for its difficulty in filling the position, having previously engaged a black minister and a seminary student. Finally, in the spring of 1853, Blackwell was hired at a salary of \$300 a year by the South Butler Congregational Church of Wayne County, New York. Her ordination in August made Blackwell the first woman ordained as minister of a recognized church.

That same year, Blackwell sparked controversy when she traveled to New York City as a delegate to the World Temperance Convention. Despite the fact that she was an ordained minister, organizers refused to allow Blackwell to speak on the grounds that she was a woman.

Within a few months, Blackwell began to understand that her ideals and those of the Congregational church were incompatible. She left her church position in July of 1854 and traveled to her parents' house to rest. "Her resignation from this post indicated her recognition of the difficulty of reconciling traditional Protestant church doctrines and structures with her commitment to the equality of the

sexes," Lasser and Merrill wrote. "But her later writings made clear that she never abandoned her belief in the power of Christianity, nor did she ever accept that religion and women's autonomy were antithetical."

It would be more than twenty years before Blackwell found a church where she felt comfortable. She became a Unitarian in 1878, and served All Souls Unitarian Church in Elizabeth, New Jersey, from 1908 until her death.

### Married with Children

Love struck the serious-minded minister in 1853 when, at a temperance convention in New York City, she met Samuel Charles Blackwell, a businessman who shared her belief in the equality of the sexes. His sisters included Dr. Elizabeth Blackwell, the first woman to earn the M.D. degree from a U.S. medical school, and Dr. Emily Blackwell. The couple was married in 1856, a year after Blackwell's friend Lucy Stone married Samuel Blackwell's brother, Henry Browne Blackwell, turning the long-time friends into sisters as well. Samuel Blackwell died in 1901.

Aspiring to model her career as a wife, mother, and activist on that of another famous early feminist, Blackwell wrote to Lucy Stone in 1850 for advice. "How many children has Lucretia Mott?" Blackwell asked, in a letter reprinted in *Friends and Sisters*. "Please give me a brief sketch of her history. I have a particular use for it. Are her children intelligent, respectable, and well trained? How did she manage to bring them all up and still speak so much in public? If you can tell me a few things about her I shall be much obliged. I admire her character far as I know it."

Blackwell embarked on her career as a mother, eventually giving birth to seven children, five of whom survived into adulthood. Her first daughter, Florence Brown Blackwell, was born in November 1856. After the birth of her daughter Mabel Blackwell in April of 1858, Blackwell received an admonishing letter, reprinted in *The Selected Papers of Elizabeth Cady Stanton and Susan B. Anthony*, from her friend and colleague Susan B. Anthony. "Now Nette, not another baby, is my peremptory command—two will solve the problem, whether a woman can be any thing more than a wife and mother better than a half dozen, or Ten even—" Anthony wrote. "What man would dream of going before the public on such an occasion as the one of to night-tired and worn from such a multitude of engrossing cares—it is not best to have to many irons in the fire at one time—"

Baby Mabel Blackwell died in August 1858. The following summer, Blackwell embarked on a lecture tour with Susan B. Anthony, but the friends must have agreed to disagree on the matter of family, for Blackwell continued her motherhood project. In December 1860, Blackwell gave birth to Edith Brown Blackwell. The next spring, the Civil War began. Grace Brown Blackwell was born in May 1863, Agnes Brown Blackwell in 1866, and Ethel Brown Blackwell in 1869. Both Edith and Ethel Blackwell would become doctors like their aunts Elizabeth and Emily Blackwell.

In addition to mothering her brood of daughters, Blackwell traveled extensively, an unusual feat considering the expense and difficulty of travel at the time. Among other

places, Blackwell visited Alaska, England, the Middle East, and Central and South America.

### Suffragist Work

Although Blackwell is best known for her groundbreaking ordination, she remains a significant founding mother of the suffrage movement, which sought to secure the right of women to vote by way of an amendment to the Constitution. In addition to her work as a traveling preacher, Blackwell delivered speeches promoting women's rights, sometimes touring with Susan B. Anthony and Elizabeth Cady Stanton, who led the National Women Suffrage Association for 50 years.

Public speaking was a particular gift. After a speech at a temperance convention, Anthony wrote to Lucy Stone that "Antoinette's address in the Capital was a grand one, the friends felt that she outdid herself even." The letter was reprinted in *The Selected Papers of Elizabeth Cady Stanton and Susan B. Anthony*.

Blackwell continually sought inspiration from sister-in-law Lucy Stone, founder of the American Woman Suffrage Association, which merged with Anthony and Stanton's group in 1890. Stone also established and edited the *Woman's Journal*, a suffrage newspaper that printed articles by Blackwell.

In addition to her contributions to *Woman's Journal*, Blackwell wrote extensively on evolution, feminism, and religion. Her books include: *Studies in General Science* (1869), *The Sexes Throughout Nature* (1875), *The Physical Basis of Immortality* (1876), *The Philosophy of Individuality* (1893), *The Making of the Universe* (1914), and *The Social Side of Mind and Action* (1915). She also penned a novel, *The Island Neighbors* (1871), and a book of poems.

David Robinson, in *The Unitarians and the Universalists*, described Blackwell's *The Sexes throughout Nature* (1875) as "a feminist critique of the evolutionary theories of Darwin and Spencer, in which she argued that nature demonstrated the equality of sexes throughout the species."

### Retirement

Blackwell remained active at what, even today, would be considered an unusually advanced age. In her biography of Blackwell, Elizabeth Cazden quoted one of Blackwell's later writings. "As a woman whose husband scorned the idea of an obedient wife and did loyal service, in teaching human equality of rights and privileges," Blackwell wrote, "I will never give my adherence to an exclusively male-made and a male-administered government in family, in church or in state. I, who lived and saw the evils of that awful dispensation, and early protested with heart and voice and still protest. Women's future part in civil, religious, society and domestic world-making remains to unfold itself."

After her farewell sermon at All Souls Unitarian Church in New Jersey, Cazden reported, the *Boston Globe* called Blackwell "in many respects the most remarkable woman in the country." One of the few early suffragists to live long enough to see their efforts come to fruition, Blackwell voted

in her first presidential election in November 1920. She died almost a year to the day later, on November 5, 1921, in Elizabeth, New Jersey, at the age of 96. The Nineteenth Amendment, which holds that “the right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex,” officially became part of the U.S. Constitution on August 26, 1926.

### Books

Cazden, Elizabeth. *Antoinette Brown Blackwell*, The Feminist Press, 1983.

*Friends and Sisters: Letters between Lucy Stone and Antoinette Brown Blackwell, 1846-93*, edited by Carol Lasser and Marlene Deahl Merrill, University of Illinois Press, 1987.

Robinson, David. *The Unitarians and the Universalists*, Greenwood Press, 1985.

*Selected Papers of Elizabeth Cady Stanton and Susan B. Anthony: Volume One: In the School of Anti-Slavery, 1840 to 1866*, edited by Ann D. Gordon, Rutgers University Press, 1997.

### Online

*Encyclopaedia Britannica*, [www.Britannica.com](http://www.Britannica.com), (December 12, 2000.)

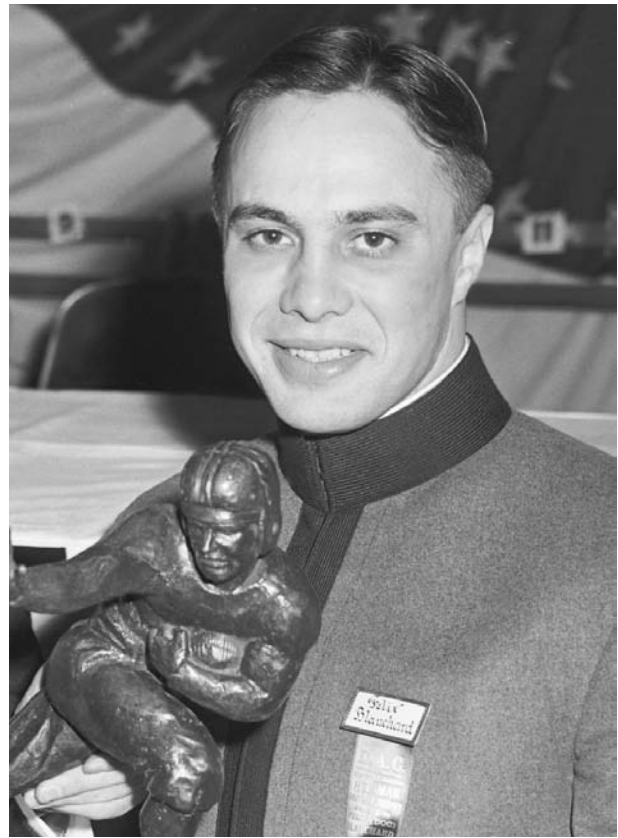
*Women in American History*, [www.Women.eb.com](http://www.Women.eb.com), (December 12, 2000.) □

## Felix Blanchard

**Felix “Doc” Blanchard (born 1924) was an outstanding football player, who won the 1945 Heisman Award while attending the United States Military Academy at West Point. Blanchard did not play professional football, but went on to a distinguished career in the military.**

Blanchard was born on December 11, 1924, in McColl, South Carolina (some sources say Bishopville, SC), the son of Dr. Felix Anthony Blanchard and his wife Mary. Because his father was a country doctor, Blanchard was known as “Little Doc.” His father had played football at Wake Forest and Tulane University as a fullback. At the latter college, he played under the name of Gaston Beaulieu because his parents did not want him to play football. Had his deception come to light he would have been forced to leave school. He passed his passion for football down to his only son. A football was put in Blanchard’s crib when he was an infant.

Blanchard only spent two years in McColl before the family moved to Dexter, Iowa in 1929. They returned to South Carolina in 1931, settling in Bishopville, where Blanchard spent most of his formative years. An athletically inclined child who shared his father’s love of football, Blanchard learned the game from his father, who encouraged his athletic pursuits. Blanchard also wanted to follow in his father’s footsteps and become a doctor, but his academic performance was not strong. Instead, Blanchard’s only sibling, his sister Mary Elizabeth, became the family’s doctor.



### Became Noted Player

When Blanchard was 13 years old, he was sent to St. Stanislaus High School in Bay St. Louis, Mississippi, a Catholic preparatory/boarding school that his father also had attended. Blanchard was supposed to concentrate on academics, but sports remained his focus. It was his football prowess that caught the attention of many colleges. As a senior fullback, Blanchard scored 165 points and his team was undefeated. He earned All-GSC honors and played in two New Orleans Toy Bowls.

### Attended University of North Carolina

Blanchard could have attended any university in the United States, but chose the University of North Carolina (UNC). At the time, his father was ill and the school was near his home. Also, Jim Tatum, his mother’s cousin, coached the UNC football team. Blanchard only spent one year at UNC, 1942-43. He was a leader on the freshman team, which won the state championship in 1942. (At the time, first year students did not play on the varsity squad.) Blanchard was expected to be a great player on UNC’s varsity squad, but never got to make the team.

### Army Days

In the spring of 1943, Blanchard was drafted (some sources say volunteered) by the United States Army and was trained as a tail gunner. He moved around in his early army days, from Florida to Alabama to Utah to New Mexico. Because of his football prowess (and perhaps his father’s



help), he was offered a chance to enter the United States Military Academy at West Point. Blanchard spent some time at Lafayette College in Pennsylvania preparing for the entrance exams. He was accepted and entered the Academy in the summer of 1944.

### Played Football at West Point

Because of the need for officers during the war, coursework at the Academy was crammed into three years instead of four so enough officers would be available. Blanchard attended West Point from 1944-46. As in high school, he did not concentrate on academics and was near the bottom of his class (296 out of 310) when he graduated. He was a far better football player. In those three years, Army's record was 27 wins, zero losses, and one tie, and the Earl (Red) Blaik-coached team averaged 56 points per game.

One reason that Army could dominate was the backfield of fullback Blanchard and halfback Glenn Davis. Some believe that the pair formed one of the greatest backfield pairings in college football history. Blanchard and Davis were dubbed Mr. Inside and Mr. Outside, respectively. Their skills complemented each other, and their combination of speed and strength helped the Academy dominate their opponents. At about six feet one inch tall and 205 lbs., Blanchard was a good runner and a better blocker. He sometimes was a pass receiver (19 catches in three years), who also did punts, kick offs, and occasionally kicked extra points.

During his first season with West Point (1944), Blanchard scored nine touchdowns, averaging 5.5 yards per rush, and nabbed three interceptions. Blanchard came to public attention in several big games, including one memorable one against Notre Dame in which Army won 59-0. Army averaged 56 points per game, while holding opponents to an average of 3.9 points per game, an NCAA record. The team won the national championship. For his part in Army's dominance, Blanchard was a consensus All-American and finished third in the voting for Heisman Trophy, given to the best college football player in the United States.

### Won Heisman Trophy

In 1945, both Army and Blanchard continued to dominate. The team had a 9-0 season and repeated as national champions. Blanchard had his finest season as a football player. In those nine games (in which he played less than 30 minutes a game, as in 1944), Blanchard had 19 touchdowns, rushed for 718 yards, and averaged 7.1 yards per rush. He also caught four passes for 166 yards. Because of Blanchard and Davis's success in the backfield, they appeared on several national magazine covers. Blanchard won numerous honors, including the Heisman Award with 860 points (Davis was second), the Sullivan Award (given to the best amateur athlete in the United States) and the Maxwell Award. Blanchard was the first junior to win the Heisman and the first football player to win the Sullivan as well as the first person to win both the Sullivan and Heisman Awards.

Blanchard's final year of football, (1946), was a rough one. He tore several ligaments in his left knee in the first

game of the season, though he only missed three games. Despite this setback, Blanchard managed to make key scores in several games. He also had arguably the best play of his career in a game against Columbia University. In that game, he scored a touchdown off a 92-yard kick-off return. On the season, Blanchard scored ten touchdowns, rushing for 613 yards, and caught seven passes for 166 yards. He finished fourth in the Heisman voting. (The Heisman was won by his backfield partner, Davis.) Though the team was not as strong, they finished the season with ten wins, zero losses, and one tie (a scoreless game with Notre Dame).

Over the whole of Blanchard's career at West Point, he had 38 touchdowns and 1666 rushing yards. He was a three-time consensus All-American. Football was not his only sport at West Point. In part to gain access to the athlete's table, he also participated in track. Blanchard competed in the shot put, for which he had no prior experience. In 1945, he was the IC4A shot-put champion in indoor and outdoor competition, once throwing it 54 feet. He also competed in the 100 yard dash, winning the event in ten seconds in a meet against Cornell.

### Denied Chance at Professional Career

After graduating in 1947, Blanchard joined the Army Air Corps. However, he and Davis still desired to pursue a career in professional football. Blanchard had been drafted by both of the professional leagues of the day: The National Football League's Pittsburgh Steelers and the All-America Football Conference's San Francisco 49ers. The pair was offered huge bonuses and salaries by the teams. Upon graduation, each man received a standard 60-day furlough. Both Blanchard and Davis asked for an extended furlough to allow them to play, but the request was denied. They also tried to arrange to play football during the fall and serve in the military during the rest of the year for several seasons. This deal also was turned down, in part because of a political uproar. Many believed the government and the Army had spent too much time, money, and effort training the men to allow them to play football.

### Appeared in Film

Blanchard and Davis managed to make money off their fame and illustrious football career during their 60-day leave. They appeared in a low-budget film about their lives and football careers entitled *Spirit of West Point*. They were paid \$20,000 each for their work. The film did not receive good reviews, even from Blanchard. He told Dave Newhouse in *Heisman: After the Glory*, "We were very self-conscious about our acting. We had a drama coach, but he told us we were getting worse by the day. He quit after a week. On a scale of one to ten (one being perfect), my acting was a ten. I never went to see the damn movie. But I did see it years later on late-late-night TV. I wouldn't watch it again."

### Chose Military Career

After a three year tour of duty, Blanchard could have again pursued a professional football career, but instead he chose to remain a military pilot for 25 years. Over the

course of his distinguished career, Blanchard served in both the Korean and Vietnam Wars. He flew 113 missions during the latter. He also flew the newest, fastest jets, including the F-84, F-94, F-100, and F-105. Blanchard was cited for bravery in 1959, for his heroism during a flight. While flying to a base near London, the oil line ruptured and oil spilled on the motor. As the plane caught fire, Blanchard could have abandoned it. However, because he was flying over a populated area, Blanchard risked his life to safely land the plane himself.

The same year as this incident, Blanchard was inducted into the NFF College Football Hall of Fame. While serving in the military, Blanchard remained involved in amateur football. In 1947, he played on an Air Force Base team. He later did some coaching under his old West Point coach, Blaik, as well as some scouting. Blanchard also coached the junior varsity squad at some point in the 1950s as well as the plebe team. His record as a coach was 29-6-2. When the Air Force became a separate entity from the Army, he was involved in Air Force athletics for four years, 1962-66.

Blanchard retired from the military in 1969 (some sources say 1971) as a colonel. He then worked for two years as the commandant at the New Mexico Military Institute, before fully retiring. Though he still followed football, Blanchard played golf while living in San Antonio, Texas, with his wife Jody King, with whom he had three children (Mary Theresa, Jo, and Felix III). Of his Heisman, Blanchard told Malcolm Moran of the *New York Times*, "I think it really is more meaningful to me now. At 21, you're kind of all mixed up, I guess. It's the cumulation of a lot of things—ideals and goals that you set for yourself and tried to reach. When I first started playing ball, my dream was to be an all-American. Way back then, the Heisman was just getting started."

### Books

- Biographical Dictionary of American Sports: Football*, edited by David L. Porter, Greenwood Press, 1987.  
 Brady, John T., *The Heisman: A Symbol of Excellence*, Atheneum, 1984.  
 Hickok, Ralph, *The Encyclopedia of North American Sports History*, Facts on File, 1992.  
 Hickok, A *Who's Who of Sports Champions: Their Stories and Records*, Houghton Mifflin Co., 1985.  
 Newhouse, Dave, *Heisman: After the Glory*, The Sporting News Publishing Co., 1985.

### Periodicals

- New York Times*, December 4, 1984.  
*Sports Illustrated*, November 21, 1988.  
 U.P.I., December 2, 1981. □

## Blanche of Castile

**Born to wealth, Blanche of Castile (1188-1252) took the reins of leadership early in life as the wife of Louis VIII, King of France and later as co-regent during her son, Louis IX's, minority. She proved to be**



**a good, albeit strong willed leader, keenly adept at dealing with her male counterparts.**

**B**lanche of Castile was born on March 4, 1188 in Palencia, Castile, an area that is now part of central and northern Spain. She was the daughter of King Alphonso VIII of Castile and Princess Eleanor Plantagenet of England. Her grandfather was Henry II of England, her grandmother was Eleanor of Aquitaine and her uncle was John I of England. This rich lineage prepared her well for a place on the throne of France.

When Blanche was 11, her grandmother, Eleanor of Aquitaine, arrived in Spain and took her to France where she was betrothed to Louis VIII (1187-1226), future King of France. The marriage treaty was concluded immediately and on the following day, May 23, 1200 at Portsmouth Hampshire, eleven-year-old Blanche married twelve-year-old Louis VIII. She embarked on a regent's life that would occupy her energies for the next 52 years. The marriage, arranged by John of England, Blanche's uncle, was politically motivated and sparked a brief truce in the ongoing struggles between England and France over French territories. Blanche and Louis produced numerous children, accounts vary from eleven to fourteen. The first three did not survive to adulthood, placing the fourth child, Louis IX, in line to ascend the throne upon his father's death.

During Louis VIII's short reign, Blanche confined her activities to the education and upbringing of her children.

She was especially careful of the education of her favorite son, Louis. She was a stern Christian and taught him to be pious and devoted to the services of the church. His training was demanding and she required that he hear all daily prayers said by the monks and to listen to sermons on feast days.

### **Goal of Unification**

Early in her life in France, Blanche set a goal of French unification. She believed that progress was being made by the victory over the English and her cousin Otto of Brunswick, at Bouvines (1214). In the spring of 1214 Blanche gave birth to her fourth child, Louis, the future king of France. Although she missed Spain and her family, she took to France with ease. In 1216 Louis VIII, not yet king, embarked on an ill-advised journey to invade England. Blanche unsuccessfully sought help for her husband's endeavor from her father-in-law, Philip Augustus. When he refused, tradition has it that she swore she would 'pawn her children if necessary to get money for her husband,' and her father-in-law quickly offered his assistance.

Upon the death of John of England in 1216, Blanche and Louis VIII saw an opportunity to further their goal of unification. A small group of barons, who had rebelled against John, sought aid from Louis and, in turn, offered him the throne of England. His first skirmishes were successful, but in the end Louis was defeated. Peace was struck at Kingston in 1217 and Louis received a secret settlement of 10,000 marks for his efforts.

### **Conflict With the Albigensian Sect**

During this time, a religious sect known as Cathari, or the Albigensians, had grown and flourished throughout southern France. Their belief that good and evil had two separate creators was counter to everything that Blanche, a devout Roman Catholic, believed. In 1224, Louis VIII, who had become king the previous year, seized the opportunity to launch an attack against the heretical group. He captured Poitou and, in 1226, captured the fortress of Auvergne, a Cathari stronghold. It was during this battle that Louis VIII contracted a case of dysentery, which proved fatal. He died on November 8, 1226 while on his return to northern France.

### **The Ascension of Louis IX**

In 1225, when Louis VIII realized his health was failing and death was eminent, he made his will, providing for the succession of his son and naming Blanche as guardian of the kingdom and the royal children. She was to reign as co-regent until his son Louis IX reached adulthood. To ensure his wishes were carried out, he summoned the bishops, lords and officials who had accompanied him and made them swear to have Louis crowned as soon after his death as possible. Louis saw the need for rapid action as the reason for taking such an unprecedented move and naming a woman to serve as regent of the kingdom. Many of the lords believed this was an opportunity to reassert their independence of the crown. The nobles groused that not only was she a stranger and a Spaniard, but also a woman. Their

sense was that "Queen Blanche ought not to govern so great a thing as the kingdom of France, and it did not pertain to a woman to do such a thing." But from the moment Blanche learned of her husband's death and for the next 26 years, her efforts were directed to one end only—the strengthening and maintenance of the French royal family.

The death of Louis VIII passed the reins of authority to Louis IX, the twelve-year-old son of Louis and Blanche. The well educated, strong-willed and shrewd Blanche realized the importance of the role she was now undertaking. Her son, at 12, was in his minority and Blanche was not only his guardian, but also co-regent of France. She moved quickly, giving no time to the nobles to group against her or the legitimate heir to the throne. Blanche arranged to have Louis IX at Rheims on November 29, 1226, three weeks after her husband's death. On the way to Rheims Louis was knighted at Soissons.

With Louis crowned as the lawful king of France, it fell to Blanche to stem the tide of revolt that was rising among the nobles. Almost immediately, various factions began to challenge the new king. Most pressing was a rebellion organized by the illegitimate son of King Philip II Augustus, Philip Hurepel. King Henry III of England supported the rebellion. Blanche gained strengthened respect and support from her followers when she successfully led her troops into battle against the rebels at the Ile de France.

Blanche participated in several indecisive battles against Henry III, but perhaps one of the most crucial events to mark her regency was the support she received from the Roman Catholic Church. The papal legate, Frangipani, who had been assigned to Louis VIII by Pope Honorius in 1225, continued his support of Blanche after Louis' death. It was this legate who convinced Pope Gregory IX, historically sympathetic to Henry III of England, to switch his support to France. As a result of this change, it was decreed that all chapters of the dioceses would tithe to Blanche of Castile in support of the southern crusade.

Frangipani received the submission of Raymond VII, Count of Languedoc and Toulouse, in Paris at Notre Dame. This submission resulted in the Treaty of Paris in April 1229, ending the Albigensian War and uniting southern France. As her rule in France continued to grow strong, Blanche never let down her guard, especially regarding her son. After one attempt to abduct Louis, Blanche made it known to all that her first responsibility was to the young king and if it became necessary to replace a rebel noble with a commoner to ensure his safety, she would take just that action. By the time of the Treaty of Paris, Blanche had created local militias as needed and established a truce with England. France now embarked on a period of domestic peace and stability during which time many of France's beautiful cathedrals were constructed.

### **An Arranged Marriage**

To ensure the continuation of her line, Blanche sought an appropriate wife for her son and settled on Margaret of Provence. Margaret was the eldest daughter of Raymond Berengar IV, Count of Provence. The marriage occurred on May 27, 1234 when Louis was 20 and Margaret 13. Al-

though Blanche arranged the marriage, she frequently treated her daughter-in-law with disdain. She was said to be an authoritarian mother-in-law and often interfered in her son's marriage. She exercised strict supervision over Margaret and, on occasion, attempted to separate Louis from his wife during the day, leaving only nighttime to the young couple. Blanche believed that her daughter-in-law's sole responsibility was to ensure the succession of the royal authority.

### A Crusade and Capture

In 1236 Louis came of age but Blanche remained at his side—his strongest supporter and advisor. Louis proved to be an energetic king devoted to his people. He was a devout Roman Catholic, austere and prayerful and a devoted husband and father. His devotion to his religion caused Louis and Margaret to undertake a crusade against the Muslims. Louis took the cross in 1244 but did not set out on the journey to the Holy Land until 1248. The kingdom was once again entrusted to Blanche. When she received word in 1250 of Louis' defeat and capture at Al-Mansurah in Egypt, she sought to raise the ransom needed for his release from her parents, her allies and the pope but Louis remained imprisoned until 1254. During his absence in the Holy Land, his brother Alphonse, count of Poitiers and Toulouse acted as co-regent with Blanche until her death in 1252.

### Death of a Monarch

Blanche of Castile suffered with a heart ailment, but continued to preside over court responsibilities. In 1252 she suffered a heart attack while on her way to the Abbey of the Lys for a retreat. She was returned to the Palace of the Louvre in Paris where she received the last rights and died. Her heart was taken to the Abbey of the Lys and she was buried at Maubuisson Abbey.

### A Legacy of Respect

Blanche of Castile left a legacy of respect and admiration. Throughout her life both friends and enemies alike admired her ability to reign with grace and determination. Theobald I, the son of Theobald of Champagne became Thebaut I, King of Navarre upon the death of his Uncle Sancho VII in 1234. He was an early supporter of Louis VIII but deserted him in 1226. On Louis' death, Theobald joined a group of rebellious barons who opposed Blanche, but he soon abandoned the group in favor of Blanche. He became a poet and composer and many of his verses are dedicated to Blanche. The nobles of the time accused Blanche of having been his lover but most authorities consider that she was too devout a Christian and too devoted to France and her son to have been anything more than an inspiration.

Baron Mathieu de Montmorency fought under Louis VIII against the English in 1224 and in the Albigensian conflict in 1226 and he continued his support of Blanche as co-regent with Louis IX.

Blanche of Castile brought strength of character and a shrewd political mind to her regency, but she also brought an appreciation for beauty and poetry as seen through her

own verses and the building of some of the world's most beautiful cathedrals.

### Books

- Book of Saints* Thomas Y. Crowell Co., 1966.  
*Catholic Encyclopedia*, Volume IX, edited by Georges Goyau, Robert Appleton Co., 1910.  
*Columbia Encyclopedia*, Fifth Edition, Infonautics Corp., 1993.  
 Dobell, Anne. *The Lives of the Kings and Queens of France*, Alfred A. Knopf, 1979.  
 LaBarge, Margaret Wade. *Saint Louis, Louis IX Most Christian King of France*, Little, Brown and Co., 1968.  
*Microsoft Encarta Encyclopedia 99*, Microsoft Corp., 1998.  
*Oxford Dictionary of Saints*, edited by David Hugh Farmer, Oxford University Press, 1997.  
*Webster's Biographical Dictionary* G. and C. Merriam Co.

### Online

- "Blanche of Castile," <http://www.ezonline.com/aem/gen/d0021/g0000070.html>, (November 15, 2000)  
 "Blanche of Castile," <http://pedigree.ancestry.com/cgi-bin/pedview.dll?ti=0=15193=64686>, (November 26, 2000)  
*Columbia Electronic Encyclopedia*, 2000 <http://infoplease.lycos.com/ce6/people/A0807847.html> (November 15, 2000)  
*Encyclopaedia Britannica* <http://www.britannica.com/seo/b/blanche-of-castile/>, (November 15, 2000)  
 "King Louis VIII 'The Lion Heart' Capet of France and Princess Blanche (Blanca) of Castile," [http://www.pwwphoto.com/gene/WC01/WC01\\_026.htm](http://www.pwwphoto.com/gene/WC01/WC01_026.htm), (November 24, 2000)  
 "16th Generation," [http://www.surnames.com/gedcom/linkswiler\\_jane/10003390.htm](http://www.surnames.com/gedcom/linkswiler_jane/10003390.htm), (November 24, 2000)  
 "26th Generation," <http://www.siteone.com/clubs/mgs/trees/rjscott/d775.htm>, (November 24, 2000) □

## Arna Bontemps

**Arna Bontemps (1902-1973) was an accomplished librarian, historian, editor, poet, critic, and novelist. His diverse occupations were unified by the common goal of forwarding a social and intellectual atmosphere in which African-American history, culture, and sense of self could flourish.**

Bontemps was born on October 13, 1902 in Alexandria, Louisiana, to Creole parents, Marie Carolina Pembroke and Paul Bismark Bontemps. His relationship with his father, a stonemason turned lay minister in the Seventh Day Adventist church, was complicated by his attachment to his mother, a former schoolteacher, who died when Bontemps was twelve. She had instilled in her son a love for the world of books and imagination stretching beyond his father's view that life consisted of practical concerns.

Several racially motivated incidents led the strong-willed Paul Bontemps to relocate his family to Los Angeles when Arna was three. He and the more exuberant Uncle Buddy, younger brother of the grandmother with whom Arna went to live in the California countryside, proved to be



contradictory influences upon Arna after his mother's death. As the older of two children, Arna disappointed his father by choosing a life of writing over following four generations of Bontemps into the stonemason's trade. It was the warm, humorous Uncle Buddy who became for his great-nephew a resource for, as well as support of, the art of storytelling. While Paul Bontemps respected Uncle Buddy's ability to spell and read, he disapproved of his alcoholism, his association with the lower classes, and his fondness for minstrel shows, black dialect, preacher and ghost stories, signs, charms, and mumbo jumbo. Through Buddy, however, Arna Bontemps was able to embrace the black folk culture that would form the basis for much of his writing.

To counter what he perceived as the pernicious effects of Uncle Buddy's attitudes, the elder Bontemps sent his son to San Fernando Academy, a predominantly white boarding school, from 1917 to 1920, with the admonition, "Now don't go up there acting colored." As Arna grew older, he found his parents' antipathy to their own blackness echoed by educators and intellectuals sympathetic to the philosophy of assimilationism. He later pronounced such views efforts to "miseducate" him. He began to understand the opposing responses of his great-uncle and his father toward their racial roots as symbolizing the conflict facing American blacks to "embrac[e] the riches of the folk heritage" or to make a clean break with the past and all that it signified. He concluded that American education reduced the Negro experience to "two short paragraphs: a statement about jungle people in Africa and an equally brief account of the

slavery issue in American history." He would devote his life to reinstating the omissions.

Bontemps's diverse occupations were unified by the common goal of forwarding a social and intellectual atmosphere in which African-American history, culture, and sense of self could flourish. Having graduated from Pacific Union College in 1923, he moved from California to New York City to teach at the Harlem Academy and to write. Bontemps became fast friends with Langston Hughes, a physical lookalike as well as an intellectual twin, evidenced by Hughes's 1926 manifesto on black art which became Bontemps's as well: "We younger Negro artists who create now intend to express our individual dark skinned selves without fear or shame."

### First Poem Was Published

In the summer of 1924, at age twenty-one, Bontemps published a poem, "Hope," in *Crisis*, a journal instrumental in advancing the careers of most of the young writers associated with the Harlem Renaissance. Recognition thereafter came quickly with his poems "Golgotha Is a Mountain" and "The Return," which in 1926 and 1927, respectively, won the Alexander Pushkin Award for Poetry offered by *Opportunity: Journal of Negro Life*, and "Nocturne at Bethesda," which in 1927 won a first prize for poetry from *Crisis*. Both the *Opportunity* pieces are atavistic poems connecting Bontemps to other Harlem Renaissance poets who express a longing for their roots in Africa. They synthesize racial consciousness and personal emotion, rendering the theme of alienation central to so much of Renaissance poetry. They also suggest through images of jungles, rain, and the throbbing of drums the attempt to return to original sources, to unleash racial memory by moving back to a more primitive, more sensuous time. Bontemps asserts the archetypal black consciousness as a suffering but indomitable self, a symbol of endurance. In "Nocturne for Bethesda," as in many other poems, he juxtaposes racial consciousness with the traditional Christianity of his youth, lamenting in this poem the inability of religious teachings to make the suffering of the black race meaningful; only through the power of racial memory can blacks find solace. But while the poet recognizes the sustenance gained from such a return in consciousness, he also acknowledges that only a moment of intense insight is possible before the vision fades in the harsh light of reality. Although his stay in Harlem spanned barely seven years, Bontemps interacted with a chorus of new voices who made the Harlem Renaissance a golden age of black art. In addition to Hughes, these included Jean Toomer, Claude McKay, James Weldon Johnson, Countee Cullen, and Zora Neale Hurston.

### Teaching Assignment at Oakwood Junior College

Although Bontemps harbored plans of pursuing a Ph.D. in English, the Great Depression, family responsibilities, and the demands of his writing contracts with publishing houses stifled such hopes as well as the spirit of optimism that pervaded his early verse. Having married Alberta Johnson on August 26, 1926, Bontemps was now a family man

already supporting two of the six children he would eventually father. Forced by economic necessity to leave the Harlem Academy in 1931, Bontemps taught at Oakwood Junior College, a black Seventh Day Adventist school in Huntsville, Alabama. His situation there mirrored the working conditions of much of his career: he was typically short on funds and rarely had a comfortable place to work. His persistence paid off, however, particularly when he turned to writing children's books in the belief that a younger audience was more receptive to the positive images of blacks he wished to instill. Over the next forty years he wrote and edited such books for children and adolescents as *Popo and Fifina* (1932), *You Can't Pet a Possum* (1934), *We Have Tomorrow* (1945), *Frederick Douglass: Slave-Fighter-Freeman* (1959) and its sequel *Free at Last: The Life of Frederick Douglass* (1971), and *Young Booker: Booker T. Washington's Early Days* (1972).

His first novel, *God Sends Sunday*, the story of the most successful black jockey in St. Louis, was published in 1931. Most critics were receptive to the book, and Bontemps himself liked the story well enough to collaborate with Countee Cullen to turn it into a play, *St. Louis Woman* (1939). It premiered in New York on March 30, 1946, and ran for 113 performances. Bontemps's efforts to alter the perception of blacks in American literature ultimately proved disadvantageous to his teaching career: the administration of Oakwood Junior College accused him of promoting subversive racial propaganda and allegedly ordered him to burn his books. He resigned in 1934 and took his family to California, much as his father had done years before.

### **Black Thunder**

While "temporarily and uncomfortably quartered" with his father and stepmother, Bontemps produced *Black Thunder*, his best and most popular novel. Published in 1936, it offers a fictional version of an 1800 slave rebellion led by Gabriel Prosser. Rendering the theme of revolution through the device of the slave narrative, the novel has become one of the great historical novels in the American tradition.

In 1935 Bontemps accepted a teaching assignment at the Shiloh Academy in Chicago, resigning in 1937 to work for the Illinois Writer's Project. The Caribbean flavor of some of his writing may be traced to a study tour in the Caribbean subsidized by a Rosenwald Fellowship for creative writing received in 1938 and renewed in 1942. His third novel, *Drums at Dusk*, appeared in 1939; continuing his interest in slave history, it depicts the revolt of blacks in Haiti occurring simultaneously with the French Revolution.

### **Librarian at Fisk University**

After receiving a master's degree in library science from the University of Chicago in 1943, Bontemps was appointed head librarian at Fisk University in Nashville, Tennessee, where he remained until 1965. During this period he received two Guggenheim Fellowships for creative writing (1949, 1954). Using his friendship with Hughes to establish at Fisk University Library a Langston Hughes collection, securing as well the papers of such Harlem Renaissance

figures as Jean Toomer, James Weldon Johnson, and Countee Cullen, and establishing a collection to honor George Gershwin, Bontemps made the library an important resource for the study of African-American culture.

While his poetry, fiction, and histories have been widely recognized, perhaps Bontemps's most enduring contribution to African-American literary history lies in the scholarly anthologies he compiled and edited, alone or in collaboration with Hughes. They appeal primarily to high school and college undergraduate students. *Golden Slippers* (1941) is a collection of poems by black writers suitable for young readers. *The Book of Negro Folklore* (1958) is a collection of animal tales and rhymes, slave narratives, ghost stories, sermons, and folk songs as well as essays on folklore by Sterling Brown and Zora Neale Hurston. *Hold Fast to Dreams: Poems Old and New* (1969) is an anthology of poems blending, without chronological or biographical data, works by blacks and whites, English and American authors. *Great Slave Narratives* (1969); and *The Harlem Renaissance Remembered* (1972) are collections of eyewitness descriptions of the period accompanied by a memoir by Bontemps.

Bontemps's series of anthologies was capped with a collection of his own poetry in 1963. *Personals*, consisting of twenty-three poems of the 1920s, remains a moving record of a young black artist exercising his imagination for the first time amid Harlem's turbulent literary and social excitement; it also contains an introductory comment describing the goals of the writers of the period and Bontemps's 1940s reaction to the Harlem milieu of the 1920s. Appropriately titled, the collection reveals the personal wonder of a young man whose consciousness is expanding with the enormous possibilities of self-definition and self-acceptance through art while simultaneously acknowledging a brooding sense of homelessness. This expression of the black self makes *Personals* a mirror for the development of black American literature during the 1920s. Bontemps captured the significance of the poetry of the period to all black artists in his 1963 introduction to *American Negro Poetry*: "In the Harlem Renaissance of the twenties poetry led the way for the other arts. It touched off the awakening that brought novelists, painters, sculptors, dancers, dramatists, and scholars of many kinds to the notice of a nation that had nearly forgotten about the gifts of its Negro people."

In 1966 Bontemps renewed his ties with Chicago by teaching black studies at the University of Illinois at Chicago Circle. In 1969 he became curator of the James Weldon Johnson Memorial Collection at Yale University, an important repository of original materials from the Harlem Renaissance. By 1971 he was back at Fisk as writer in residence, working on an autobiography he would not live to complete. He died in Nashville of a heart attack on June 4, 1973.

Though his accomplishments as librarian, historian, editor, poet, critic, and novelist were stunning, Arna Bontemps was perhaps as overshadowed by Langston Hughes as Zora Neale Hurston was by Richard Wright. Epitomizing the quiet, understated endurance celebrated in his poems. Contributing in ways large and small to the perpetuation of what was a limited interest in African-Amer-

ican life and culture, Bontemps paved the way for subsequent scholars and writers to find easier access to research materials as well as public recognition. He takes his place as a pioneer who, as Arthur P. Davis asserts, “kept flowing that trickle of interest in Negro American literature—that trickle which is now a torrent.”

### Books

- Baker, Houston A. Jr., *Black Literature in America*, 1971.  
 Bone, Robert A., *The Negro Novel in America*, 1958.  
 Brown, Sterling, *The Negro in American Fiction*, 1937.  
 Fleming, Robert E., *James Weldon Johnson and Arna Wendell Bontemps: A Reference Guide*, 1978.  
 Gloster, Hugh M., *Negro Voices in American Fiction*, 1948.  
 Page, James A., *Selected Black American Authors: An Illustrated Bio-Bibliography*, 1977.  
 Turner, Darwin T., *Black American Literature: Poetry*, 1969.  
 Whitlow, Roger, *Black American Literature: A Critical History*, 1973.  
 Young, James D., *Black Writers in the Thirties*, 1973.

### Periodicals

- American Libraries*, December 1974.  
*From the Dark Tower: Afro-American Writers, 1900-1960*, 1974.  
*New York Times*, June 6, 1973. □

## Hubert Cecil Booth

**British inventor Herbert Cecil Booth (1871-1955) is credited with inventing the first vacuum cleaner, which he demonstrated to a royal audience at Buckingham Palace in 1901.**

Despite the advances in technology made during the Industrial Revolution, everyday life during the nineteenth century still held its discomforts. Despite the increase in cheap, machine-made goods that allowed even the middle classes to own carved and upholstered furniture, fringed brocade draperies, and attractively-patterned woven rugs, the methods for keeping it all clean—wiping dust from furniture; shaking dust and lint from textiles; sweeping floors, stairs, and wall surfaces; and dragging heavy rugs outside to beat the dirt out of them—proved to only move dirt and dust from one surface to another. The non-stop effort required to keep up the appearance of a clean home proved daunting to many housewives, who spent hours on hands and knees scrubbing dirt-covered floors or brushing rugs. For wealthier families, the prospect of spring cleaning required them to actually leave their home for several days, while servants tore the house apart in search of dirt. Soot from coal fires, ash from wood stoves, dust, and dirt, not to mention microorganisms: these were the source of many a housewife and cleaning woman's frustration. While floor wax had been in use since 1870—a development of a Wisconsin flooring manufacturer named Samuel Curtis Johnson—as a way of protecting wood surfaces from the abrasion created by dirt, it did little to remove dirt from flooring surfaces. And the increasing use of electric

light was quick to shine a harsh light on the growing problem.

### A Knack for all Things Mechanical

Herbert Cecil Booth was among those canny minds who set to work addressing the practical problems of daily living. Like others before him, he sought to end the frustration of keeping a clean house. While housewives continued to arm themselves with brooms, whisks, dustpans, and carpet sweepers—a rolling box invented by Michigan native Melvin Bissell that swept dirt from carpets using rotating cylindrical brushes—Booth and others realized there must be a better way.

Born in Gloucester, England in 1871, Booth was one of six sons born to lumber merchant Abraham Booth. Upon reaching adulthood, Booth moved to London and enrolled at the City and Guilds College where he studied civil and mechanical engineering. His first job after college graduation was at the firm of Maudsley Son and Field, which was known throughout England for its engines. Booth's obvious talent for all things mechanical soon caught the eye of others, and he eventually left Maudsley Son to join a firm that designed and built huge wheels along the lines of those developed by American engineer G. W. G. Ferris in the early 1890s. The Ferris Wheel, rotated by a steam-driven engine and providing horizontal seating around its rim, was causing a stir at fairgrounds across Great Britain.

### Led the Battle against Dust

As a man, Booth was not directly involved in the problem of accumulated dust and dirt. In fact, if he had not chanced upon a demonstration of an American invention he would likely have never entered the fray. However, during one day in 1901, he happened to be inside the Empire Music Hall when his interest was captured by a demonstration of a mechanical aspirator, or cleaning machine. The machine—developed by a St. Louis, Missouri railway worker to clean rail cars—consisted of a motor, a hose attachment, and a large box, into which pressurized air focused through jets blew dust and other debris. While the machine certainly stirred up dust, it ultimately proved ineffective in collecting and removing it. Booth asked the man demonstrating the machine whether suction rather than pressure wouldn't work better. The demonstrator indignantly replied that suction had been tried on numerous occasions but didn't work.

Several types of pressurized aspirators were already in use when Booth first witnessed the cleaning machine demonstration at the Empire. One such type required two operators: one to operate a suction-creating bellows mechanism and the other to move the suction tube across the surface to be cleaned of debris. Ives W. McGaffey had patented one primitive version of this manual floor cleaner as early as 1869. Another early invention used manpower as well, the operator being required to turn a crank, which in turn caused pulleys to set into motion a cleaning apparatus, which in turn did little or nothing to remove dirt. More imaginative was the Teeterboard, a teeter-totter-like con-

traption that required one person to generate suction by rocking while another positioned the cleaning nozzle.

Booth's mind quickly went to work on the problem. Several days later, while discussing his thoughts on the subject during a dinner with friends at a London restaurant, he attempted to illustrate his idea by unfolding his handkerchief, placing it on the plush velvet seat of his chair, placing his lips upon the handkerchief, and inhaling. Witnessing their friend choking on the quantity of dust he had managed to draw out from the chair, Booth's friends also witnessed an invention in the making.

Booth patented his new invention, dubbed the Puffing Billy, that same year. Consisting of a suction pump attached to a hollow implement, the contraption also included a flexible tube open at one end and connected to an impurity collector that served as a filter. Although the machine's description might bring to mind the twentieth-century canister vacuum, the suction pump in Booth's original Puffing Billy was so large and cumbersome that it was necessary to transport it from house to house in a horse-drawn cart. Its size was due to the fact that many houses in London were not yet wired for electricity, requiring the machine's power source to be either coal or oil. The machine's gasoline-powered generator had to be powerful and hence large—and loud. Because of its size, the bright red Puffing Billy remained outside the home to be cleaned atop its cart, attached to a hose measuring 82 feet in length. As electricity gained in popularity, Booth went to work and developed a portable version of his contraption in 1906.

Founding the British Vacuum Cleaner Company to market his new invention, Booth decided that operating it in front of an audience would result in sales. He approached a local restaurateur with his proposal to clean the dining room for free, and it was accepted. News of Booth's new contraption quickly reached the palace, and one of Booth's very first jobs was to clean the carpet running down the center aisle of Westminster Abbey in preparation for the coronation of Edward VII and Queen Alexandra in 1902. A cleaning machine was eventually installed in Buckingham Palace, while another one was brought to Windsor Castle. With the cost of each machine the equivalent of thousands of dollars, Booth's company earned profits by hiring out its cleaning services on a subscription basis, allowing uniformed vacuum operators to make regularly scheduled cleaning runs through the city. For 13 pounds—the annual wages of a scullery maid—a home could now be thoroughly cleaned.

### **Transformed Twentieth-Century Society**

Booth's bright red Puffing Billy, hauled through the streets by its dapper operators, transformed the Edwardian home. The removal of years of accumulated dust from rugs, draperies, and furnishings established a new standard of cleanliness. In fact, hiring Booth's machine soon became a status symbol among fashionable households, and the lady of the house would even host vacuum tea parties to entertain her friends while the white-coated Puffing Billy staff invaded her home with their hoses and Booth's invention roared on the street outside. Booth's list of clients grew to

include Wilhelm II of Germany, Nicholas II of Russia, the House of Commons, and numerous department stores and homes in the wealthy sections of London.

In addition to homes, Booth and his machine were called into service for less typical jobs. During World War I fifteen Puffing Billys and their staff were dispatched to vacuum the huge iron girders of London's Crystal Palace, a huge, glass-walled public building that had been built to house the Great Exhibition of 1851. Requisitioned for use as a naval barracks, the building released over 26 tons of dust, accumulated in mounds over six inches high over the sixty years it had been standing.

The success of the Puffing Billy proved mixed for its inventor. His company was the recipient of numerous fines for illegal parking, having earned the ire of customer's neighbors who were irritated by the noise of Booth's machine and cabdrivers tired of having to calm frightened horses. He also spent the next two decades defending his patent from the infringement claims of dozens of other inventors who previously registered vacuum cleaner models. In every court battle, he ultimately won; his design was the only configuration of suction, filter, and collection box that actually trapped and captured dust and dirt.

### **Provided Starting-Point for Others**

As might be expected, the quest to perfect the vacuum cleaner went on, leaving Booth and his invention ultimately in the shadows. A woman named Corinne Doufour developed a device that sucked dust into a wet sponge—the first filtered vacuum system. David E. Kennedy elaborated on Booth's idea, as well as the innovations of a Missouri railroad worker, and created a mechanical monster: a machine that was installed in the basement with connections to each room via a sequence of pipes, rather like forced hot air heating systems are today. Even with the success of the suction-cleaning method, others still persisted in finding a powerless way to clean, among them the inventor of 1917's Success Hand Pump, which involved an accordion and a hefty supply of arm strength in its so-called powerless cleaning process.

Meanwhile, back in the United States, other minds were hard at work on the problem of accumulated dust. The firm of Chapman and Skinner developed a portable suction cleaner a year before Booth completed his own model. A Canton, Ohio, janitor with asthma named James Murray Spangler patented his own device in 1908. Featuring a suction system similar to Booth's, Spangler's machine incorporated rotating brushes powered by a small electric motor attached to a wood and tin frame, used an old pillowcase as a dust collector, and was pushed around using a broom handle. Small and lightweight—the 0 model weighed in at only 40 pounds—Spangler's upright design proved to be practical as well. Calling his company the Electric Suction Sweeper Company, Spangler went into business with his cousin, a saddle and harness manufacturer named William H. Hoover, and began producing their product—redesigned in aluminum and including wheels—in 1907. The result of their ability to mass-produce Spangler's design



and their continued improvements resulted in a machine that bears Hoover's name even today.

Advances in vacuum-type cleaners continued. Air Way began marketing the first disposable paper filter in 1920. In 1921 Swedish inventor Axel Wenner-Gren opened the Electrolux Company to sell a canister vacuum that incorporated sled-like runners to allow it to be dragged rather than pushed across the floor. Rexair marketed the first bagless cleaner in 1936. While innovative, the Rexair cleaner was also expensive due to its hydro-technology, and by 1974 Electrolux had become the largest manufacturer of vacuum cleaners in the world.

Later in his life, Booth wrote a short book titled *The Origin of the Vacuum Cleaner*, which recounted his development of the first suction cleaner. He died in Croyden, England, on January 14, 1955, at the age of eighty-four.

### Books

- de Vries, Leonard, *Victorian Inventions*, J. Murray, 1991.  
 Furnival, Jane, *Suck, Don't Blow: The Gripping Story of the Vacuum Cleaner and Other Labor-saving Machines*, Michael O'Mara, 1998.  
 Ireland, Norma Olin, *Index to Scientists of the World from Ancient to Modern Times*, F. W. Faxon, 1962.  
*Dictionary of National Biography, 1951-1960*, edited by E. T. Williams and Helen M. Palmer, Oxford University Press, 1971.

### Periodicals

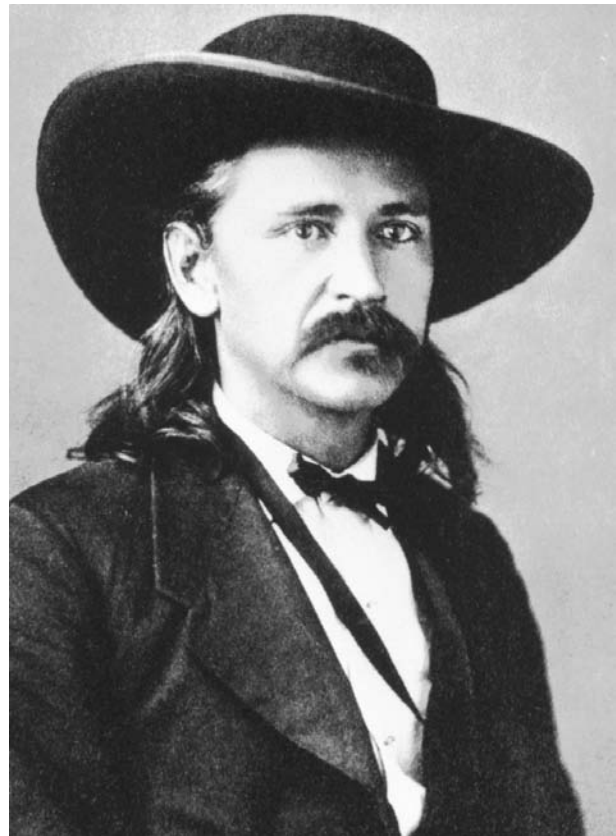
- Antiques and Collecting*, June, 1996.  
*Newcomen Society Transactions*, Vol. 15, 1934-35. □

## Elias Boudinot

**Elias Boudinot (ca 1803-1839) became the first editor of the bilingual newspaper *Cherokee Phoenix*, which began publication in the Cherokee Nation East (now Georgia) in 1828. He later became a prime mover in the Treaty Party and was a signer of the Treaty of New Echota in 1835. This treaty was not authorized and had the effect of ceding tribal land, a capital offense. The tragic consequence of the treaty was the Trail of Tears, during which over one-fifth of his tribe died en route to Indian Territory.**

**E**lias Boudinot was born in the old Cherokee Nation (the area is now part of the state of Georgia) around 1803 (some say 1805). His father was David Oowatie. Stand Watie, the noted Confederate general, was his younger brother. His Indian name was Galagina (pronounced Kill-ke-nah). He assumed the name of Elias Boudinot, a prominent Revolutionary statesman and his benefactor, at Boudinot's request.

The education of the Cherokee Elias Boudinot began at the school of the Moravian Mission at Spring Place (now



part of Murray County, Georgia). The Moravians had been active among the Cherokees starting in 1800, when two Moravian brothers travelled from Salem, North Carolina, to Tellico, the Cherokee capital, to address tribal officials with the proposition of setting up a school among them. Around age 15, Boudinot travelled to the Foreign Mission School in Cornwall, Connecticut, spending one night with his benefactor en route.

After graduation, he announced his intention to marry a white girl from Cornwall. Boudinot's cousin John Ridge had caused a controversy in the community two years earlier by marrying a white girl, which prompted the local newspaper to call for closure of the Cornwall Mission School. It was with this background that Boudinot asked Harriet Ruggles Gold to be his bride. The marriage was strongly opposed by many Cornwall residents, and the bride's brother burned the two in effigy as Harriet went into temporary hiding for her own safety. During that same demonstration, the church bells tolled a death knell and members of the church choir, to which Harriet belonged, were asked to wear black mourning bands for their lost sister. Harriet's family also struggled with approval of this union, and Harriet became seriously ill. As she grew steadily worse, her parents rethought their position and approved the union, trusting they were following God's will. Eventually, Harriet's health was restored and marriage plans proceeded.

Harriet was very religious and longed to do missionary work. Her love for Boudinot and for a life of religious work combined to help the couple weather the storm. Boudinot

had taken classes at Andover Theological Seminary in Massachusetts, it being his goal to take the gospel of Christianity to his people. Love prevailed, and the couple was married in the home of her parents on March 28, 1826. However, this incident resulted in the closing of the Cornwall School in the autumn of 1826. Harriet Gold Boudinot died ten years later, at age 31, after bearing six children. In 1836, Boudinot married Delight Sargent, also a white woman; they remained childless.

### Returned to Georgia

With his course at Cornwall and his study at Andover Theological Seminary completed, Boudinot was one of the best-educated citizens of the Cherokee Nation. He went on a fund-raising tour before taking a teaching position at a mission school in High Tower, Cherokee Nation, from 1826 to 1827. In 1828 he became editor of the *Cherokee Phoenix*, which made use of the Cherokee alphabet Sequoyah had developed. Much of the paper was printed in English, but at least a quarter of each issue was in Cherokee. Boudinot resigned as editor in 1832, after a disagreement with tribal authorities about whether the newspaper should be a vehicle for discussion on the issue of removal of the Cherokees to Indian Territory. By 1833, Boudinot published a novel in Cherokee, *Poor Sarah; or, The Indian Woman*.

In 1827, Boudinot was named clerk of the Cherokee National Council (legislature). The major issue facing the council was increasing pressure from the U.S. government to remove the Cherokees from their ancestral land in Georgia to Indian Territory in Oklahoma. The Cherokee council, meeting in October 1829, decided to stand firm, alarmed at the loss of their ancestral land. The resolution that was adopted (drafted by Major Ridge, Boudinot's uncle) called for the death penalty for any tribal member who thereafter undertook "to cede any part of their tribal domain." The Boudinot-Ridge-Watie faction was apparently content with this posture until 1831, when the council named John Ross principal chief (over John Ridge) for an indefinite period. Ross and his majority believed that they could retain their land by using the U.S. court system and by eventually treating with Georgia and/or the U.S. government to keep their lands.

In March 1832, Boudinot and his cousin John Ridge traveled to Boston and other northern cities to speak and raise support for the Cherokee cause. In the meantime, Georgia continued its encroachment and its efforts to enforce the Georgia Compact, which would move the Cherokees to the West. Upon his return to the Cherokee Nation in the summer of 1832, Boudinot assessed the situation and the deteriorating fortunes of his tribe and began to change his position on removal. He resigned as editor of the *Phoenix* in September, under pressure from the tribal government. He wanted to use the newspaper as an instrument of discussion, but John Ross forbade the editor to print a word in favor of removal.

### Reversed Position on Removal

At this time, Boudinot and his family began considering their own situation. They ultimately decided that a treaty

with the U.S. government, ceding land in exchange for new land in the West, was their best hope. They formed the "Treaty Party" and made a trip to Washington, D.C., in 1835 to negotiate unofficially on behalf of the Cherokees. On December 29, the Treaty of New Echota was signed by Boudinot, John Ridge, Major Ridge, Stand Watie, and 15 others, none of whom had authority to do so. The treaty provided for surrender of Cherokee lands and removal of the people to Indian Territory (now Oklahoma). The lawful government of the Cherokee Nation was outraged and sent petitions with signatures of more than 90 percent of the tribal members to the Senate, pleading against ratification. Nonetheless, the treaty passed on May 23, 1836, by one vote.

Boudinot and his family were able to choose their time for passage to the West, since they were part of a favored group who had signed the Treaty of New Echota. They traveled to Indian Territory in September 1837, along with John Ridge and his family. When they arrived, they joined Dr. Samuel Austin Worcester, a medical missionary, in Park Hill, near the capitol at Tahlequah.

### Joined Worcester in Publishing Venture

Worcester, known as the "Cherokee Messenger" among the Cherokees, had worked with Boudinot since 1826 in the old Cherokee Nation. He established the new Worcester Mission in 1836. Worcester worked fervently among the Cherokees, learning their language with Boudinot as his interpreter. Together they wrote textbooks and translated several books of the Bible into Cherokee. Worcester was imprisoned in Georgia for helping the Cherokees and became famous through the U.S. Supreme Court case *Worcester v. Georgia*. This case, decided in 1832, established tribal sovereignty and protected Cherokees from Georgia laws. The decision also freed Worcester, although Georgia ignored it until Worcester was pardoned in early 1833.

One of the conditions of Worcester's pardon was that he leave Georgia. When he did, he took his printing press to the new nation with him, with the intention of teaching and preaching among the Cherokee. In 1835 he set up his press at Union Mission, on the west banks of the Grand River south of the present-day Pryor, Oklahoma, in Mayes County. Textbooks, religious tracts, the *Cherokee Almanac*, and other items were published here. Most notably, the collaboration of Boudinot and Worcester produced the first book published in what is now Oklahoma in August 1835. The title was "I Stutsi in Natsoku," or "The Child's Book." In 1836, the press was moved to the recently established community of Park Hill and Worcester's mission work continued. Boudinot had served as his interpreter and assistant for several years and together they issued more than 13 million printed pages.

### Assassinated for Role in Treaty of New Echota

The work continued until Boudinot's assassination on June 22, 1839, on the same day that his relatives John Ridge and Major Ridge were killed; only Stand Watie escaped the

plot. Three men lured Boudinot from the home he was building at Park Hill. They wanted him to go with them to the home of Dr. Worcester for medicine. He was killed as they approached the mission. No one was ever brought to justice for his murder (or for the deaths of the Ridges), but it was assumed that the responsibility lay with Ross sympathizers, although not Ross personally. Boudinot is buried in the Worcester Mission Cemetery at Old Park Hill, near Tahlequah, Oklahoma, the capital of the Cherokee Nation since 1839. The site is approximately 300 yards north of the spot where he died, and the cemetery is the only remaining part of the mission. At Boudinot's death, his wife took all six children east to escape the violence in the Cherokee Nation. They were placed with relatives of Harriet Gold Boudinot. The best known of the children was Elias Cornelius Boudinot. He studied engineering and then law, became active in politics, and was eventually elected to the Confederate Congress.

### Books

- Biographical Dictionary of Indians of the Americas*, second edition, American Indian Publishers, 1991.
- Cherokee Cavaliers: Forty Years of Cherokee History as Told in the Correspondence of the Ridge-Watie-Boudinot Family*, edited by Edward Everett Dale and Gaston Litton, University of Oklahoma Press, 1939.
- Dictionary of American Biography*, edited by John A. Garraty, Charles Scribner's Sons, 1951.
- Dockstader, Frederick J., *Great North American Indians*, Van Nostrand Reinhold, 1977.
- Gabriel, Ralph Henry, *Elias Boudinot, Cherokee & His America*, University of Oklahoma Press, 1941.
- Native North American Almanac*, edited by Duane Champagne, Gale Research, 1994.
- Starr, Emmet, *Old Cherokee Families: Old Families and Their Genealogy*, University of Oklahoma Foundation, 1972.
- Schwarze, Edmund, *History of the Moravian Missions among the Southern Indian Tribes*, Moravian Historical Society, 1923.
- Waldman, Carl, *Who Was Who in Native American History*, Facts on File, 1990.
- Wardell, Morris L., *A Political History of the Cherokee Nation, 1838-1907*, University of Oklahoma Press, 1977.
- Wilkins, Thurmond, *Cherokee Tragedy: The Story of the Ridge Family and of the Decimation of a People*, Macmillan, 1970.
- Woodward, Grace Steele, *The Cherokees*, University of Oklahoma Press, 1963.

### Periodicals

- Chronicles of Oklahoma*, 11:3, September 1933; 12:1, March 1934; 31:2, summer 1953; 46:4, winter 1968-1969; 48:2, summer 1970; 51:4, winter 1973; 53:3, fall 1975; 55:3, fall 1987. □

## Henry de Bracton

**With legal treatises in short supply during the middle of the twelfth century, Henry de Bracton (c.1210-1268), stepped forward to bring order to English jurisprudence. He is said to have authored *De Leg-***

***ibus et Consuetudinibus Angliae* (The Statute and Common Law of England).**

Little is known of the early life of Henry of Bratton (Henricus de Brattona or Bractona). His exact birth date is unknown but it is believed that he was born during King John's reign, ca. 1210, in England. His death in 1268, just prior to the end of the reign of Henry III, put his lifetime during a period of enormous importance including events such as the granting of the Magna Carta and the death of Simon of Montfort, Earl of Leicester at the battle of Evesham.

He is believed to have been born in Devon where two parishes exist with the name of "Bratton," Bratton-Clovelly and Bratton-Fleming. Most authorities put his birthplace as Bratton-Clovelly, establishing the correct form of his name as Bratton, not Bracton (by which he was commonly known). He is said to have attended the University of Oxford as a youth where he received a doctor's degree in civil and cannon law.

### A Legal Career

Bracton was made an itinerant judge in 1245 and from 1247 to 1250 he was an English judge of the *Coram Rege* ("Before the Monarch"). This later became known as the King's (or Queen's) Bench. He held this position again from 1253 to 1257. From the beginning of his judgeship in 1245 until 1267 he served as a justice in Eyre, his native Devon or other neighboring counties or held court before King Henry III. Although he continued his work on various benches, he never held *placito de banco* (a place on the bench) i.e., he was never permanently seated on the Bench at Westminster.

While never holding permanent position, records show that Bracton received favors from the monarch, yet he maintained an unbiased position in the courts, gaining respect and trust from both king and barons alike. He retired in 1257 but continued to serve on judicial commissions. In 1265 he became chief justiciar of England under King Henry III.

### On the Laws and Customs of England

Bracton is credited with producing a long treatise on English jurisprudence, *De Legibus et Consuetudinibus Angliae*, "On the Laws and Customs of England." Written in Latin, it is considered one of the oldest systematic dissertations on English common law. He expanded the common law and attempted to make sense of English law in terms of *ius commune*, that is, using principles derived from both civil and canon law. The substance of the piece was drawn from English law courts, while its form was from Roman law.

*De legibus* was an immediate success and became the forerunner to numerous other legal dissertations. The treatise was frequently used by the likes of Sir Edward Coke when preparing legal arguments against the monarchy during the civil war. It is often referred to as the most important work on English law prior to that of Sir William Blackstone in the eighteenth century. The piece was never thoroughly

completed and there is doubt about Bracton's part in writing it. Some authorities believe others authored the work during the 1220s and 1230s although Bracton was the last owner of the original manuscript and he most likely made later additions.

### Later Findings

The work, however, maintained its high position as the reference work of English Law for centuries. The first printed edition of *De legibus* appeared in a 1569 folio and was reprinted in quarto in 1640. Sir Travers Twiss issued a six-volume translation of the entire work from 1878 to 1883. A manuscript collection called the *Notebook*, of approximately 2,000 English law cases, evidently written by Bracton, was discovered in 1884. It was edited and published in 1887 by British legal scholar Frederic Maitland.

### Later Life and Death

Like many jurists of his time, Bracton was also a ecclesiastic. In 1263 he was made archdeacon of Barnstable. That same year he left Barnstable to become chancellor of Exeter Cathedral. He remained at Exeter until his death in 1268. Bracton was buried before an altar in Exeter cathedral at which he had founded a perpetual endowment for his soul.

### Books

*Catholic Encyclopedia*, Robert Appleton Co., 1907.

*Columbia Encyclopedia*, Fifth Edition, Infonautics Corporation, 1993.

*The Hutchinson Dictionary of World History*, Infonautics Corporation, 1998.

### Online

"Bracton, Henry de," *Funk and Wagnalls Multimedia Encyclopedia*, <http://www.FunkandWagnalls.com> (January 17, 2001).

"Bracton, Henry de," *Microsoft Encarta Online Encyclopedia 2000*, <http://encarta.msn.com/index/conciseindex/3D/03D62000.htm> (January 18, 2001).

"Bracton, Henry de" *Encyclopedia Britannica*, <http://www.Britannica.com.htm> (January 17, 2001).

"Bracton: De Legibus Et Consuetudinibus Angliae," <http://www.Bracton's De Legibus.htm> (January 17, 2001) □

## John Randolph Bray

**John Randolph Bray (1879-1978) was a pivotal figure in the development and organization of the animated cartoon industry in the United States. By introducing important technological advances along with new innovations in the organization and process of producing animated films, Bray earned a dual reputation as one who championed the success of the animated film industry and one who turned artistic work into an assembly-line production.**

Bray was born on August 25, 1879, in Addison, Michigan, a small farming town where his father served as a minister. He entered Alma College in Michigan in 1895, but the following year abandoned his formal studies. In 1901 he became a reporter for the *Detroit Evening News*. During his two-year stint in Detroit, Bray's assignments included examining corpses at the morgue in order to recreate sensational accident reports. In 1903 he moved to New York to join the staff of the Brooklyn *Daily Eagle* as a cartoonist. During his time with the *Daily Eagle*, Bray met and married Margaret Till, a German immigrant working as a translator at Columbia University. From the start of their marriage, Margaret was a dynamic force behind Bray's success. Desiring to venture into full-time freelancing as a cartoonist, Bray sought his wife's counsel. She readily agreed to maintain a job until Bray could establish his freelance career. As a result, Bray left the *Daily Eagle* and began offering his services as an illustrator and cartoonist around New York.

Bray's first important break came in 1906 when *Judge* accepted his one-panel animal cartoons for publication. The following year *Judge* began publishing Bray's comic strip "Little Johnny and His Teddy Bears." The full-page strip consisted of six panels with rhyming captions. Created out of the teddy bear craze instigated by Teddy Roosevelt, the bears were accompanied by a typical boy-hero named Johnny. The comic strip, which received wholeheartedly positive reviews, ran for the next three years. Bray also regularly contributed cartoons to *Life* and *Harpers*, as well as creating the strip "Mr. O. U. Absentmind" for the McClure Newspaper Syndicate.

### Began Working with Animation

Succeeding in gaining financial security, Bray moved out of the city to a farm in Highland Falls. Although his cartoon work continued to be well received, the frequency of appearances of his work in publications was declining by the early 1910s, apparently due to Bray's increasing fascination with animation. Around 1910 he began experimenting with the development of an original animated cartoon. He was apparently influenced by Porter's *The Teddy Bears*, released in 1907, which was created by using stop motion photography of real teddy bears. However, after numerous failed attempts, Bray concluded that the number of drawings required by the process was prohibitive. Wishing to create an animated cartoon that was both entertaining and financially lucrative, he began to look for ways to eliminate the massive amount of detail necessary to produce an animated version of a comic.

Bray's first completed cartoon animation was released in 1913. Accepted and released by well-known producer Charles Pathe, *The Artist's Dream* (or *The Dachshund and the Sausage*) portrayed an artist drawing a chest of drawers with a dog sleeping next to it. As the artist completes a drawing of a bowl of sausages on the chest of drawers, his wife enters and calls him away. After the artist leaves, the drawing comes to life: The dog jumps up, climbs up the drawers, and wolfs down the sausages until ultimately it explodes. The venture resulted in a contract with Pathe for

six more films in six months, with a new film to be released each month. Considering it had taken Bray at least six months to create *The Artist's Dream*, the contract provided a challenge that Bray would be unable to meet. However, even though production times had to be extended, the need for streamlined production forced Bray to find creative solutions to the problem of how to make animated cartoons financially successful.

### Streamlined the Animation Process

To eliminate the time-consuming task of completely redrawing the entire cartoon for each frame, Bray came up with the idea of using a printed background. Using zinc etching, hundreds of identical background scenes with the center left blank were printed on tracing paper. Bray then added the moving components of the cartoon to the blank center, thus drastically reducing the time and the number of skilled artists needed to complete an animated cartoon. The new technique was considered an improvement over fellow cartoon animator Winsor McCay's method of retracing all the lines in each frame, which often would appear to wiggle and wobble when cast on the film screen. Wishing to protect his new technique, Bray filed for his first U.S. patent, which was granted as No. 1,107,193. Bray, with the help of a wife whose intelligence and business sense proved to be a valuable asset, was on his way to revolutionizing the animation industry.

To produce the films under contract with Pathe, Bray assembled a staff of artists that he kept sequestered at his Highland Falls home during the week. Despite the lack of distractions, it took Bray's team six months to complete the first project promised to Pathe. *Colonel Heeza Liar's African Hunt* was released on January 14, 1914, followed by subsequent films in March, April, May, and August. By the end of 1914 Bray had formed Bray Studios Incorporated with \$10,000 in capital and an office on 26th Street in New York. As much businessman as animator, Bray hired talented artists and ceased contributing artistically to his films. Instead, he focused on improving the technological processes and streamlining production. Under Bray's direction, the animation process became compartmentalized. Previously, cartooning and animation were considered art forms to be undertaken by a single artist. As such, not every animator welcomed Bray's assembly-line approach. Nonetheless, Bray began employing animators who relied on assistants for portions of the work. After Paramount picked up the contract on *Colonel Heeza Liar*, Bray also began producing weekly episodes of three other animated cartoons created by his talented staff, including Earl Hurd's *Bobby Bumps*, Max Fleischer's *Out of Ink*, and Paul Terry's *Farmer Al Falfa*.

In July 1914 Bray took out a second patent that covered the technique of applying gray shades to drawings in order to counteract the flicker caused by all-white backgrounds. Bray's most important contribution to film animation, making production of animated cartoons much cheaper and faster, was the introduction and implementation of the cel system of animation. Actually, the process was similar to his previous invention of printing backgrounds on sheets of paper. However, inventor and animator Earl Hurd had pat-

ented an alternative technique in 1914 that used celluloid, an early form of plastic. "In fact," writes Giannalberto Bendazzi in *Cartoons: One Hundred Years of Cinema Animation*, "Hurd's process was not only alternative, but ultimately more important than Bray's: it consisted of the cel process, involving the drawing of characters on transparent celluloid sheets, which then were applied over painted background scenes. The transparent sheet was called *cel* in English, and *cellulo* in French (from celluloid)." Because of the sheets' transparency, only the moving parts needed to be drawn without worrying about blending them into a printed background as in Bray's method. Also the cels could be stacked to create multiple layers, although the plastic sheets were thick and tended to appear yellow if stacked too deep, which usually limited the number to three sheets or less.

Hurd could have begun to operate in competition with Bray. However, fortunately for Bray, the importance of Hurd's invention was yet to be realized. To prevent legal disputes over patent rights, Bray invited Hurd to become his partner and effectively took control of his patent. The relationship between Bray and Hurd is obscure. Little is known about how they met or became associated. Even though Hurd was brought aboard as a partner, he was never considered by Bray to be more than an employee of the firm. In 1916 Bray filed for his third and last patent, which incorporated and consolidated the methods of cel animation. With a monopoly on the technological processes, Bray made a substantial fortune by selling licenses for the use of the patented techniques, until the patents ran out in 1932. With the help of his wife, Bray vigilantly pursued claims against those who dared infringe on his patents, leading to numerous long legal battles.

### Instructional Films and Animation

In 1915 Bray signed a large contract with Paramount. By the following year, he had earned enough through the agreement to purchase the controlling share in what became Paramount-Bray Pictograph. With the United States' entrance into World War I, Bray discovered another lucrative outlet for his work: Army training films. Using a new process recently patented by staff animator Max Fleischer called rotoscoping, Bray's firm developed training films on such topics as the operation of Browning machine guns, rifle grenades, trench mortars, as well as how to harness horses used in the Calvary. Rotoscoping involved projecting film footage one screen at a time and tracing each screen onto cels, thereby creating images of remarkable clarity. Having just received the contract with the U.S. War College, Fleischer was drafted. Upon Bray's protest that he needed his artist to complete the project, Fleischer was granted leave from regular duty and assigned to oversee the making of the films.

Over the next three years, Bray turned his attention to filling continuous orders from the military, industry (especially the rapidly growing automobile industry), and educational facilities. In 1919 Bray severed his relationship with Paramount and created Bray Pictures Corporation, vested with \$1.5 million in capital. Nonfiction documentaries and

technical films became the company's leading emphasis. By joining forces with filming industry great Samuel Goldwyn, Bray released a slew of films, often more than three a week. Despite the shift in focus, Bray's studio also continued to release cartoon films, including more episodes of *Colonel Heeza Liar*, *Lampoons*, *Dinky Doodle*, and *Hot Dog Cartoons*. On February 8, 1920, Bray and Goldwyn released the first color cartoon, *The Debut of Thomas Cat*, using a process akin to the techniques recently developed in Technicolor filming. Although it received good reviews, it was Bray's only attempt at color animation as the process proved too expensive to be economically feasible.

By the late 1920s Bray was almost completely removed from the daily operation and production of animation. Attending to distribution and marketing were his main concerns. He did find time for several projects of special interest, including an attempt to produce H. G. Welles' *Outline of History*. Despite Bray's efforts to see the project into production, he finally abandoned the idea as overly ambitious and never made the film. In 1927 he accompanied a filming expedition down the Colorado River which resulted in the full-length documentary *Bride of the Colorado*. During the 1930s he produced a series of short comedy films for Goldwyn-Bray Pictographs entitled *McDougall Alley Comedies*. In the 1940s, with the onset of World War II, Bray once again went to work for the U.S. Army producing instructional films along with documentaries, health and safety films, and travel films.

### The End of an Era

Bray's stronghold on the animation industry began to wane during the early 1930s when his patents ran out. Also with the introduction of sound film, the entire film business was moving in a new direction, leaving Bray's era of silent animation behind for good. Bray's ability to shift gears and take on new projects and directions in business allowed him to maintain a respectable business well beyond the life of the silent animated cartoon. His push for technological advances along with the organization of the process went a long way in transforming animation from an art form into a profitable business endeavor. Donald Crafton, who calls Bray "the Henry Ford of Animation," writes in *Before Mickey: The Animated Film, 1898-1928*, "Bray's reputation as the man who stripped animation of all its individuality and artistic interest was undeserved. But, like Ford, he did revolutionize a fledgling industry, and he inexorably changed the lives of those associated with it." Bray remained active in his company well into his eighties. In 1963 he removed himself as president of Bray Studios, but remained as chair of the board. Having turned his company over to his grandson, he moved into a nursing home in Bridgeport, Connecticut, in the late 1960s where he died in October 1978, just a few months before his 100th birthday.

### Books

- Bendazzi, Giannalberto. *Cartoons: One Hundred Years of Cinema Animation*. John Libbey and Company, 1994.
- Crafton, Donald. *Before Mickey: The Animated Film, 1898-1928*. MIT Press, 1982.

Katz, Ephraim. *The Film Encyclopedia*. 3rd edition. Revised by Fred Klein and Ronald Dean Nolan. HarperCollins Publishers, 1998.

*The World Encyclopedia of Cartoons*. edited by Maurice Horn, Chelsea House Publishers, 1980.

*The World Encyclopedia of Film*. edited by John M. Smith and Tim Cawkwell, World Publishing, 1972.

### Online

"J. R. Bray." *International Dictionary of Films and Filmmakers, Volume 4: Writers and Production Artists*. St. James Press, 1996. Available at <http://www.galenet.com> (February 28, 2001). □

## Don Budge

**Don Budge (born 1915) swept the tennis scene in 1937, when he won the singles, men's doubles, and mixed doubles at Wimbledon, the U.S. national singles and mixed doubles, and the Davis Cup. In 1938, he was the first player ever to win Wimbledon as well as the U.S., French, and Australian national championships-the "Grand Slam" of tennis.**

Budge's father was a professional soccer player in Scotland who moved to California in hopes that the warmer climate would help with his respiratory problems. His mother, also of Scottish descent, was born in San Francisco. Budge and his brother Lloyd were both born in Oakland and were natural athletes; although Lloyd played tennis from an early age, Don Budge preferred baseball. When he was 13, Lloyd, who was the top member of the tennis team at the University of California in Berkeley, talked him into giving tennis a try. E. Digby Baltzell wrote, "From the very first, Don's money-stroke was his backhand which grew directly out of his almost-perfect, left-handed batting swing."

### Won His First Tournament

Shortly before his fifteenth birthday, Budge entered his first tournament, the California State Fifteen-and-Under Championships. He beat the top contender in the first round and eventually won the tournament. During the match, he met famed coach Perry T. Jones, whose players dominated tennis from 1931 to 1949. After Budge came off the court feeling triumphant, Jones beckoned to him, and Budge went over to him confidently, expecting to receive a compliment. "Instead, with a distinct frown, he looked me up and down," Budge later recalled, according to Baltzell. Jones told him, "Those are the dirtiest tennis shoes I ever saw in my life. Don't you ever-don't you ever-show up again on any court anywhere at any time wearing shoes like that." Deeply embarrassed, Budge slunk off the court, and later said, "I know he made an impression on me, for I've never gone on court since that day with even scuffy shoes."

After winning the tournament, Budge was hooked on tennis and dreamed of winning the National Junior Champi-



onships. In 1933 he did just that at the age of 18, beating the top-seeded contender in the fifth set after losing two sets. The player he beat was Gene Mako, and surprisingly, the two became lifelong friends. They played doubles together for the rest of Budge's amateur career, and in 1936, beat Allison and Van Ryn, who had been 1935 U.S. Champions, 14 times before beating them in the Forest Hills final; in 1937 they won the doubles at Wimbledon, and they won both the U.S. and Wimbledon doubles in 1938.

### A Player with a Lot to Learn

During his freshman year at the University of California at Berkeley, Budge withdrew from college to play the Emerson Grass Court Circuit as a member of an auxiliary Davis Cup team. He made it to the fourth round at Forest Hills and was ranked among the top ten U.S. players. At the Pacific Coast Championships at Berkeley, he lost to famed player Fred Perry in the finals. Although he could have played through the winter months in South America and on the Riviera, Budge decided to stay home and work on his grip, which Perry had called a "Wild Western" grip, according to Baltzell. He was an admirer of Perry and was thrilled when Perry took time out to coach him. He also worked with his own coach, Tom Stowe, who was the tennis pro at the Claremont Country Club in Oakland. Stowe, who coached Budge for free, focused on changing Budge's grip to an "Eastern" grip and on improving his volley. By the following spring, he was a stronger and more skilled player. As Frank V. Phelps wrote in *Biographical Dictionary of American Sports*, "Wielding a 16-ounce rack-

et, the 6 foot, 1 inch, 155 pound right-handed Budge exhibited power, consistency, and no weaknesses at his peak. He devastated opponents by serving and smashing with a slight slice, stroke-volleying deep and hard, and driving hard with minor overspin." He was also known for his powerful backhand and his quick return of serves.

Budge first began playing world-level tennis in 1935. He won an unexpected victory over Bunny Adams at Wimbledon, and met famed player Baron Gottfried von Cramm, who became his friend for life despite the fact that in the semifinal, Cramm beat Budge. Cramm, who was a true gentleman on the court, impressed Budge with the high caliber of his moral character as an athlete, and Budge adhered to Cramm's ideals of athletic behavior after their meeting.

In 1937, Budge dominated tennis, but he still had much to learn, and he was eager to learn it. As Alan Trengrove wrote in *The Story of the Davis Cup*, "Don Budge's greatness was as much the result of his eagerness to learn and to adjust his technique as to his natural talent." He applied that eagerness in January of 1937, while he was umpiring a match between two world-class players. He noticed that player one hit the ball very hard, and the other hit the ball very soon after it bounced, when it was still only a few inches off the court. He reasoned that a player who could hit the ball both hard and early would be unbeatable, and he resolved to be that player. In addition, he and coach Tom Stowe worked on his attitude. According to Baltzell, he later wrote, "I was to think of myself as number one at all times. If I concentrated on that belief, we felt that I would be more likely to *play* like number one."

### Played "Almost to Perfection"

He was right. He played "almost to perfection," according to Baltzell, during the spring and summer of 1937, never losing a match on grass, and not losing any tournament at all until September, when he lost to Henner Henkel in a small tournament outside Chicago. He won the Wimbledon singles, men's doubles, and mixed doubles (playing with Gene Mako and Alice Marble), becoming the first man to accomplish this feat. He beat his friend Gottfried von Cramm in three straight sets at Wimbledon, and beat him again in the Davis Cup Interzone Finals, where he needed to beat Cramm so that the U.S. team would make it to the challenge round. In that competition, Cramm was favored to win, and he was also a favorite of the crowd, since Budge was considered an upstart. Budge lost in the first two sets, but then beat Cramm in the next two. In the fifth set, he won 8-6, letting the U.S. team into the challenge round. As Baltzell noted, he called that game "the greatest match in which I ever played. It was competitive, long, and close. It was fought hard but cleanly by two close friends. It was cast with the ultimate in rivals, the number-one-ranked amateur player in the world against the number two. I never played better and never played anyone as good as Cramm." Budge also remarked on the fact that Queen Mary of England was in attendance, that so many Americans watched the competition that activity on the stock market slowed down, and even German dictator Adolf Hitler listened in-

tently to the broadcast. According to Trengrove, Allison Danzig later wrote in the book *Budge on Tennis*, "The brilliance of the tennis was almost unbelievable. In game after game [Budge and Cramm] sustained their amazing virtuosity without the slightest deviation or faltering on either side. Gradually, inch by inch, Budge picked up." Baltzell noted that a reporter for the *London Times* commented, "Certainly I have never seen a match that came nearer the heroic in its courage, as in its strokes, as this." Once Budge had cleared the way, the U.S. team beat England for the first time in the Davis Cup since 1926.

Throughout the Davis Cup competition, Budge displayed the calm temperament he later became famous for. On the night before a particularly important match, he went to sleep at ten at night and woke up at two in the morning. Thirsty, he went out into the hall and headed for the sink, and ran into Texan Wilmer Allison, who was so nervous he couldn't sleep. Allison, who was a much more experienced player than Budge, shook his head in amazement at Budge's calm. "You haven't got any nerves at all," he said, according to Alan Trengrove in *The Story of the Davis Cup*. "I wish to heaven I could go to sleep before a match."

### Won the Grand Slam

Budge beat Cramm again at Forest Hills and the Pacific Southwest. Because of his achievements during that outstanding year, he won the Sullivan Award for the most outstanding amateur athlete, and was named Associated Press Athlete of the Year. As Baltzell wrote, "He became an authentic national hero. The world was at his feet and he could dictate his terms to the professional promoters who now wooed him with lucrative offers." However, Budge didn't want to turn pro just yet. He felt that tennis had given him great opportunities, and he wanted to pay back these gifts to the game and its players. He wanted to win all four of the famed national championships-Wimbledon, the Australian championship, the French championship, and the U.S. championship.

No one could have imagined that in 1938 he would play even better, than he did in 1937, but he did. In that year, he succeeded in his goal and became the first player ever to win the "Grand Slam" of tennis-Wimbledon, and the Australian, U.S., and French national championships. The Associated Press named him Athlete of the Year again in 1938. In his entire Davis Cup career, Budge had a record of 19-2; he only lost in 1935, to Fred Perry and "Bunny" Austin.

In 1939, Budge began playing professionally; during that year, he was 21-18 against Ellsworth Vines and 18-11 against the legendary Fred Perry. Bill Tilden, the flamboyant and formerly great player, also joined the tour in 1941, but by then he was past his peak, and out of 58 matches, Budge won 51. After this, the tour was halted when the United States entered the fighting of World War II, and Budge retired.

In 1941, Budge married Diedre Conselman, and they had two sons, David Bruce and Jeffrey Donald. He and Conselman divorced, and he married Loriel McPherson in June 1967. Budge was briefly a partner in a laundry service,

then worked as a tennis pro and as a consultant to sporting goods manufacturers. He wrote two books, *Budge on Tennis* and *Don Budge: A Memoir*, and was elected to the International Tennis Hall of Fame in 1964. Fred V. Phelps summed up his career by noting, "Many experts have called this popular, skilled sportsman the greatest player since [Bill] Tilden, and some have ranked him the greatest ever."

### Books

Baltzell, E. Digby, *Sporting Gentlemen*, The Free Press, 1995.  
*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.

Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton Mifflin, 1995.

Tengrove, Alan, *The Story of the Davis Cup*, Stanley Paul, 1985.

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## Carlos Bulosan

**For decades after the death of Carlos Bulosan (1911-1956), his works languished in obscurity and his extraordinary achievements were virtually forgotten. But in his short life, Bulosan rose from an impoverished childhood in colonial Philippines to become a celebrated man of letters in the United States, despite deeply entrenched racial barriers. His books and poems bore unsparing witness to the racism and hardships Filipinos encountered in their adopted home.**

While America failed to live up to his dreams, Bulosan continued to lay claim to his vision for the land that rejected him and his countrymen. "America is not a land of one race or one class of men," Bulosan wrote in his autobiography, *America Is in the Heart*. "We are all Americans that have toiled and suffered and know oppression and defeat, from the first Indian that offered peace in Manhattan to the last Filipino peapickers. America is a prophecy of a new society of men: of a system that knows no sorrow or strife or suffering." The book, when rediscovered by another generation of Asian Americans in the late 1960s and 1970s, would later become an instant classic in the emerging canon of Asian American literature.

### Poverty and Flight

Although there is conflicting information on the exact date of Bulosan's birth, Susan Evangelista, author of *Carlos Bulosan and His Poetry: A Biography and Anthology*, believes he was born on November 2, 1911, in Binalonan, Philippines. Bulosan's parents were peasants who eked out a living from the land. In his autobiography, Bulosan described his father's losing battle to keep the small parcel of land that supported their large family, and the setbacks that continually dashed any hopes for improving their lives. In his vivid portrayal of his family's poverty, Bulosan captured



the forces that ultimately drove him—just as it had thousands of others—to seek a better life abroad.

After striking out on his own and saving enough money for his passage, Bulosan left Manila aboard a ship bound for Seattle. He never returned to the Philippines. During the harrowing transoceanic crossing, an epidemic of meningitis broke out and several of the Filipino passengers, who were confined to the steerage section, became ill or died. When Bulosan arrived on July 1, 1930, the United States was a country deeply mired in the Great Depression. With unemployment high and competition for the few available jobs intense, immigrants who were drawn by promises of opportunity instead encountered resentment and racism. Those who were too new to know their rights were often exploited. With no money or family in Seattle, Bulosan was quickly recruited to work in the Alaskan fish canneries. After a season of hard labor, his total earnings, after some questionable deductions, were only thirteen dollars.

Once back from Alaska, Bulosan started working his way south, toward California, where two of his brothers lived. Along the way, he found occasional work as a field hand or crop picker, and came to know the marginalized world of the Filipino immigrants. Ostracized by the mainstream, Filipino men (few women immigrated) created their own rough-and-tumble bachelor societies.

### Racism

On the West Coast, Filipinos were often the target of racial violence. While working in an eastern Washington orchard, Bulosan and other Filipino workers were driven out by a group of white men, their bunkhouse set on fire. At a pool hall in Los Angeles, Bulosan saw two policemen gun down a Filipino. In California, racist laws made it illegal for Filipinos to marry white women, and cars with Filipino men were routinely stopped by police and searched. "I came to know afterward that in many ways it was a crime to be a Filipino in California," Bulosan wrote in his autobiography. "I came to know that the public streets were not free to my people."

In California, Bulosan became involved in an effort to organize independent unions—a reaction to the wage cuts, unemployment, and the exploitation of the Depression and a protest against the drive to exclude Filipinos from unions in the early 1930s, noted Carey McWilliams in his introduction to *America Is in the Heart*. McWilliams, who was the editor the *Nation* magazine, knew Bulosan. The organizing effort led to the formation of a new international union known as UCAPAWA, United Cannery and Packing House Workers of America, representing fish cannery workers in Seattle and packing house workers in Salinas, California—often the same workers at different times of the year.

An older brother helped Bulosan find enough work to keep them alive. McWilliams described Bulosan as sickly. Because of a limp, the kinds of jobs open to him were limited, although he did manage to get work now and then, mostly as a dishwasher. McWilliams quoted John Fante, the novelist and screenwriter who was also a friend of Bulosan's, who described him as a poet-saint, having "an exquisite face, almost facially beautiful, with gleaming teeth

and lovely brown eyes, shy, generous terribly poor, terribly exiled in California."

### Reading and Writing

To pass time during the periods when he was not well enough to work or when he was unable to find jobs, Bulosan spent long hours at the Los Angeles Public Library, where he read everything from children's books to Freudian psychology, said Evangelista. When he left the Philippines, he had only three years of formal education and spoke little English. Although he hadn't written much before coming to the United States, once he discovered writing, he never stopped. Bulosan sold his first story while he was working in a fish cannery in San Pedro.

In 1934, Bulosan published *The New Tide*, a bimonthly radical literary magazine that brought him into contact with several prominent writers, including William Carlos Williams, William Saroyan, and Richard Wright. He also met and befriended Harriet Monroe, editor of the prestigious magazine *Poetry*, who published and championed his work. At other times, Bulosan was involved in writing more political news, working for the *Philippine Commonwealth Times* and at least two other newspapers in the Stockton-Salinas areas that focused on the problems of the Filipino workers, according to Evangelista.

In 1936 Bulosan, suffering from tuberculosis, was taken to the Los Angeles County hospital where he underwent three operations for a lesion in his right lung. He spent two years in the hospital, mostly in the convalescent ward. Bulosan used his long stay in the hospital to develop his education by reading voraciously and constantly writing. "Writing is a pleasure and a passion to me. I seem to be babbling with multitudinous ideas, but my body is weak and tired," Bulosan wrote at the time. "I locked myself in the room, unplugged the phone, pulled down the shades and shut out the whole damned world. I knew enough of it to carry me for a lifetime of writing."

With the end of the Depression and the start of World War II, during which the Philippines and the United States were allies in the fight against Japan, the status of Filipinos in the United States began to change slightly. It was during this time that Bulosan began to receive wider acceptance as a writer, noted Evangelista. In 1942 he wrote two thin volumes of poetry, *Letter from America* and *Chorus for America*. That year he was included in *Who's Who in America*. The following year he published *The Voice of Bataan*, written in memory of the soldiers who died there. That same year, the *Saturday Evening Post* published four articles on the four freedoms—freedom of speech, freedom to worship, freedom from want, and freedom from fear. Bulosan was chosen to write the section on freedom from want. In 1944, Bulosan published *The Laughter of My Father*, which became an instant wartime success. The book was translated into several European languages and was transmitted worldwide over wartime radio. The following year, Harcourt, Brace and Company asked him to write what would become his most enduring work, his autobiography, *America Is in the Heart*. When it was published in 1946, the book was a critical success.

McWilliams, in his introduction to the reprinted edition nearly three decades later, called it a social classic: "It reflects the collective life experience of thousands of Filipino immigrants who were attracted to this country by its legendary promises of a better life or who were recruited for employment here." The *Saturday Review of Literature* said of the book: "People interested in driving from America the scourge of intolerance should read Mr. Bulosan's autobiography. They should read it that they may draw from the anger it will arouse in them the determination to bring to an end the vicious nonsense of racism."

### Political Repercussion

In the conservative postwar climate, Bulosan's star started to face. His left-wing politics and involvement in union activities were at odds with the fervent anti-communism of the McCarthy era. But Bulosan became increasingly involved with UCAPAWA. In 1950, he was hired to edit the union's highly political yearbook. The repercussions for his political stand were severe. Bulosan believed that he was blacklisted in Hollywood and was unable to find work there because of his political beliefs, according to Evangelista. His friend, John Fante, reportedly said that he was barred from working at MGM studios simply because of his association with Bulosan.

Bulosan's health progressively worsened in the early 1950s. He spent his final years in Seattle, and was hospitalized for part of that time. When he died of tuberculosis and malnutrition, union leader Chris Mensalvas, a close friend of Bulosan's, wrote this obituary, as quoted in Evangelista's book: "Carlos Bulosan, 30 years old (sic), died 11 September 1956, Seattle. Birthplace: Philippines; Address: Unknown; Occupation: Writer; Hobby: Famous for his jungle salad served during Foreign-Born Committee dinners. Estate: One typewriter, a twenty-year old suit, unfinished manuscripts, worn out sock; Finances: Zero; Beneficiary: His people."

For two decades after his death, Bulosan and his works were largely forgotten. But a generation of young Asian Americans hungry to reclaim their lost history and heroes rediscovered him. *America Is in the Heart* was reprinted by the University of Washington Press in 1973 and it has since become a fixture in Asian American studies programs at universities across the country.

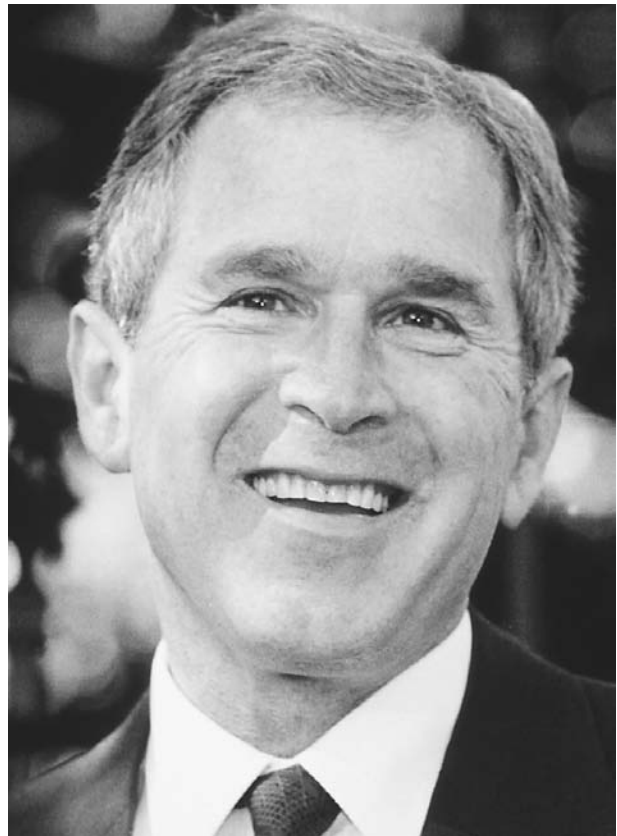
### Books

Bulosan, Carlos. *America Is in the Heart*. 1943; reprinted with introduction by Carey McWilliams, University of Washington Press, 1973.

Evangelista, Susan. *Carlos Bulosan and His Poetry: A Biography and Anthology*. University of Washington Press, 1985. □

## George W. Bush

**When George W. Bush (born 1946) won a disputed election to become president of the United States, it capped a meteoric rise to power in a relatively short**



**political career that combined good timing, a powerful family, and uncanny campaigning skills. A late bloomer in terms of achievement, Bush's victory represented the second time in American history that the son of a former president took on the world's most powerful political job.**

George Walker Bush was born in New Haven, Connecticut on July 6, 1946. His parents moved the family from New Haven, where they had lived next door to the president of Yale University, to Texas when George W. was two years old. His father, George Herbert Walker Bush, had just graduated from Yale and wanted to try his hand at the oil business. At first they lived in a ramshackle duplex in the roughneck town of Odessa, with two prostitutes renting the other half of the house. Two years later, after a brief time following the elder Bush as a drill-bit salesman in California, they moved to Midland, a more refined city that was better suited to raising a family.

One of their neighbors, Charlie Younger, described Midland as "a real Ozzie-and-Harriet sort of town." It was also bursting with optimism during the boom times of the 1950s, when the elder Bush made his fortune in drilling. Young George W. was a strong-willed and wisecracking child who posed a challenge for his mother, Barbara. His father, who had played baseball at Yale, coached his Little League baseball team, and the young boy became a baseball fanatic, memorizing statistics and trivia from his collec-

tion of baseball cards. The Bushes had five more children: a son Jeb; a daughter Robin, (who died of leukemia in childhood); then sons Neil and Marvin and daughter Dorothy. As the eldest, George W. was expected to shine. He was an all-around athlete, fair student, and occasional troublemaker in school—he was once paddled for painting a mustache on his face during a music class. In seventh grade, he ran for class president and won. The next year, his father, who had become a millionaire, moved the family to Houston.

Two years later, George W. was sent back East to enroll at Phillips Academy, an elite private prep school in Andover, Massachusetts. At Andover, he was a whirlwind of physical activity, playing varsity baseball and basketball and junior varsity football. In basketball he often made self-deprecating jokes about riding the bench. Instead of trying out for varsity football, he became the squad's head cheerleader. He also organized a stickball league and was nicknamed Tweeds Bush, after the political organizer Boss Tweed. Against the school's intense competition Bush arrayed his sense of humor. "I was able to instill a sense of frivolity," Bush later said. "Andover was kind of a strange experience."

His high school academic record was far from top-notch. However, drawing on his family connections, Bush landed a spot at Yale, where both his father and grandfather had attended. Bush, extremely gregarious and a notoriously poor dresser, made many friends, somehow bridging the growing divide between the public school graduates who were entering Yale and the "preppies." Bush's interest in politics faded temporarily after his father lost a close election for a seat in the U.S. Senate, in which his grandfather had served. He remained uninterested in politics even after his father won the Senate seat on a second try in 1966. Instead, he became president of the Delta Kappa Epsilon fraternity and enjoyed parties, drinking, watching and playing football, and dating. Grades weren't a high priority. "He was a serious student of people," recalled classmate Robert McCallum. He was booked on a misdemeanor charge for being part of a prank that involved stealing a Christmas wreath for the frat house, but the charges were dropped. He was also questioned by police for helping to tear down the goalposts at Princeton University after a football game. For a brief time, he was engaged to a Rice University student, Cathryn Wolfman. In his senior year, he joined the notorious secret society, Skull and Bones. Despite his background of privilege, Bush became more at ease with all kinds of people in college. "I was never one to feel guilty," he said about his wealth and family connections. "I feel lucky." Moving back to Houston after graduating from Yale, Bush took up residence in a trendy apartment complex, the Chateaux Dijon—a hub for young single people. Cocky and loud, Bush played volleyball in the swimming pool, flirted with women, and drove a sports car. He worked, for a time, for an agribusiness company and for a mentoring program. "I was rootless," he later said. "I had no responsibilities whatsoever." Later, he would fend off reporters' questions about rumors of drug use in those days. "How I behaved as an irresponsible youth is irrelevant to this campaign," he said during his 1994 race for governor. "What matters is how I behave as an adult." Other questions later arose

about how he had managed to avoid serving in Vietnam. He was a member of an elite Texas Air National Guard unit stationed at Ellington Air Force Base that included the sons of other prominent politicians and civic leaders. The National Guard had a long waiting list of young men eager to avoid military service during the war, but Bush managed to sail through easily. He has denied any impropriety, but political writer Molly Ivins claims that a family friend used Ben Barnes, then speaker of the House of Representatives in Texas, to recommend Bush for a spot in the Guard unit.

### Texas Oil Business

Bush was rejected by the University of Texas Law School, but gained admittance to Harvard's Business School. After graduation, he retraced his father's footsteps and returned to Midland, Texas in 1975 to try his luck in the oil business. Bush started by searching deeds for other oilmen who wanted mineral rights. His first attempt at exploration, Arbusto Energy, failed to strike oil.

In 1977 Bush suddenly announced that would run for a seat in the U.S. Congress. Asked later about his renewed interest in politics, Bush said it was because President Jimmy Carter was trying to control natural gas prices and "I felt the United States was headed toward European-style socialism." A friend set up Bush for a date with Laura Welch, a librarian. She had grown up near him in Houston and even lived at the Chateaux Dijon, but they had never crossed paths. Three months later, he married her and they immediately hit the campaign trail. In 1982, they would have twin daughters, Jenna and Barbara. In a primary, Bush prevailed over the Republican Party's handpicked choice, Odessa mayor Jim Reese, who portrayed him as an elitist and a liberal. Bush then faced off against Democrat Kent Hance, who painted him as elite East Coast carpetbagger whose \$400,000 in campaign contributions came from well-connected outsiders such as baseball commissioner Bowie Kuhn. Bush played into Hance's hands by airing a campaign ad showing him jogging—an activity considered alien to many west Texans. Hance's campaign used a last-minute attack ad that accused Bush of having given free beer to college students in order to win their vote. Bush refrained from retaliating, and lost the election.

Bush raised money from prominent family friends to support an oil drilling fund. However, Arbusto was still unable to find oil. He merged it with another company, Spectrum 7, which soon was three million dollars in debt. Many independent oil companies were going broke. Midland, the financial center of the Texas oil country, was in decline. Bush needed a miracle to survive in the oil business and was finally bailed out by Harken Oil and Gas (later Harken Energy Corporation). Harken wanted the name of the vice-president's son on its board of directors so badly that it assumed Spectrum 7's debt, paid Bush \$320,000 worth of stock options, and offered him a consulting position at \$80,000 a year. Government regulators later investigated the deal after Harken, which had no previous experience in the Persian Gulf, landed a lucrative contract to drill for oil off the coast of Bahrain. Bush's decision to sell 212,140 shares of Harken for \$848,560—just before the

company announced poor quarterly earnings—was also scrutinized, but he was not charged with any wrongdoing.

In 1985, Bush was in the family's Kennebunkport, Maine, complex, when evangelist Billy Graham paid a visit. George W. Bush said he had a "personal conversion" and began taking Biblical teachings more seriously. A year later, on the morning after a raucous party celebrating his 40th birthday, Bush suddenly swore off drinking. He had not considered himself an alcoholic, and neither had friends or family, but all admitted he drank to excess on occasion. The announcement was a turning point.

In 1988, Bush worked on his father's presidential campaign as a "loyalty thermometer," taking the pulse of campaign workers and making sure that they were ready to deflect any criticism that was directed against his father. He also traveled far and wide soliciting donations and help from powerful people. Bush was instrumental in hiring decisions, but found Washington to be a pompous, petty place. He left shortly after the work for the transition team was finished. In the process, however, he had, he said, "earned his spurs" in his father's eyes. He would return to work on the 1992 campaign, playing an instrumental role in getting rid of Chief of Staff George Sununu, who had failed the loyalty test.

### **Bought Baseball Team**

Late in 1988, Bush heard that the Texas Rangers, a struggling professional baseball club, was up for sale. He put together a group of 70 investors who contributed \$14 million to buy the team at a bargain price. Bush's own investment of \$606,000—part of his booty from the Harken stock sale—was the smallest of any investor. But Bush became the driving force and public face of the new ownership group. During the next five years, he was managing general partner of the franchise. He organized a successful campaign to get voters to approve a sales tax for a new publicly funded stadium paid with \$135 million in bonds. The lucrative stadium deal turned the franchise around financially, since the owners got to keep the stadium when the bonds were paid off. In 1994, when Bush ran for governor, he put his share of the Rangers, along with his other assets, in a blind trust and resigned as managing general partner just before a players strike wiped out the World Series. His opponent, Ann Richards, accused Bush of benefiting from corporate welfare, but the charges didn't stick and Bush won the election. In 1998, his group sold the team, and got a personal windfall of \$14.9 million. That was money he used to bankroll his run for the presidency.

His old friend, Joseph O'Neill, said of Bush's 1988 moves: "He really hated Washington, but it charged him up. Then, with the Rangers, he really hit stride. It took some hard times and big jobs to bring out the bigness in him." When his father lost to Bill Clinton in the 1992 presidential race, Bush the younger felt free to resume acting on his long-shelved political ambitions. His celebrity as the most well known owner of the Rangers and as the son of a former president gave him an advantage as he ran for governor in 1994. But his opponent was the popular governor, Ann Richards. With the help of political strategist Karl Rove,

nicknamed "Bush's brain," Bush stayed doggedly "on message" and remained affable and unresponsive to Richards's attacks.

### **Governor of Texas**

Famous for delegating details and making connections, Bush used his newly honed management skills in the governor's office. Texas is also a weak-governor state, and Bush was adept at making compromises and taking credit. Bush's governing style in Texas depended on bi-partisanship, a political tradition in that state. Longtime Texas Lieutenant Governor Bob Bullock, a Democrat, endorsed Bush in his 1998 bid for re-election. Bullock, a tough negotiator, had been a mentor for Bush in Texas politics. He did not earn a reputation as a hard-driving executive, often taking time out in the middle of the day to go jogging or play video games. He complained that he did not like to read long books and that he hated meetings and briefings. But Bush did work hard on education reform, championing public schools.

A key to Bush's popularity in Texas was his ability to appeal both to the old-guard "country club" Republicans, who tended to be more moderate, and the Christian Right, which had come to control the GOP in that state. Bush described himself as a born-again Christian, that helped him with the fundamentalist voters, but downplayed issues like his opposition to abortion, keeping his appeal to moderates. He would use that same formula to secure the GOP presidential nomination and keep the party together during the 2000 campaign.

### **Presidential Campaign**

Many months before the first presidential primaries were held for the 2000 election, Bush had virtually sewed up the GOP nomination by demonstrating his ability to attract millions in contributions. Business interests and Republican stalwarts closed ranks behind the Bush candidacy, making his nomination appear to be inevitable. To some critics such as Ivins, Bush was characterized as "a wholly owned subsidiary of corporate America." *Washington Post* writer Lois Romano and George Lardner Jr. said that "all along George W. harbored qualities that his father could only envy: a visceral and energetic charm, sound political instincts, an easy and convincing sense of humor, a common touch." But then a formidable challenger emerged out of a large pack of contenders.

Arizona Senator John McCain rode a wave of media and popular enthusiasm in early 2000 to provide a point of coalescence for those opposed to Bush's nomination. Sounding his key theme of campaign finance reform, McCain attacked Bush as being the creation of special interest and business contributors. Bush's campaign was ambushed by McCain in New Hampshire, where the challenger pulled off an upset. The defeat prompted Bush to change the tone and tactics of his campaign. To win the South Carolina primary, Bush visited controversial Bob Jones University, a hotbed of far-right activism. He also launched a series of attacks on McCain's credibility. McCain, complaining about campaign dirty tricks, was soundly

defeated, and Bush eventually won in enough other states to fend off McCain's challenge.

In the general election campaign, Bush selected Dick Cheney, who had been Secretary of Defense under his father, as his running mate. It signaled that Bush would surround himself with people he considered authoritative. Bush took an early lead in the polls but his opponent, Vice-President Al Gore, bounced back after the Democratic convention, when he started sounding a populist theme. The media had a field day with Bush's tendencies to malapropisms and Gore hammered at his foreign policy weaknesses and lack of experience. There was also some criticism of an alleged subliminal messages in a Bush campaign ad in which the word "Democrats" morphed into "rats" for a split-second. Bush immediately pulled the ads, and continued to display his people skills. "What Bush does with people is establish a direct, personal connection," wrote reporter Nicholas Lemann in the *New Yorker*. Lemann claims that Bush has "a talent for establishing a jovial connection with an unusually large number of people." The polls drew close and a series of three debates in October was expected to be decisive. Gore, portrayed as a man with more command of policies and details, was expected to win. However, Bush more than held his own, and his folksiness made Gore look stiff by comparison. In a second debate Gore was more agreeable, and the two candidates declared much common ground. However, Gore's dramatic mood shift made him appear insincere to some voters. Bush remained adamantly "on message," repeatedly sounding his issues of education reform, social security privatization, and tax cuts, while downplaying controversial issues such as abortion.

Although the 2000 presidential election was extremely close, and was finally resolved by a five to four decision of the U.S. Supreme Court, Bush emerged as the winner. Ivins had often said of Bush: "He is so lucky that if they tried to hang him, the rope would break."

### Books

Ivins, Molly and Lou Dubose, *Shrub: The Short But Happy Political Life of George W. Bush*, Vintage, 2000.

### Periodicals

*New Yorker*, January 31, 2000.

*Newsweek*, November 22, 1999.

*Texas Monthly*, June 1999.

*Time*, June 21, 1999.

*US News and World Report*, January 22, 2001.

*Washington Post*, July 25, 1999; July 26, 1999; July 27, 1999; July 28, 1999; July 29, 1999; July 30, 1999; July 31, 1999. □

## David Bushnell

**David Bushnell (1742-1824) built the first man-propelled submarine boat with a wooden magazine containing gunpowder and a clock mechanism for igniting it at any particular time. Although he was**

**not successful in his attempts to destroy British ships during the American Revolution, he is recognized as the father of the modern submarine.**

David Bushnell was a descendant of Francis Bushnell, an Englishman who joined the New Haven Colony in 1639 and subsequently helped to found Guilford, Connecticut. David was born on his father's farm in Saybrook, Connecticut. The home was located in an extremely secluded portion of the township and here young Bushnell grew up, helping his father with the farm duties, devoting his leisure moments to reading, and shunning all society. When he was twenty-seven his father died, and, as his mother had died some years before, the farm descended to David and his brother. David immediately sold his inheritance, moved into town, and began to prepare for college. He secured as tutor, the Reverend John Devotion, pastor of the local Congregational church. Two years later Bushnell entered Yale, and completed the four-year course in 1775.

### Bushnell's Turtle

On one occasion, as a result of a discussion with members of the faculty, Bushnell demonstrated the fact that gunpowder could be exploded under water. This is thought to have suggested to him the idea of a submarine mine or torpedo. Apparently he gave much time and attention to this during his college years, for in 1775 he completed at Saybrook a man-propelled submarine boat on the outside shell of which was attached a wooden magazine containing gunpowder and a clock mechanism for igniting it at any particular time. The boat, built entirely of heavy oak beams, had the shape of a top. In fact, its exterior appearance was said to resemble a structure that would result from joining together the upper shells of two turtles and weighting the whole so that the tail end pointed downward and the head skyward. For this reason it was called "Bushnell's Turtle." The vessel was equipped with a vertical and horizontal screw propeller and rudder, operated by hand from the interior. It also contained a water gauge to indicate the boat's depth; a compass for direction, lighted up with phosphorus; a foot-operated valve in the keel to admit water for descending; and two hand-operated pumps to eject the water for ascending. The magazine, or torpedo, was located above the rudder and was connected by a line with a wooden screw, turned from within, which could be driven into a ship's hull. A further arrangement was contrived so that as the submarine moved away the clockwork in the mechanism was set in motion, having been previously set to ignite the charge at a certain time, the maximum being twelve hours. Bushnell successfully demonstrated his idea to the governor and Council of Safety of Connecticut who approved of his plan and suggested that he proceed with further experiment if necessary, with the expectation of a proper public reward.

During 1776-77 Bushnell attempted to blow up British ships but was never successful, owing entirely to his inability to obtain a skilled operator, he personally being too frail. Attempts were made in Boston Harbor; off Governor's

Island, New York; and in the Delaware River above Philadelphia. After the failure at Philadelphia, in December 1777, Bushnell gave up further attempts amidst general popular ridicule, although today he is recognized as the father of the submarine.

### Commanded Corps of Engineers

Bushnell's inability to prove the merits of his invention in actual warfare did not entirely discredit him. When General Washington organized companies of sappers and miners in 1779, Bushnell was made a captain-lieutenant. He was promoted to captain in 1781, and was stationed at West Point in command of the Corps of Engineers on June 4, 1783. In November of that year he was mustered out of service, receiving the commutation of five-years' pay in lieu of one-half pay for life.

During the following ten or twelve years it is believed that he went to France. In 1795, however, he appeared in Columbia County, Georgia, as a schoolteacher, under the name of Dr. Bush. He lived with a fellow soldier, Abraham Baldwin who was the only person who knew his real identity. Through him Bushnell became head of a private school. Several years later he settled in Warrenton, Georgia, and began the practice of medicine which he continued until his death in 1824, at the age of eighty-four. As far as is known he never married.

### Books

- Abbot, Lieut.-Col. Henry L., *Beginning of Modern Submarine Warfare*, 1775.  
 Dexter, F. B., *Biographical Sketches of the Graduates of Yale College*, vol. III, 1903.  
 Howe, Henry, *Memoirs of the Most Eminent American Mechanics*, 1844.  
 White, George, *Historical Collections. of Georgia*, 3rd ed., 1855, pp. 406-09.

### Periodicals

- American Journal of Science*, April 1820.  
*Connecticut Historical Society Collections*, vol. II, 1870.  
*Transactions of the American Philosophical Society*, vol. IV, 1799, No. 37. □

## Benjamin Franklin Butler

**History seems to have forgotten Benjamin Franklin Butler (1818-1893), though he was one of the most colorful-and reviled—figures in American politics in his day. A brilliant lawyer from Massachusetts, Butler served in Congress for a number of years, but is best remembered for his Civil War leadership, and the enmity he earned at home and in Washington for his uncompromising views.**

Butler was born on November 5, 1818, in Deerfield, New Hampshire. He was the sixth child of a father from whom he inherited his adventurous streak: John Butler captained a company of dragoons during the War of 1812, and later became a privateer—and possibly a pirate—plying the Caribbean seas. When he died of yellow fever on the island of St. Kitts, his ship and its contents were lost, and with it his family's financial resources. His mother eventually became proprietor of a boarding house for textile-mill workers in Lowell, Massachusetts. As a boy, Butler was an eager student and avid reader. He was mesmerized by stories of some elderly neighborhood men who had fought in the Revolutionary War, and dreamed of a military career himself.

Charlotte Seelye Butler, however, hoped her son would become a minister. He was sent to Waterbury College (later renamed Colby College) in Maine instead of his first choice, the U.S. Military Academy at West Point. But his experience at the strict Baptist-Calvinist college only increased his distaste for the religion, and he was happy to graduate in 1838. He decided to study law, and clerked at a Lowell practice, as was the custom before law schools came into being. For extra money, he taught at a small school for juvenile delinquents, and gained renown for his track record there in rehabilitating the boys. Admitted to the Massachusetts bar in 1840, he began practicing in Lowell and quickly gained a reputation as a tenacious courtroom opponent. His business grew along with his formidable reputation, and he soon opened an office in Boston. Butler defended criminals and injured workers alike, and prepared the patent documents for Elias Howe's sewing machine with such thoroughness that the Singer Sewing Machine Company was later forced to pay Howe lifetime royalties.

### Skilled Trial Lawyer

Butler married Sarah Hildreth, the daughter of a scholarly physician, on May 16, 1844. Hildreth was an accomplished actress who had appeared on the New York stage. They had one daughter and two sons. In 1845, the 27-year-old Butler was admitted to the Bar of the U.S. Supreme Court, making him possibly the youngest attorney to argue a case before the High Court. His earliest victory from this part of his career came when the owner of the famous Sutter's Mill, on whose property the California Gold Rush began in 1848, hired him. Butler won the case for the owner, who was given legal title to thousands of acres of land.

Butler was soon drawn into politics. An avowed Democrat in New England, he often found himself in conflict with the conservative Massachusetts establishment, who were usually Whigs or Know-Nothings, two precursors of the Republican Party. In 1853, Butler was elected to the Massachusetts House of Representatives, and advanced to a seat in the state Senate in 1859. He courted votes from the Roman Catholic minority in the state, and from the burgeoning labor movement centered around the textile industry in places like Lowell. He tried to introduce a bill mandating a ten-hour day at the mills, but was unsuccessful. In the Boston legislative chambers, Butler's debating skills brought

him renown, for he was famous for unleashing biting ripostes upon his political foes.

### **Press Chronicled His Military Exploits**

During the run-up to the 1860 presidential elections, Butler emerged as one of New England's more prominent politicians. He was a confirmed Andrew Jackson Unionist, and at the Democratic national convention that year opposed the party's favored nominee, Stephen Douglas. Butler argued instead for the nomination of Southern Democrat Jefferson Davis, and then gave his support to a New England faction that nominated John Breckinridge, vice president under incumbent James Buchanan. As a member of a national party that was bitterly divided over the slavery issue, Butler remained on the fence about the matter for a time. He provoked some in Massachusetts—an avowedly abolitionist state—by pointing out that the language of the Constitution did indeed protect the Southern states' rights to preserve what was termed "their peculiar institution."

Butler had been elected brigadier-general of militia of Massachusetts, and his regiment left Boston a few days after the first shots of the Civil War were fired in April of 1861. Over the next four years Butler became one of the most colorful personalities of the war, a name as well known at the time as those of generals Ulysses S. Grant and Robert E. Lee, or Davis, who became the president of the Confederacy of seceded states. Butler's first great success came with finding a way around the Confederate navy's blockade of Washington. Butler and his forces landed at Annapolis and rebuilt the railroad into the city, thereby restoring a supply line to the Union capital. He was sent to occupy Baltimore for a time, then commanded Fortress Monroe, near Richmond, Virginia.

### **Refused to Return Escaped Slaves**

It was here that Butler, with lawyerly practicality, settled one of the thorniest questions for the Union army: in the midst of war, slaves were escaping from their owners and crossing enemy lines to seek refuge. Most Union generals returned the slaves, who were simply considered property, to their owners. But when three came to Fortress Monroe, Butler fed them and put them to work. When a Confederate major arrived the next day with a truce flag to request their return—they belonged to one of his colonels—Butler refused, citing that the state of Virginia had seceded from the Union, and Butler was not obligated to obey the laws of a foreign country now. He declared the slaves contraband, or illegal goods, which enraged slave owners, since it gave the slaves a new legal status. It also gave the Union army a legal basis for providing them food and shelter. Soon, word spread and Butler's fort was sheltering nearly a thousand escaped slaves.

In the spring of 1862, Butler was named military governor for the city of New Orleans, which had recently been taken by Union ships. The population, under martial law, was unruly and hostile, and the business establishment there had flourished before its subjugation as one of the few ports from which trade with Europe was still possible. In order to avoid an outbreak of the fatal yellow fever that had

killed his father, Butler took draconian steps to clean up the city, outlawing litter and pumping out the rudimentary sewer system. Still, New Orleans remained antagonistic, and Butler seemed to enjoy the near-autocratic powers his post allowed him. He did agonize, however, when he ordered the court-martial of a New Orleans man who had hauled down the U.S. flag at the symbolic U.S. Mint building, where the Confederate flag had recently flown. The rebel press hailed the man as a hero, and Butler ignored death threats on his own life and signed the death warrant. Years later, he intervened to help the family keep its house, and found a government job for the man's widow.

### **The Infamous Order No. 28**

Though he was accused of financial misdeeds and drawn into potential scandals that seemed to be the work of his Washington enemies, Butler won praise for maintaining the peace in New Orleans, and his troops were considered impeccable in their demeanor, despite the fact that the spirited women of the city carried out a silent war against them. They held their handkerchiefs to their nose when a Union soldier passed, or lifted a skirt in an exaggerated manner; some made retching noises when Union soldiers were nearby, and finally one spat in a soldier's face. It was the last straw for Butler. He issued his famous Order No. 28: "When any female shall, by word, or gesture, or movement, insult or show contempt for any officer or soldier of the United States," it warned, "she shall be regarded and held liable to be treated as a woman of the town plying her avocation." In other words, the woman would be arrested for prostitution and faced a night in jail. It made Butler one of the most hated men in the Rebel South, and even stirred somewhat of an international outcry, but no woman was ever arrested in New Orleans because of it.

Butler's experience in New Orleans made him a confirmed abolitionist. When his requests to Washington for troop reinforcements went unheeded, he raised three of his own regiments from New Orleans's freed black population. Enmity with Lincoln's Secretary of War, Edwin Stanton, ended Butler's tenure as New Orleans military governor in December of 1862. He was sent to command captured districts in Virginia and North Carolina, and supervised a prisoner-of-war exchange program near the border. By early 1865, he was back in Massachusetts, and there was talk that he would be made Secretary of State. This ended with Lincoln's assassination in April of 1865.

### **Wanted to Erase the South**

By this point Butler's political allegiances had moved from the Democratic Party to the newcomer Republican organization, but he became a member of that party's Radical faction. These politicians, bitter foes of the South, advocated civil rights for freed slaves, a trial of the Confederate leaders, and indefinite armed supervision of subdued rebel states. Butler himself went even further, arguing that the entire map of the South should be redrawn into administrative districts that would forever eradicate the states themselves. With the war's end, he retreated to some property he acquired on the Massachusetts shoreline near Gloucester. It

was called Bay View for its proximity to Ipswich Bay, and he liked to camp there during the summer months with his sons while his wife and daughter stayed nearby. From this spot Butler decided to declare his residency and run for a seat in the U.S. House of Representatives in 1866. He held the seat for four terms, though he eventually replaced the tent with a grand home.

Early in his congressional career, Butler was drawn into the impeachment proceedings against Lincoln's successor Andrew Johnson. Johnson had defied Congress over the issue of Reconstruction; radicals like Butler wanted Congress to control the process of rehabilitating the Southern states, while Johnson claimed presidential authority in the matter. When the House voted to impeach him, it named Butler to serve as the lead speaker for the upcoming trial in the Senate. He delivered a two-hour speech from a brief prepared with his usual lawyerly precision that excoriated the President, but Johnson avoided impeachment by a single vote. Butler's last major Congressional battle, in early 1875, was the passage of a sweeping civil rights bill; instead it passed in severely truncated form, even permitting segregated schools, and was declared unconstitutional eight years later anyway.

### Ran for President

Butler espoused the Greenback Party during his post-war career, too, and made it to Congress a final time in 1878

on that party's ticket. The Greenbacks, named for their support of a currency expansion program, allied with labor groups and pushed for a number of progressive causes, including women's suffrage and a graduated income tax. The country's banking and business interests vehemently opposed them. Butler himself was quite wealthy, having made prudent investments in land, a textile mill, railroads, and even a quarry. Still, he remained at odds with the Massachusetts establishment, though he managed to serve as governor for a one-year term after several tries. The job had no real executive power, but he did manage to appoint not only the state's first black judge, but its first Irish Catholic to the bench as well. Butler's last attempt at political office came when he made a bid for the presidency in 1884 after being nominated by the Anti-Monopoly party; he campaigned on a platform of national control of interstate commerce and the eight-hour day, and received 175,370 votes. On his way to Washington to argue a case before the Supreme Court, Butler contracted pneumonia and died in the city on January 11, 1893.

### Books

*Dictionary of American Biography*, American Council of Learned Societies, 1928-1936.

Nolan, Dick, *Benjamin Franklin Butler: The Damndest Yankee*, Presidio, 1991. □



# C

## James Cagney

**James Cagney (1899-1986) inaugurated a new film persona, a city boy with a staccato rhythm who was the first great archetype in the American talking picture. He was a true icon, and his essential integrity illuminated and deepened even the most depraved of the characters he portrayed.**

Born on the Lower East Side of Manhattan, the son of James Francis Cagney, an alcoholic bartender and saloon proprietor, and Carolyn (Nelson) Cagney, a housewife, James was one of seven children, two of whom died in infancy. When he was eight, his family moved uptown to the Yorkville section, then a working-class neighborhood of Germans, Irish, Italians, and Jews. Cagney credited his mother for the fact that, unlike a number of his childhood friends, neither he nor his brothers slipped into a life of crime. Nevertheless he learned to use his fists in street fights and even achieved a modest success as an amateur boxer. Wearing a mask of toughness for self-protection, the young Cagney was in fact a thoughtful, keen observer of life in the teeming city streets. He later drew on his recollections to create the screen roles that earned him worldwide fame.

Cagney was also a hard worker who took on a variety of odd jobs to help his struggling family and a dedicated student. Among his siblings he was closest to William, who was later his associate and adviser in Hollywood, and Jeanne, who acted in a number of his films. After graduating with honors from Stuyvesant High School in 1917, Cagney enrolled in Columbia University, but he had to withdraw after a year when his father died, at age forty-one, from Spanish influenza.

### Broadway Debut

Cagney was working as a package wrapper at Wanamaker's Department Store when a fellow clerk told him about an opening in the chorus of a revue at Keith's 86th Street Theater. Cagney had no formal training as a dancer, but he moved well and learned quickly. He was hired, and, ironically, the future tough guy of gangster pictures first appeared on stage in drag. Cagney made his Broadway debut on 29 September 1920 in the chorus of a revue called *Pitter Patter*. Also in the chorus was a young woman named Frances Willard Vernon, who was called "Billie." She and Cagney married early in 1922 and they remained happily wedded for the rest of Cagney's life. They adopted two children. In an abortive first attempt to try his luck in films, Cagney moved to Los Angeles, where he and Billie opened a dance studio. When that failed, they toured for three years on the small-time vaudeville circuit as a song-and-dance team called Vernon and Nye.

In September 1925 Cagney made his debut on the legitimate stage as a hobo in the play *Outside Looking In*. Impressed with Cagney's performance, George Abbott cast him as the lead, a hoofer in a speakeasy populated with Runyonesque guys and dolls, in the London production of a big hit, *Broadway*. Although Cagney was fired when he refused to simply provide a copy of Lee Tracy's original performance, he went on to understudy the lead in the Broadway production and eventually played a small role. His major break came in 1929, when the esteemed playwright George Kelly chose him to play a swaggering urban roughneck in *Maggie the Magnificent*. Cagney and Joan Blondell, as a wisecracking, gum-chewing flapper, received positive reviews, and later the same year both were cast again as colorful lowlifes in *Penny Arcade*, a melodrama about murder in a carnival setting. After a screen test,



Warner Brothers hired Cagney and Blondell to recreate their roles in the film adaptation, *Sinner's Holiday* (1930). Cagney was thirty when he arrived in Beverly Hills, California, in April 1930 to launch a career that would endure for more than three decades.

### Proletarian Image

Cagney was in exactly the right place at the right time. Unlike well-spoken stage actors who were imported to Hollywood in the first years of talking pictures, Cagney had an unreconstructed city-streets accent. His natural speech and movement proved to be ideally suited to the new medium. The movie-going audience could more readily identify with Cagney's proletarian image than with actors who had immaculate diction and a patrician manner. Short, decidedly ethnic in face and voice, he lacked the glamour and sex appeal of romantic leading men. Rather, he inaugurated a new film persona, a city boy with a staccato rhythm who was the first great archetype in the American talking picture. Quick, savvy, and feisty, he bristled with urban energy, swinging his arms when he walked and jabbing the air with his fists.

Cagney became a star in his fifth film, *The Public Enemy* (1931), a landmark gangster saga that chronicles the rise and fall of a daredevil kid from the slums who slugs his way to the top of the underworld. As Tom Powers, Cagney is subversively charismatic. Playing a ruthless, misogynistic hoodlum, his most famous gesture is shoving a grapefruit in the face of a nagging mistress. Cagney is both brutal and

appealing, a combustible combination that incited the disapproval of censors.

Following *The Public Enemy*, Warner Brothers exploited their new star by assigning him to a succession of low-budget films with urban settings. He was not always cast as a criminal. For instance, in *Taxi!* (1932), he is the leader of independent cabbies in a taxi strike; in *The Crowd Roars* (1932), he appears as a self-destructive racecar driver; and in *Winner Take All* (1932), he is a prizefighter. But he was slotted into the mold of a fast-talking proletarian with a touch of the con artist, and only a few films in this hectic phase of his career offered relief from routine roles, which Cagney increasingly resisted. In *Footlight Parade* (1933), as a hard-driving impresario who stages splashy theatrical prologues for film palaces, he at last demonstrated the musical skills he had honed in vaudeville. In Max Reinhardt's spectacular version of *A Midsummer Night's Dream* (1935), a unique departure for Cagney as well as his studio, Cagney delivers a vigorous low-comedy performance as Bottom, but in the same year, he was forced to appear in five other films cut to the measure of conventional studio formulas.

By the end of 1935, Cagney was drained from overwork, complaining about the recycled scripts he was handed, and bruised from fighting with Jack Warner, his intransigent boss, for a higher salary. Determined to exert greater creative control over his career, Cagney left Warner Brothers and, with his brother William, set up a small, independent company, Grand National Pictures. While the two films Cagney made under this new arrangement were neither commercial nor artistic successes, they clearly indicated how he wished to present himself. In the revealingly titled *Great Guy* (1936), he plays a staunch crusader determined to correct fraud in the weights and measures bureau. In *Something to Sing About* (1937), he is a bandleader who engagingly sings and dances his way to Hollywood stardom.

### Returned to Warner Brothers

In 1938, Cagney returned to Warner Brothers, where, playing a fast-talking screenwriter, he co-starred with his good friend Pat O'Brien in *Boy Meets Girl*. He and O'Brien eventually made eight films together. Later in 1938, Cagney achieved one of his greatest successes, as a recidivist hoodlum in *Angels with Dirty Faces*. Returning to his old neighborhood, Cagney's character, Rocky Sullivan, is idolized by a local youth gang. After he is sentenced to death, his boyhood pal, now a parish priest played by O'Brien, urges him to sacrifice his "honor" by pretending to walk the last mile as a coward, thereby demolishing his image as a hero in the eyes of the gang. Cagney's virtuoso shrieks and screams leave the viewer uncertain whether the character is faking, as the priest requested, or is truly frightened. In *The Roaring Twenties* (1939), he plays another criminal with an atavistic drive to conquer the underworld, and again he has a bravura death scene, this time enacted in snow on the steps of a church. Both *Angels with Dirty Faces* and *The Roaring Twenties* have a valedictory aura while casting a nostalgic glance at the roles he played early in the decade, but Cagney was fated to return on-screen to a life of crime.

### ***Yankee Doodle Dandy***

Throughout the 1930s, as he animated a series of anti-social characters and fought for his independence from the studio system, Cagney maintained an active profile in politics. A staunch Franklin Roosevelt Democrat, he was a prominent and often outspoken Hollywood liberal. Although Cagney never joined the Communist party, from time to time the right-wing press painted him red. In the early 1940s, long before the McCarthy era, when actors were branded for their real or imagined political dereliction, Cagney and his brother felt the need to establish his patriotism. The project they selected to "cleanse" his image was a highly sanitized portrait of the fabled entertainer and true-blue American, George M. Cohan. In *Yankee Doodle Dandy* (1942), Cagney sheds all vestiges of his psychotic crime-movie persona to give a sentimental, charming, high-spirited performance in which he sings and dances with a captivating verve. He won the Academy Award for best actor and regarded the film as both a personal and a professional vindication. Buoyed by his triumph, he departed Warner Brothers for the second time.

Cagney and his brother established William Cagney Productions, and their films were distributed by United Artists. As in his first hiatus from studio domination, Cagney's second group of independent works is revealing and disappointing. In *Johnny Come Lately* (1943), he plays a journalist at war against corrupt small-town politicians. In *Blood on the Sun* (1945), he is another crusading reporter, determined to thwart Japan's plans for world conquest. In marked contrast to his hyperactive performances in urban pictures, he is a sedentary barroom philosopher in William Saroyan's *The Time of Your Life* (1948).

### ***White Heat***

Devoting most of his time to farming on Martha's Vineyard and in Dutchess County, New York, Cagney made few films during the World War II years. Eager to abandon his con man persona, he was unable to create a potent new image, and he began to resemble an actor from another era who had settled into comfortable semi-retirement, working only when it suited him. Then, at the end of the decade, he returned again to Warner Brothers to make yet another crime picture. In *White Heat* (1949), as a trigger-happy, mother-dominated outlaw who suffers from blinding headaches, he gives the most intense performance of his career. Grown stout and homelier than ever, Cagney is electric-the performing energy unaccountably held in reserve since *Yankee Doodle Dandy* released at fever pitch. Curling up on his mother's lap, slugging his greedy, two-timing mistress, barking orders to his dim-witted henchmen, evading the law as if in retreat from the Furies, he proffers his most physical performance. The role afforded him his two most bravura acting moments: in prison, when he learns of his mother's death, he cracks up operatically, and at the end, just before the gas tank he has climbed upon explodes, he exultantly shouts, "Made it, Ma! Top of the world!"

*White Heat* inaugurated a final Cagney renaissance, during which he freelanced among a number of major studios. As in his heyday in the 1930s, the quality of his

material varied, but Cagney was clearly eager to accept challenges. He appeared in musicals, including *West Point Story* (1950), *The Seven Little Foys* (1955), and *Never Steal Anything Small* (1958); war comedies, including *What Price Glory?* (1952) and *Mister Roberts* (1955); Westerns, including *Run for Cover* (1955) and *Tribute to a Bad Man* (1956); a soap opera, *These Wilder Years* (1956); and biographical dramas, playing Lon Chaney in *Man of a Thousand Faces* (1957) and Admiral William F. Halsey, a World War II hero, in *The Gallant Hours* (1960). During the 1950s, he portrayed villains in only two films, *Kiss Tomorrow Goodbye* (1950), a strikingly mean-spirited film noir, and *Love Me or Leave Me* (1955), in which he is a tyrannical racketeer with a limp. Tellingly, these are his most persuasive performances of the decade. His final reprise of the sharp, confident persona he created in the 1930s is an effulgent display in *One, Two, Three* (1961), in which he appears as a take-charge representative of American capitalism in postwar Berlin. Along with Howard Hawks's *His Girl Friday*, this movie is among the fastest talking of American films, and in his ebullient staccato delivery, Cagney concedes nothing to his advancing age and weight.

After *One, Two, Three* was completed, Cagney at long last did what he had intermittently threatened throughout his career—he hung up his hat and retired to the life of a gentleman farmer in Dutchess County. As ever, he avoided publicity and fanfare, becoming increasingly reclusive and rarely venturing into public for fear of being recognized. He continued to receive acting offers but was tempted only once, when he was asked to play a cockney, Alfred P. Doolittle, in *My Fair Lady*. When he declined, the role was given to Stanley Holloway, who recreated his original Broadway performance.

In 1974 Cagney reemerged to accept the Life Achievement Award of the American Film Institute and, engagingly unassuming, claimed that acting was simply a job at which he had done his best. In 1976 he published *Cagney by Cagney*, a casual, sketchy account of his life and career in which he distanced himself from his crime-movie persona. Unable or at least unwilling to be articulate about technique, he maintained that he worked purely by instinct and that, to enliven the routine material he was often required to perform, he frequently improvised dialogue and behavior. For the first time, he addressed his political commitments and his gradual shift to the right.

In 1980 Cagney made the mistake of returning to films. Visibly aged, heavysset, and with a vacant look in his eyes, he gives an all but immobile performance as the sheriff in *Ragtime* (1981), an adaptation of E. L. Doctorow's novel (1974). Cagney died of heart failure on March 30, 1986 in Millbrook, New York.

Although he often tried to prove otherwise, Cagney, like most film stars, had a limited range. He could not sound or move like anyone other than James Cagney, city boy, but like most performers who attained his stature, in his own line he was definitive. He was a true prototypical American icon, and his essential integrity illuminated and deepened even the most depraved of his characters. He thought of himself as a humble song and dance man and an urban

populist. The central irony of his career is that he is best remembered as a supremely skillful delineator of criminal psychopaths. Fittingly, his obituary in the *New York Times* (31 March 1986) hailed him as “a master of pugnacious grace.”

### Books

Cagney, James, *Cagney by Cagney*, 1976.  
 Freedland, Michael, *Cagney: A Biography*, 1975.  
 McGilligan, Patrick, *Cagney: The Actor as Auteur*, 1982.  
 Schickel, Richard, *James Cagney: A Celebration*, 1985.  
 Sklar, Robert, *City Boys: Cagney, Bogart, Garfield*, 1992.

### Periodicals

*New York Times*, March 31, 1986. □

## Yakima Canutt

**As a second-unit director for action sequences, Yakima Canutt (1896-1986) made scores of films during the 1940s, 1950s, 1960s, and 1970s, but his best-known work is the chariot race in *Ben-Hur* (1959), starring Charlton Heston and Stephen Boyd.**

**Y**akima Canutt, was one of five children of John Lemuel Canutt, a rancher, and Nettie Ellen Canutt. He grew up in eastern Washington on a ranch founded by his grandfather and operated by his father, who also served a term in the state legislature. During Canutt's professional career, many thought him descended from various Native American tribes, but his ancestry was Scotch-Irish and German.

### Gained Skills on Family Ranch

Canutt's formal education was limited to an elementary school in Green Lake, Washington, a suburb of Seattle. He gained the education for his life's work on the family ranch, where he learned to ride horses. By the age of thirteen, he rode unbroken horses, and within three years he began to compete in area rodeos. After his parents divorced, Canutt devoted his full time to the rodeo circuit. In 1916 he married Kitty Wilks, who was also a rodeo performer. They had no children, and their stormy marriage ended quickly. He became proficient at saddle-bronc riding and bulldogging and was named a world champion for the first time in 1917. Canutt won that designation three times more before he abandoned rodeo riding for work in the motion picture industry.

Canutt claimed that he received his nickname, “Yakima,” while performing in a rodeo in Pendleton, Oregon. After drinking with two friends from Yakima, Washington, he competed in the bronc riding. His two companions demanded difficult horses to show the others how expertly riders from Yakima could perform, but both riders were thrown. To support his friends' claims, Canutt also asked for a difficult horse so the fans could have another chance to



see how well persons from Yakima could ride—even though he was from Colfax. But he also was thrown, and a picture of him in the air above the horse ran in several newspapers. Thereafter he was called Yakima, which was frequently shortened to Yak.

### Early Film Appearances

Canutt joined the U.S. Navy in 1918 and trained in gunnery in Bremerton, Washington. He was released when World War I ended in November of that year. In 1919 he returned to the rodeo circuit and traveled to Los Angeles, California, for the first time. There he met Tom Mix, a Western movie actor, who offered him a job in films. Canutt's first exposure to moviemaking was unpleasant, so he returned to the rodeo. In 1923 Ben Wilson offered him an opportunity to appear in eight motion pictures. Canutt experienced such stage fright in the first film, *Branded a Bandit* (1924), a silent Western, that he doubted he would be able to continue. However, reassurances from Wilson and others convinced Canutt to remain in the business, and he completed nearly twenty motion pictures before 1930. In these silent features, he played the lead role, and since he was an experienced horseman and athlete, he did not use a “double” or stuntman, during action scenes. Probably his best-known film from this era is *The Devil Horse*, produced by Nat Lavine in 1926.

In the 1930s Canutt moved more completely into planning and performing stunt work. His voice was unsuited to the movies, so once sound revolutionized the industry, he

felt more comfortable doing the “gags” or stunts, in action scenes. At that time, stuntmen often made more money than the lead actors in the B Westerns. On 12 November 1931 he married Minnie Audrea Rice. They had three children, including two sons who followed Canutt into stunt work.

Canutt continued to appear in non-speaking roles, but mostly he doubled for lead actors, especially John Wayne in the westerns and Clark Gable in his major films. In *Gone with the Wind*, Canutt doubled for Gable driving the horse and wagon through Atlanta as the city burned. He was also the ruffian who accosted Scarlett (Vivien Leigh) on a bridge before she was rescued by Big Sam (Everett Brown).

Canutt's best-known work of the 1930s is in *Stagecoach* (1939), directed by John Ford. Dressed as an American Indian, he mounts the lead horse in a “six-up” or team of six horses, pulling a stagecoach at high speed. Wayne shoots him, and Canutt drops to the tongue of the stagecoach. Wayne shoots again, and Canutt drops to the ground. He is dragged by the coach until he lets go and passes between the horses and under the stagecoach. In later films, he perfected the gag sufficiently to complete the circle; that is, he jumps from the seat to the rear team, leaps eventually to the lead team, passes under the vehicle, grabs a bar on the rear of the coach, climbs over the top, and resumes his seat in the driver's box.

### Became Action Sequence Director

Canutt sustained serious injuries while performing stunts, including six broken ribs while filming *San Francisco* (1936). These caused him to restrict his activities to directing and intensified his determination to make stunt work as safe as possible. As a second-unit director for action sequences, he made scores of films during the 1940s, 1950s, 1960s, and 1970s, but his best-known work is the chariot race in *Ben-Hur* (1959), starring Charlton Heston and Stephen Boyd. Canutt improved upon the previous version of the film, made in the 1920s by Reeves Eason, and took greater safety precautions. In 1966 Canutt won an Academy Award for his stunt work, and the citation included his inventions that had increased the safety of stuntmen. In 1976 he was inducted into the National Cowboy Hall of Fame.

The many injuries, some of them life threatening, that Canutt suffered while doing stunt work made him conscious of the safety of the stuntmen and stuntwomen he directed. In his autobiography, *Stunt Man: The Autobiography of Yakima Canutt* (1979), he claimed more pride in his safety record than in all of his other accomplishments. He died of natural causes in Los Angeles on May 24, 1986.

### Books

Canutt, Yakima, *Stunt Man*, 1979.  
Wise, Arthur and Derek Ware, *Stunting in the Cinema*, 1973.

### Periodicals

*New York Times*, May 27, 1986. □

## Captain Jack

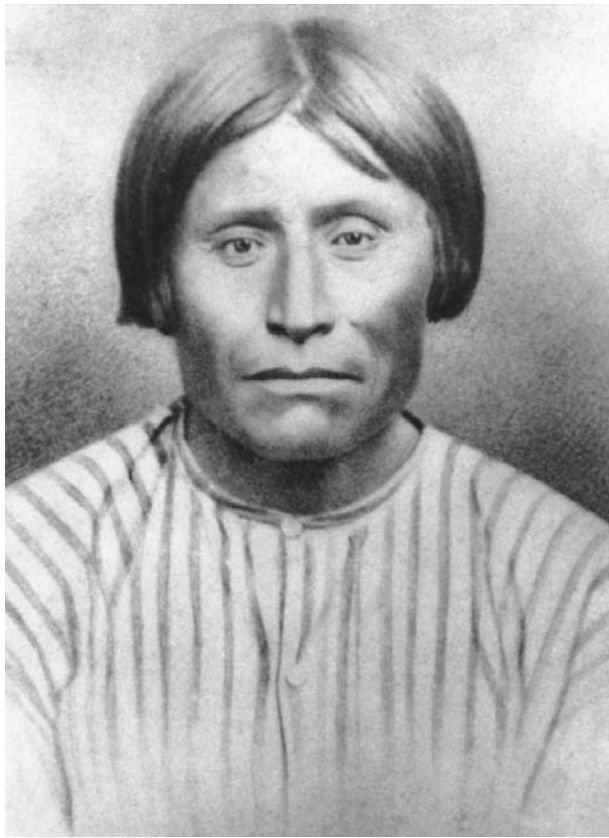
**Kintpuash, son of a Modoc chief, was commonly known as “Captain Jack” because of his penchant for wearing a blue military jacket with brass buttons. Captain Jack (ca 1837-1873) was a major figure in the Modoc War of 1872-1873. Protesting unsuitable conditions on the Klamath Reservation, he led a band of about 50 warriors, resisting forced removal by U.S. troops from their former ancestral lands.**

The protestors secluded themselves in the Lava Beds and held off the army for nearly a year. Captain Jack was captured in June 1873 and charged with the murder of General Edward Canby during negotiations. He was executed by hanging on October 3, 1873. His death marked the end of a story of discrimination and conflict between Indians and whites, the Modocs and other northern California tribes, and different factions within the Modoc tribe.

Little is known about Captain Jack's life prior to the age of 25. He was born along the lower Lost River, near the California-Oregon border, in the Wa'chamshwash Village, around 1837. The Modocs lived relatively peacefully in the territory surrounding Clear Lake, Tule Lake and the Lost River. By the 1850s, however, white pressure on the Indian lands, aggravated by the 1848 California Gold Rush, led to conflict. In the early 1850s, Indians attacked a wagon train of immigrants on their way to the West Coast. Because the horses from the train ended up in the possession of the Modocs, the tribe was blamed for the raid. A reprisal party led by the miner, Jim Crosby, did not find the responsible parties, who were members of the Pit River tribe, and took out their frustrations on the Modocs instead. The Modocs, including Captain Jack's father, responded with violence. In 1856 the Modocs ambushed another wagon train at a place called Wagakanna, which the white survivors later labelled “Bloody Point.” In response to the massacre, the well-known mountain man and Indian fighter, Ben Wright, organized a vigilante group specifically to stalk and kill Indians. In an attempt to preserve the peace, 45 of the Modoc leaders were invited to a conference and were ambushed by Wright and his men. Wright himself shot Captain Jack's father with a revolver.

### Life at the Klamath Reservation

Captain Jack is said to have replaced his father as chief of the clan but it was actually his uncle, Old Schonchin, who compelled the Modocs to abide by the Treaty of 1864. This treaty established a reservation at Klamath Lake, across the California-Oregon boundary. All the Modocs, Klamath and Pit River Indians were to be removed to this tract of land. The reservation, however, was located on former Klamath territory and included none of the Modoc's former hunting grounds. The Klamath, feeling superior to the dispossessed Modocs, harassed and ridiculed their fellow Indians. They demanded concessions, including split wood



rails, as payment for the use of Klamath territory. The Indian agents on the reservation also encouraged the Indians to establish a restructured leadership. Instead of hereditary chiefs for each tribe, the Indian men voted for a single reservation chief. The man finally selected was a Klamath native.

The treatment of the Modocs by the Klamath, together with the unc customary rules of the reservation, caused a rift among the Modocs. Captain Jack renounced the Treaty of 1864 and left the reservation in 1865. Some of the Modoc Indians left with him, and the band returned to their hunting ground along the Lost River. Various groups of Indian agents and military officers visited Captain Jack, trying unsuccessfully to get him to return to the reservation. In December of 1869, a delegation was finally able to convince him. Alfred B. Meacham, the newly appointed Indian superintendent, organized the delegation. He took with him, in addition to soldiers, Captain O. C. Knapp and Ivan Applegate, who both served as agents for the reservation. Also included on the visit were Old Schonchin, and Frank Riddle and his Modoc wife Tobey (later known as Winema) to serve as interpreters.

The Klamath and Modoc Indians lived peacefully together on the reservation for several weeks of the new year, but conflicts soon arose again. The current agent at the reservation, Knapp, refused to become involved. The Modocs were told to work the problems out themselves. In April 1870, Captain Jack called a meeting of all Modocs. They made plans to leave the reservation and, at the end of

April, Captain Jack and 371 Modocs returned to Lost River. The rest of the tribe, led by Schonchin, remained on the reservation, although they moved away from the Klamath and settled in Yainax.

### Establishment at Lost River

The Modoc presence in northern California caused unrest among the white population. Settlers in the area around the Tule Lake Basin began to demand the removal of Captain Jack and his band. In 1870, Captain Jack made a formal request for a Modoc reservation on the Lost River. The Indian agent Meacham suggested the request be granted but the settlers were enraged. In response, General Edward Canby, a distinguished Civil War veteran with experience in Indian battles, was dispatched to the area. He was placed in charge of a small troop and instructed to keep Captain Jack under control. The settlers were growing impatient with Meacham's lack of action, but neither he nor Canby would make a move until a decision was reached about a reservation site. Finally, in 1872 the Interior Department replaced Meacham as Indian superintendent with T. B. Odeneal. Keith A. Murray describes this action in *The Modocs and Their War*: "Thus, at this critical point in negotiations, a man who knew almost nothing of the background of the situation and had never met with Jack or the Modocs, was placed in charge of the job of getting Jack to leave Lost River. It is to be granted that Meacham was not a strong agent and that he had shamefully neglected his duty and opportunity to pacify the Modocs."

The final act of the drama began when Jack's niece fell ill. Curly Headed Doctor, the group's shaman or tribal doctor, was absent from the encampment at the time. The nearest healer was the shaman from Klamath. He was sent for, took his payment in advance, but the girl died just the same. Grieved by the unnecessary death and in accordance with tribal custom, Captain Jack killed the shaman for his inefficiency. The Klamath informed the Indian agent and a warrant was issued for Captain Jack's arrest. After a series of unsuccessful conferences, Odeneal made a recommendation to the Commissioner of Indian Affairs on June 17. His solution was to arrest Captain Jack and hold him in custody until he accepted Schonchin's leadership and returned to the reservation at Yainax. It was agreed to take action in September so additional forces could be dispatched should Captain Jack's band resist.

Captain Jack may have suspected the military's true intentions. In September 1872, he resisted all their attempts to meet with him. The order was finally given, at the end of November, to arrest Captain Jack, Black Jim and Scarfaced Charley by the next morning, forcibly if necessary. Troops left Fort Klamath for Captain Jack's stronghold, beginning the first battle of the Modoc War. Captain Jack and 50 of his warriors fought the troops while around 175 women and children fled across the lake to the Lava Beds. The volcanic rock formations absorbed the lead as well as offered cover. Few Indians were killed or wounded, compared to casualties on the American side. The fighting Modocs held out against superior numbers, including approximately 400 reinforcements that arrived in January 1873.

At the end of January, northern California was hit by blizzard. The snow immobilized supply trains as well as the advance of additional troops. Captain Jack used the snowstorm as cover in sending a messenger to the military camp. He wanted to speak with John Fairchild, a rancher who was well liked and trusted by both settlers and Indians, about a settlement. Word was sent that Fairchild would visit when weather permitted. Captain Jack may have wanted peace but his advisors wanted land. They convinced him to continue with the war, holding out with the weather, which was working to their advantage in demoralizing the opposing troops.

Though Fairchild made several trips to and from the stronghold, no agreements were reached. Intermittent fighting continued until March when Captain Jack agreed to meet with the whites in council. By this time Lost River had officially been rejected as a reservation site. Entering the negotiations with the assumption that a compromise was sought, Captain Jack suggested two other sites as possible reservations for the Modocs. General Canby promptly refused. Albert Britt summarized the negotiation in his book, *Great Indian Chiefs*: "The only peace offered them was the peace of submission. As each location that the Modocs would accept was rejected by Canby, it became increasingly clear that the only reservation for them would be that they would share with the unfriendly Klamath. And that had no look of peace to the Modocs."

### Planned "Final" Negotiations

At this point Captain Jack called a council among his own people in the Lava Beds. Schonchin John and Black Jim, two tribesmen who were wanted by the authorities for killing soldiers, challenged Jack's leadership. They insisted he prove his commitment to the Modoc cause by killing the white representatives. Captain Jack was in a difficult position. For himself he wanted peace, an end to the fighting. As a leader of his people, however, he was obliged to meet their need for land of their own. Captain Jack spent the following two days alone in his cave, struggling with this decision. A mutual friend warned Winema (Tobey Riddle) that the negotiators would be murdered. When she, in turn, tried to warn Canby and the other representatives, they did not believe her.

The council met again on April 11, 1873. Captain Jack, Schonchin John, Boston Charley, Bogus Charley, Black Jim and Hooker Jim met with Captain Meacham, General Canby and the Reverend Mr. Thomas. Frank Riddle and his wife Winema served as interpreters. Captain Jack made a final plea for a reservation to be established for his people at Hot Creek in California. Britt describes the next events: "[A]s though the enumeration of his grievances and his thought of the home that he knew now he was not to have had broken the last thread of his resistance to violence and kindled fresh hatred of the whites, he shouted in Modoc, *Ut-wih-kutt*, [Let's do it,] and fired at Canby." Captain Jack knew the fate of the Modocs was sealed. Whether judged by their fellow Indians or a jury of white men, they had committed an unforgivable act by striking down unarmed men during negotiations. Jack later stated that after killing Canby,

he returned to the Lava Beds with the assumption that he would die in the fighting that followed. The Modoc representatives fled back to the Lava Beds and fighting began once more on April 14.

### Capture and Trial

By May the Modoc resistance had begun to crumble. Quarrels among the Indian leaders caused the group to fragment and surrender piecemeal. Hooker Jim even offered to turn Captain Jack over to the U.S. soldiers in return for his life and liberty. Captain Jack turned in his gun in late May, accompanied by Schonchin John, Black Jim and Boston Charley. His trial began on July 5 at Fort Klamath. Steamboat Frank, Hooker Jim, and Bogus Charley—those who had convinced Captain Jack to kill the negotiators—were also present at the trial but not in custody. The four men were hung on October 3, 1873. Captain Jack was asked to name his successor, but he refused. The entire Modoc band from Lost River was forced to witness the execution. All the soldiers from Fort Klamath were also required to attend.

After the bodies were buried, Captain Jack's was exhumed and taken by freight train to Yreka. Some reports state his body was embalmed and then sent to Washington, D.C. Others suggest it was decapitated and his head then used in carnival side shows. Whatever became of his body, the Modocs gained no ground for their efforts. The cost of the Modoc War was enormous compared to its results. The tribe requested a reserve of land with a value of approximately \$20,000, according to most sources. As Britt explains in *Great Indian Chiefs*, the government spent \$500,000 on the war, in addition to losing "the lives of eight officers, thirty-nine privates, sixteen volunteers, two Indian scouts, and eighteen settlers—a trumpery affair, as wars go." The remaining Modocs were escorted to a reservation on Shawnee land in the Indian Territory. They arrived at their destination, Seneca Springs on the Quapaw Agency, almost one year after the war began.

### Books

- Britt, Albert, *Great Indian Chiefs*, Books for Libraries Press, 1938.  
 Dockstader, Frederick J., *Great North American Indians*, Van Nostrand Reinhold, 1991.  
 Murray, Keith A., *The Modocs and Their War*, University of Oklahoma Press, 1959.  
*Native North American Almanac*, edited by Duane Champagne, Gale Research, 1994. □

## Alexander Cartwright

**Contrary to the official myth about the origin of the sport, Alexander Cartwright (1820-1898) is the man who should be credited with doing the most to invent the modern game of baseball. In 1845, Cartwright laid out the key rules of the game, including the dimensions of the field. He was enshrined in the National Baseball Hall of Fame even as baseball's**



**establishment propagated a myth that Civil War General Abner Doubleday invented baseball.**

In 1846, Cartwright and other members of the Knickerbocker Base Ball Club played the first recognized baseball game in Hoboken, New Jersey, at a park called the Elysian Fields. Cartwright later traveled west across the United States, spreading the game as far as California and Hawaii. But during his lifetime he was never properly credited by organized baseball for his pioneering efforts.

### **From Rounders to Base Ball**

Baseball, commonly called America's national pastime, was adapted from a British game known as "rounders." Rounders was a simplified offshoot of cricket, and it was played primarily by children in Britain and in the British colonies of North America in the 1700s (and later in the United States in the 1800s). It was also sometimes called "base ball." Adults in some colonies, such as Massachusetts, played a version known as "town ball." In all these pick-up games, a pitcher threw a ball, an opponent used a stick or bat to strike it, and then the hitter attempted to run to one or more bases. Runners were "put out" when fielders threw the ball and hit them; this was called "soaking." There were few if any standard rules to the game, and the number of players on a team, the number of bases, and the distances between the bases were largely a matter of local custom or pre-game negotiations.

Alexander Cartwright was born in New York City on April 17, 1820. After leaving school at the age of 16, he became a clerk at a bank. Later on, he also became a volunteer fireman. In the evenings, Cartwright joined other young New York businessmen, lawyers and doctors who got together to play a version of rounders. Their sport came to be known as the "New York game" to distinguish it from the "Massachusetts game" of "town ball."

For several years, Cartwright belonged to a group called the New York Base Ball Club. In 1845, some members of that group joined with others and organized a new group, the Knickerbocker Club. Cartwright was appointed secretary and vice-president of the club when it wrote down a formal constitution in September of that year.

### **Codified Rules of the Game**

Cartwright took a leadership role in suggesting to other members of the Knickerbocker Club that they write down a set of rules for the game they played. Up until then the traditions of the game had been passed down orally but never codified. Cartwright was one of four members who decided upon 14 written rules. The dimensions of Madison Square, where the Knickerbocker Club most often played, necessitated the most important rules. One rule eliminated the circular field common to cricket and established fair and foul territory. The club members limited the number of bases to four (including home plate), fixed them in the shape of a diamond, and set them 90 feet apart. Cartwright and the other Knickerbocker rule makers also outlawed the practice of soaking, because they considered it rude and ungentelemanly. The more genteel activities of tagging a runner with the ball, or getting the ball to a base before a runner reached that base, became the accepted ways to retire a runner.

Cartwright later was credited with instituting two other key rule changes: setting the number of players at nine for each side, and fixing the length of a game at nine innings. But baseball historians dispute whether Cartwright and the other Knickerbocker rule makers really should be credited with these innovations. For the first several years of their existence, the Knickerbockers usually played with eight men—three infielders (one standing near each base), three outfielders, a pitcher and a catcher. In other games they used 9, 10 or even 12 players. The position of shortstop apparently was not solidified until 1849, when it was established as a means of relaying throws from the outfield to the infield. (The ball used at the time was so light that players could not throw it all the way in from the outfield with one throw.) As far as the length of the game, it was not until 1857 that a convention of ball players decided upon nine innings; up until then, the first team to score 21 runs was generally the winner.

### **Elysian Fields to Hawaii**

Once the Knickerbockers had agreed upon their rules, they began advertising for games. Their first opponent was a team called the New York Nine. On June 19, 1846, the teams traveled from Manhattan across the Hudson River to Hoboken, New Jersey, and played the first recognized baseball game at a park known as the Elysian Fields. Cartwright,



who wrote in his diary that he was one of the best Knickerbocker players, did not play in the first game. Instead, he served as umpire and collected a six-cent fine from any player who used profanity. Ironically, the Knickerbockers lost the game, under the rules they had invented, by the decisive score of 23 to 1.

Cartwright remained with the Knickerbockers for four more years, during which the team played many other games with the New York Nine and other local clubs. Records of the games and of Cartwright's play are unavailable. Under the leadership of Cartwright and the other Knickerbockers, baseball soon became a favorite pastime for many young New York men. In those years it was not played by factory workers (who had no time or energy after their 12-hour or longer days) but mainly by clerks, attorneys, physicians and businessmen who had time after work to play in the late afternoons.

By early 1949, Cartwright, like thousands of other Americans, came down with a bad case of gold fever after hearing of the discoveries of gold in California. On March 1, he headed west, never to return to New York. As he journeyed across the country by train, by wagon and by foot, he took the game of baseball with him. Like the legendary Johnny Appleseed, Cartwright spread seeds for the sport that had become so popular in a few eastern cities. Among his stops was Cincinnati, which would be a cornerstone of the National League when it was formed in 1876. He made his way across the Great Plains and taught the sport of baseball to locals in many places. In August he arrived in San Francisco, but by then the great gold rush was over.

Cartwright remained in San Francisco for six weeks, hoping that he still might strike gold somewhere. During that time he helped to establish the game of baseball in that city. He finally decided to return to New York, this time on a ship sailing across the Pacific, Indian and Atlantic oceans. But he fell ill and was put ashore in Hawaii, then known as the Sandwich Islands.

Cartwright recovered from his illness and fell in love with the islands. He began teaching the islanders how to play baseball and forming local leagues. As a result of his activity, baseball became firmly established in Honolulu well before it was introduced to cities such as Detroit and Chicago. Back in New York City, the Knickerbockers and other clubs continued to play, and the game soon became popular all around the country. During the Civil War, troops played baseball during breaks in combat.

Cartwright's wife and children joined him in 1851. He founded the Honolulu Fire Department and served as the city's fire chief for ten years. Cartwright set up a number of businesses and became a wealthy man as well as a civic leader. He served in several government positions, and helped to establish the islands' library system and one of its foremost hospitals.

Cartwright never returned to the mainland to witness the spread of the game that he was so instrumental in popularizing. He died in Honolulu on July 12, 1898—largely unknown to the outside world. The first diamond he laid out is now called Cartwright Field. His grave has been

visited by many famous baseball players, including Babe Ruth.

### The Doubleday Myth

Cartwright's place in baseball history was ignored for many decades. In the mid-1930s, the National Baseball Hall of Fame was opened in Cooperstown, New York. A commission of high-ranking baseball officials was set up to determine who should be credited with inventing the game. The real history of the sport was largely lost, but the commission was eager to discredit any link to the British sport of cricket. The commission fixated on an apocryphal story involving a Civil War hero, General Abner Doubleday. According to a myth that the leaders of baseball sanctioned, Doubleday invented baseball in a cow pasture in Cooperstown in 1838. Since the Hall of Fame was set to open in 1938, the story was a convenient fabrication—it posited that the museum was located in the birthplace of baseball, and that its opening would be a centennial. The commission ignored facts about baseball's true origins because it was determined that a genuine American hero be credited with inventing the national pastime.

When Cartwright's descendants heard about the Doubleday story, they registered a protest. Cartwright's grandson gave the Hall of Fame his grandfather's diaries as well as news clippings and other items that substantiated the role of Cartwright and the Knickerbockers in codifying many of the game's most important rules. However, the newspapers of the era carefully toed the official line because so much publicity had already been disseminated about Doubleday. So the public came to believe that Doubleday invented baseball. In fact, the general's connection to baseball was so tenuous that most historians believe he never even attended a game.

With little fanfare, Cartwright was inducted into the Hall of Fame in 1939. His plaque characterizes him as the "Father of Modern Base Ball." Doubleday, however, was never enshrined in the Hall of Fame. Yet baseball's officials never took any other action to recant the Doubleday myth. The fabrication took on the status of received truth. The field at Cooperstown is still called Doubleday Field. And more than 60 years later, most Americans continued to believe that Doubleday was baseball's inventor.

The truth is more complicated. No single person invented baseball. It was adapted from rounders and gradually shaped into a distinctive American sport. But as a leader of the Knickerbockers, the man who first set down rules in writing, and the game's first traveling ambassador, Alexander Cartwright fully deserves credit as baseball's founding father.

### Books

Peterson, Harold, *The Man Who Invented Baseball*, Scribner, 1973.

### Online

"Alexander J. Cartwright," *Hickok Sports*, <http://www.hickoksports.com/biograph/cartwrig.shtml>.

"Alexander Cartwright," *Mr. Baseball*, <http://www.mrbaseball.com/history/cartwright.htm>.

"Alexander Cartwright," *Total Baseball*, <http://www.totalbaseball.com/history/people/pioneer/carta102/carta102.html>

"The Doubleday Myth," *The Bench Warmer*, <http://thebenchwarmer.tripod.com/doubleday.htm>.

"The Father of Baseball," *Hawai'i History Moments*, <http://www.hawaiianhistory.org/baseball.html>. □

## John Chapman

**American pioneer, John Chapman (ca 1775-1847) was popularly known as "Johnny Appleseed." He brought apple seeds from Pennsylvania and planted them in the Midwest. It is said that he would travel hundreds of miles to prune his orchards, which were scattered through the wilderness.**

Chapman's parentage and the exact time and place of his birth have not been discovered. It is generally inferred that he was born in 1775, either in Boston or Springfield, Massachusetts. All that is known of his boyhood is that he had a habit of wandering away on long trips in quest of birds and flowers. His first recorded appearance in the Middle West was in 1800 or 1801, when he was seen as he drifted down the Ohio past Steubenville, in an astonishing craft consisting of two canoes lashed together and freighted with decaying apples brought from the cider presses of western Pennsylvania.

It is claimed that Chapman's first nursery was planted two miles down the river, and another up Licking Creek. Although he returned frequently to Pennsylvania for more apple seeds, by 1810 Chapman appears to have made Ashland County, Ohio, his center of activity, living some of the time in a cabin with his half-sister, near Mansfield. It is said that he would travel hundreds of miles to prune his orchards scattered through the wilderness. His price for an apple sapling was a "fip penny bit," but he would exchange it for old clothes or a promissory note which he never collected.

Wherever he went, Chapman read aloud to any who would listen from the works of Emanuel Swedenborg, or the Bible. Lying on the floor and rolling forth denunciations in tones of thunder, he came to be accepted as a sort of Border saint. The stories of his quixotic kindness to animals, even to insects and rattlers that bit him, are characteristic of the growth of a folk legend. Indians regarded him as a great medicine man; he did indeed scatter the seeds of many reputed herbs of healing, such as catnip, rattlesnake weed, hoarhound, pennyroyal, and, unfortunately, the noxious weed dog-fennel which he believed to be anti-malarial.

In 1812, when the Indians around Mansfield were incited by the British to attacks upon the American frontier settlements, Chapman volunteered to speed through the night to Mt. Vernon, Ohio, to get help from Capt. Douglas, warning many lonely homesteads on the way. This incident



is authenticated; there is a wider tradition that he traversed much of northern Ohio apprising settlers of the surrender of the American forces under Hull at Detroit and of the imminence of Indian massacres. The most famous tale about him is of a pharisaical minister who demanded from the pulpit, "Where is the man who, like the primitive Christian, walks toward heaven barefoot and clad in sackcloth?" "Johnny Appleseed," clad in short ragged trousers and a single upper garment of coffee sacking with holes cut for head and arms, barefoot, with a tin mush pan on his head for a hat, approached the pulpit, saying, "Here is a primitive Christian!"

About 1838 Chapman crossed gradually into northern Indiana and continued his missionary and horticultural services. But after a long trip to repair damages in a distant orchard he was overtaken by pneumonia, and presented himself at the door of William Worth's cabin in Allen County, Indiana, where he died on March 11, 1847. He was buried in Archer's graveyard near Fort Wayne. The Honorable M. B. Bushnell erected a monument to him at Mansfield. His legendary life has inspired numerous literary works such as Denton J. Snider's *Johnny Appleseed's Rhymes* (1894), Nell Hillis's *The Quest of John Chapman* (1904), Eleanor Atkinson's *Johnny Appleseed, the Romance of a Sower* (1915), and Vachel Lindsay's "In Praise of Johnny Appleseed" in the *Century Magazine*, August 1921.

### Books

Duff, W.A., *Johnny Appleseed, an Ohio Hero*, 1914.

### Periodicals

*Harper's Magazine*, XLIII, 830-36.

*Ohio Archaeological and Historical Quarterly*, IX, 1901. □

## Chien-lung

**Ch'ien-lung (1711-1799) was the fourth emperor of the Ch'ing, or Manchu, dynasty in China. His rule covered a span of 63 years, a reign longer than any other in the recorded history of China, dating back to the Shang dynasty, 1766-1122 B.C.**

In the reign of Ch'ien-lung the Ch'ing dynasty reached its zenith and began the downward spiral that was to culminate in the Revolution of 1911, which marked the final demise of imperial China. The signs of impending collapse, however, were only dimly perceived during the late 18th century, and for the most part the Ch'ien-lung reign was characterized by courtly splendor, prodigious accomplishments in literary compilations, and vigorous expansion of the Chinese frontiers to the west and the south.

Ch'ien-lung was born Hung-li on September 25, 1711, the fourth son of the energetic and suspicious Yung-cheng and the grandson of the illustrious K'ang-hsi emperor. Ch'ien-lung's mother, the empress Hsiao-sheng, was descended from one of the most influential Manchu families and had been one of Yung-cheng's imperial concubines. Ch'ien-lung remained exceptionally devoted to his mother throughout her life, giving her the title of empress in 1735.

### His Model and Training

Ch'ien-lung's great hero was his grandfather, K'ang-hsi. When Ch'ien-lung was still a boy, K'ang-hsi admired the young prince and selected a prominent scholar to assist Ch'ien-lung in his studies of literature. The Emperor is reported to have selected Yung-cheng as his successor partly because he hoped that Ch'ien-lung might eventually hold the throne of the Ch'ing dynasty. After Ch'ien-lung became emperor, he paid great respect to his dead grandfather, modeling many of his own policies after those of K'ang-hsi and even curtailing his reign after 60 years so that it would not officially exceed that of K'ang-hsi.

Ch'ien-lung and his brother, neither knowing which would become emperor, were subjected to identical educations at the Palace School for Princes. Here, with the assistance of Chinese and Manchu tutors, they studied Chinese classical literature and philosophy, the reigns of the great Chinese emperors of the past, the techniques of administration, and the behavior expected of emperors. They also learned the martial arts of the Manchu tradition, and Ch'ien-lung is reputed to have been a competent horseman and archer. Ch'ien-lung also gained some practical experience in court affairs, occasionally substituting for his father in ritual functions.



### Apex of Manchu Hegemony

Since the problem of imperial succession had caused severe feuds in the early 1720s and at other points in the early Ch'ing period, Yung-cheng wrote the name of his successor on paper and sealed it in a box not to be opened until his death. Ch'ien-lung therefore did not know that he was his father's choice until the box was unsealed.

On October 7, 1735, the day before Yung-cheng died, it was announced that Ch'ien-lung, then only 24, was to become emperor of China. He inherited the great Manchu dream for China: the expansion of the realm, the establishment of a harmonious Manchu-Chinese polity and society, and the creation of a stable and prosperous economy. Throughout his regime Ch'ien-lung relied heavily on high officials in the imperial bureaucracy, whom he selected as trusted advisers and informal confidants. Among his early aides were O-er-t'ai, a very competent Manchu official who had distinguished himself in provincial administration in South China, and Chang T'ing-yu, a Chinese bureaucrat of exceptional talents who had been a close associate of Ch'ien-lung's father and whose knowledge of Chinese politics proved useful to the young emperor.

Though he continued to depend on his advisers, Ch'ien-lung energetically took much of the administration into his own hands. Like his grandfather, Ch'ien-lung sought direct and personal information about affairs within the empire, and he thus received secret reports from provincial officials on matters relating to local disorder, famines and droughts, tax collection, and corruption in the local admin-

istration. He also followed his grandfather's example of making several tours of the empire to provide a break from the rigorous Peking routine, to impress the people of China with the Emperor's concern for their well-being, and most important, to check on local conditions in person.

### Expansion of the Realm

Under the guidance of Ch'ien-lung several successful expansionist military expeditions were carried out along the western and southern frontiers. In the 1750s the Manchu general Chao-hui marched his troops deep into Chinese Turkestan. By this series of campaigns Ch'ing control was extended through the Tarim Basin to an area which encompassed Lake Balkhash and the Ili River and southward to the great Pamir mountain range. Ch'ien-lung also established a protectorate over Tibet, insisting that the Dalai Lama govern through four ministers under the supervision of imperially appointed Ch'ing officials and a garrison of Chinese troops.

During the latter half of the 18th century Ch'ien-lung inaugurated several other military forays into Burma, Nepal, and Vietnam. In 1788, for example, Ch'ing troops invaded Vietnam as far as Hanoi. Although the Chinese soon were ousted by rebel troops, Ch'ing influence in Vietnam remained strong during the 19th century until the French conquest of Indochina in the 1880s.

### Patron of the Arts

Ch'ien-lung is well known in Chinese history as one of the greatest imperial patrons of arts and letters. The Emperor was a connoisseur of art and literature and often dabbled in painting and calligraphy as well as composing prose and poetry. He expanded the Old Summer Palace outside the city of Peking as a complex of architectural monuments, lavish gardens, and art museums.

Ch'ien-lung also initiated the greatest literary compilation project in Chinese history, "The Complete Library of the Four Treasuries." Comprising some 36,000 volumes of philosophy, history, and literature, it took almost 20 years to complete and involved thousands of officials and clerks. In creating the "Four Treasuries," Ch'ien-lung sought not only to preserve the best of the Chinese written tradition but also to weed out works which contained passages disrespectful to the Manchus. In Ch'ien-lung's "literary inquisition" of the 1770s and 1780s, over 2,000 such works were banned or destroyed.

### Beginning of Decline

In the last two decades of the Ch'ien-lung reign, signs of internal decay began to appear in Ch'ing China. The Emperor, always intolerant of criticism, allowed his last chief minister, the corrupt and extravagant Ho-shen, to undermine court finances in spite of the protests of several officials. Secondly, the Chinese economy as a whole began to crumble in the late 18th century as the population rapidly increased to about 300 million, placing a great strain on the already heavily farmed arable land.

Thirdly, the dynamic military forces of the Ch'ing which had brought the Manchus to power and had consolidated their control over China, became effete as the soldiers

turned to a more passive and sedentary existence with stipends from the government. When the White Lotus Rebellion (1796-1804) occurred, the dynasty was forced to turn to peasant soldiers to suppress the rebels in central and southern China, since the regular army lacked the necessary strength and morale.

One problem that seemed rather insignificant to the Chinese court at the end of the Ch'ien-lung reign was the growth of Western economic imperialism. In 1793, when the Earl of Macartney had an audience with Ch'ien-lung on the matter of expanding trade relations, the elderly emperor confidently dictated an edict to George III of England. He announced that the Chinese Empire was entirely self-sufficient and had no need for "any more of your country's manufactures."

After a "retirement" of three years (1796-1799), during which Ho-shen continued to dominate the imperial court on the emperor's behalf, Ch'ien-lung died on February 7, 1799, His son, Ch'ia-ch'ing, succeeded him; well intentioned, he was a far less competent ruler than his father.

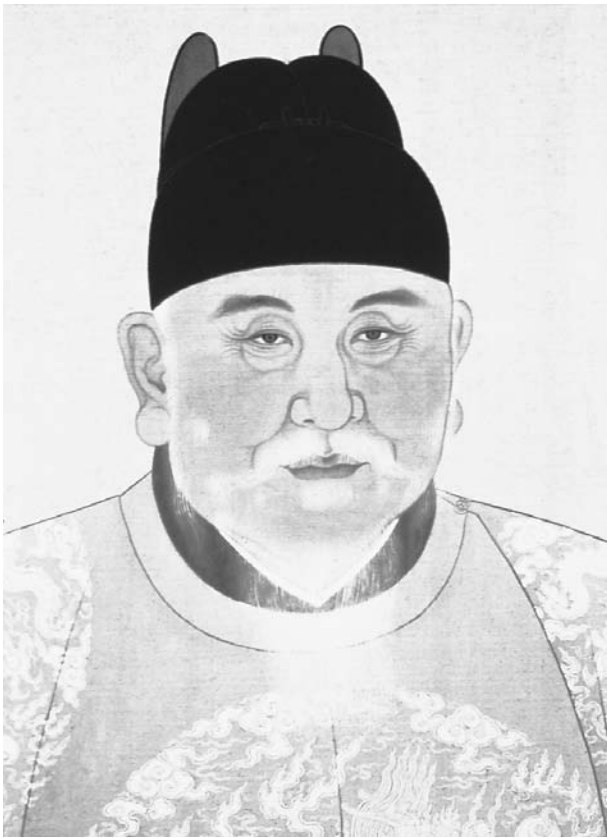
### Books

- Annals and Memoirs of the Court of Peking*, edited by Sir Edmund T. Backhouse and J.O.P. Bland, 1914.  
*The Chinese World Order: Traditional China's Foreign Relations*, edited by John K. Fairbank, 1968.  
*Eminent Chinese of the Ch'ing Period, 1644-1912*, edited by Arthur W. Hummel, 1943-44.  
 Fairbank, John K. *Trade and Diplomacy on the China Coast*, 1964.  
 Goodrich, Luther Carrington. *The Literary Inquisition of Ch'ien-lung*, 1935.  
 Hedin, Sven. *Jehol: City of Emperors*, 1933.  
 Malone, Carroll Brown. *History of the Peking Summer Palaces under the Ch'ing Dynasty*, 1934.  
 Pritchard, Earl H. *The Crucial Years of Early Anglo-Chinese Relations, 1750-1800*, 1936.  
 Reischauer, Edwin O. and John K. Fairbank. *A History of East Asian Civilization*, vol. I, 1960. □

## Chu Yuan-chang

**In the latter fourteenth century when Chu Yuan-chang (1328-1398) declared himself emperor of China, the Ming dynasty was born. It spanned almost three centuries and proved to be one of the most successful governments in China's history.**

Chu Yuan-chang was born on October 21, 1328 in Hao-chou China, in the province of Anhui, about 100 miles northwest of Nanking near China's east coast. At 16 he was orphaned and followed the path often taken by the sons of peasant families, he became a Buddhist monk. Chu began his monastic life at the Huang-chueh monastery near Feng-yang. To avoid starvation during his subsequent wanderings, he frequently begged for food in



the area surrounding Ho-fei. This was an area where little or no authority existed, providing a certain safety for Chu and others in the same predicament.

Northern and central China was experiencing a difficult time, suffering from extended periods of drought and famine. Rebellions led by bandits had begun as early as 1325. By 1352, times had not improved. At the age of 24, Chu left the monastery and joined a band of rebels led by Kuo Tzu-hsing (Guo Zixing). Upon Kuo's death in 1355, Chu became their leader. His group stole from the wealthy and distributed their ill-gotten gains among the common people.

### Conquering the Yuan Dynasty

During the period from 1271 to 1368, China was ruled by the Mongol dynasty. In 1271, Kublai Khan swept down from northern China and, after numerous struggles, finally defeated the Sung dynasty in 1279. Kahn had taken the Chinese name Yuan and thus the Yuan dynasty was born. The Mongols discriminated against the Chinese and Khan stationed Mongol troops throughout the country to prevent rebellion. Kahn was succeeded by nine rulers who were more Chinese than Mongol. Gradually they lost influence over other Mongol lands as well as within China itself. The situation was ripe for takeover. In 1356 with the leadership in the Yuan dynasty flagging, Chu and his band of rebels took over Nanjing (Nanking).

Chu was considered to be a brilliant military leader and in 1356 he took Nanking. By 1364 he had conquered the

provinces of Hupeh, Hunan, Kiam and proclaimed himself Prince of Wu. By 1368 Chu had consolidated control of the Yangtze Valley, seized the Yuan capital of Khanblich (Beijing) and proclaimed himself emperor. He first established the Ming dynasty at the city of Nanjing (Nanking) where Chu took the reigning name of Hongwu (HungWu).

Leading an army of 250,000 men, he drove the Yuan emperor Shun Di along with the Mongol leaders out of Beijing. He pursued the armies of the Yuan dynasty into Mongolia and won a final victory in 1388 at the Battle of Puir Nor. He took over 70,000 Mongol prisoners and destroyed Karakorum, the seat of the Mongol empire.

### The Ming Dynasty

Once the Mongol leaders were driven from China, Chu began to centralize power in his own hands, establishing despotic rule. He killed any of his own generals if he suspected them of plotting against him and he eliminated rival rebel leaders in order to solidify his rule. Chu ensured his power base by introducing reform throughout his government including military, educational and administrative areas. Administrative control was delegated to the ministers of six boards—each being responsible directly to him. He established schools and extended his rule as far as southern Manchuria. Chu gained power as a feudal lord over Korea and Annam. He eliminated the office of prime minister and issued new legal codes. Chu directed farmers to grow cotton. As a result, the spinning and weaving of cotton became the single most important subsidiary occupation of the peasants.

With the continued growth of the Ming dynasty came improved administrative systems and public works and the development of foreign trade. Social divisions had little meaning when applied to scholars, farmers, artists and merchants. Social division did, however, exist between the learned and the uneducated masses.

The Ming dynasty was known as a time of prosperity. Population growth increased from an early estimate of 60 million to nearly 150 million. One of the most widely recognized contributions was its manufacture of high quality, easily recognizable porcelain. It is believed that the Dutch delftware was inspired by the traditional blue-and-white Ming porcelain.

### Strong Organizational Skills

As brilliant a military leader as he proved to be, Chu also excelled in organizational skills. His administrators painstakingly documented the size of each small farm, large estate and everything in between. These lists were used to enforce proper taxation. He set up collective units within population sections. Each unit was charged with providing a variety of services. Tasks were rotated. Their functions included secretarial work, penal activities, and delivering supplies throughout the empire. In many ways, Chu's reign represented a collection of small communities rather than one large nation.

Chu's military was self supporting and primarily a defensive unit. The military hierarchy had less prestige than the civilian bureaucracy and frequently found itself at odds

with civil officials. The bureaucracy of the early Ming dynasty was self-governing with more than 20,000 positions at various levels of authority. The bureaucracy policed itself and managed its own personnel.

### A Legacy of Peace

In retrospect, the legacy of Chu's reign was one of peace and prosperity. The age of great military conquests in this area had passed and the European nations had yet to make their way across either land or sea. Trade flourished. The arts, medicine and political structure reached their peak.

Chu was known by many names—his reigning name Hangwo (HungWu), his born name, Chu Yuan-chang or Zhu-Yuanzhang, his temple name, T'ai Tsu and his posthumous name, Kao-ti. Although his name may not be familiar to many, contributions of the Ming dynasty will not be forgotten. Chu died on June 24, 1398.

### Books

Bozan, Jian; Shao Xunzheng; and Hu Hua. *A Concise History of China* Foreign Languages Press, 1981.  
*Columbia Encyclopedia*, Fifth Edition, 1993.  
*Countries of the World*, 1991.  
*Hutchinson Dictionary of World History*, 1998.  
*Merriam-Webster's Biographical Dictionary*, Merriam-Webster, Inc. 1995.

### Online

"Hung-wu" *Encyclopedia Britannica*. <http://www.britannica.com/70+1+41545,00.html>, (November 20, 2000).  
 "Ming dynasty" *Microsoft Encarta Online Encyclopedia 2000*. <http://encarta.msn.com>, (November 27, 2000).  
 Think Quest Team 16325, "Empires Past: China: Ming dynasty" 31 August 1998.  
 "Zhu Yuanzhang", *Microsoft Encarta Online Encyclopedia 2000*. <http://encarta.msn.com>, (November 27, 2000) □

## Clement VII

**Elected pope of the Catholic Church in times of religious and political turmoil, the reign of Clement VII (1478-1534) was marked by a brutal attack on Rome and the defection of King Henry VIII of England.**

Pope Clement VII began his life as Giulio de' Medici on May 26, 1478, in Florence, Italy. He was the illegitimate son of Giuliano de' Medici, of the famed Medici family of Florence, who was murdered about a month before his birth. Historians disagree on who his mother was, and what her relationship was with Giuliano. No matter what her social status was, after the murder, she gave her infant son to Lorenzo de' Medici (known as Lorenzo the Magnificent), the older brother of Giuliano. She would have no role in her son's life.

Lorenzo de' Medici had been injured in the attack (an attempt to overthrow Medici power in Florence) that had



killed his brother. Deeply saddened by his brother's death, he raised young Giulio in his household, treated him as his son, and planned a military career for him. The boy was very close to his cousin, Lorenzo's son Giovanni (who later became Pope Leo X). As noted by E.R. Chamberlin in *The Bad Popes*, "The positive, articulate Giovanni, naturally earned and enjoyed the hero worship of the withdrawn, rather shy Giulio."

### Cardinal and Papal Advisor

Although his uncle had planned a military career for him, Giulio de' Medici was interested in a life in the clergy. Matthew Bunson, author of *The Pope Encyclopedia*, wrote that his cousin, now Pope Leo X, ignored the tradition of illegitimate men not being able to be serve as bishops. He named his cousin Archbishop of Florence and a Cardinal in 1513.

The future Clement VII was a well-respected man in Rome. Bunson noted that he served as an advisor to both his cousin, Pope Leo X, and to his successor, Pope Adrian VI. He was a patron of literature, culture, and the arts, and was an admirer of Michelangelo. In 1519, when his uncle, Lorenzo de' Medici died, he was sent to oversee Florence.

In his book *Saints and Sinners-A History of the Popes*, Eamon Duffy noted that the future pope was a well-regarded diplomat. As a cardinal, he was a supporter of Emperor Charles against the French, and took the lead in arranging an alliance between Pope Leo X and Charles. However, in *The Oxford Dictionary of Popes*, J.N.D. Kelly added that he

was “narrow in outlook and interests” and “acted mainly as an Italian prince and a Medici.”

### Elected Pope

In the fall of 1523, the unpopular Pope Adrian VI (who was Dutch, and the only non-Italian pope until John Paul II was elected in 1978) died. Chamberlin commented that there was a great deal of political maneuvering to see who would be the next pope. Time dragged on, and the conclave of cardinals failed to elect a successor. The Roman citizens complained and the cardinals grew frustrated.

After almost 50 days, Chamberlin wrote that the cardinals were switched to a diet of just bread and water. This prompted more political maneuvering, which resulted in Giulio de' Medici's election as pope on November 19, 1523. He took Clement as his papal name. Bunson wrote that people expected that he would be a great pope and leader, as he had been a highly regarded advisor to the two previous popes. Unfortunately, as Pope Clement VII, he would prove to be unequal to the task.

In his book, Duffy described Pope Clement VII as a “Renaissance aristocrat . . . universally respected . . . immensely hard-working and efficient . . . pious . . . and free of sexual scandal.” However, the changing climate of Europe challenged Clement. Duffy added that “the nations of Europe increasingly went their own way.” These countries were led by “assertive monarchs . . . powerful rulers such as Francis I of France, Henry VIII of England, and Charles V of Spain.” Bunson recalled that although Clement VII was genuinely concerned with the state of his Church, he was easily distracted, and was indecisive. Chamberlin added, “Clement's inability to inspire loyalty was as nothing compared with his main defect: his inability to make up his mind.” This indecisiveness would lead to major problems in his reign.

### Caught Between Two Monarchs

During his reign as pontiff, Clement switched allegiance between King Francis I of France and Emperor Charles V, several times. Duffy wrote that to a point, his indecisiveness was understandable. Even though Charles was a more devout Catholic than Francis, he was also a bigger threat. Duffy called Charles was “the most powerful man in Europe,” as he controlled Spain, Naples, the Netherlands, Austria, Germany, and the Spanish New World. Chamberlin added that ultimately, Clement owed his election as pope to the support of Charles. Clement's cousin, Pope Leo X, had some success at controlling Charles and Francis, usually by threatening one with the other. Chamberlin noted that Clement would proclaim to be neutral, but did not play the game as well as his cousin had.

In the fall of 1524, Chamberlin wrote, two armies were converging on Milan. Francis came from the north, and soldiers loyal to Charles came from the southwest. Francis ended up with control of the city, and Clement made a treaty with him. Chamberlin recounted that the treaty included protection of the Church as well as Medici rule in Florence. In return, Clement recognized Francis as the duke

of Milan, and allowed the French army to pass through to attack the Spaniards in Naples.

In the next major battle, however, the French failed. Chamberlin wrote, “The French army was destroyed, the king was taken captive, and the balance of power in Italy—in all Europe—tilted toward the emperor.” Rome was vulnerable to an attack, and many blamed Clement for this. However, rather than destroying Rome, Charles proposed a treaty. Chamberlin recounted that Charles believed that “the pope must have learned his lesson.” They signed a treaty on April 1, 1525, just three months after Clement had signed the treaty with Francis. Chamberlin noted that Charles was now given control of Milan, agreed to protect the States of the Church, and promised that Florence would remain under Medici control, for a price.

The king of France was a prisoner for a year before Charles offered him a deal for his release. Francis took it, but did not intend to keep his word. Once again switching his allegiance, Chamberlin noted that Clement met with Francis on May 22, 1526, and the Treaty of Cognac was signed. Chamberlin called it “an alliance consisting of the Papacy, Venice, Milan, and France, directed against Emperor Charles.” This alliance would prove to be a disaster for Clement. On September 20, 1526, raiders, led by Cardinal Colonna, one of Clement's rivals during the conclave and a supporter of Charles, invaded Rome. The next day, the panic-stricken Clement VII signed yet another treaty with Charles. Chamberlin noted that the pope agreed to pardon Cardinal Colonna for his actions, and to abandon his allies. The raiders withdrew and Rome was relieved. However, peace would not last.

### The Sack of Rome

Several things led up to the sack of Rome. Duffy noted that Cardinal Colonna wanted to overthrow Clement and become pope. There was also a rebellion in Florence. In Rome, families were taking sides and fighting each other. Protestantism was also growing across Europe. As noted by Duffy, the renegade French duke, Charles of Bourbon was pushing his army south, hoping to gain control of central Italy. He planned to attack Florence, but because of the rebellion, the Florentines were angry and prepared to do battle with anyone. Bourbon decided to bypass Florence and pushed his army, made up of angry German, Spanish, and even Italian soldiers, towards Rome.

Early on the morning of May 6, 1527, the soldiers attacked Rome. Their leader, Bourbon, was killed early in the battle. Chaos and destruction followed. As Bunson noted, Clement barely survived the attack. The Swiss Guard gave their lives to save him. He made it to the safety of the Castel Sant' Angelo. As noted on the *New Advent website*, from the Castel, Clement “had to listen to the agonized screams of his poor flock” and watch as “the glory of Renaissance Rome was extinguished in blood.” He would remain a prisoner there until December.

As noted by Duffy, Rome was being desecrated and destroyed. Horses were stabled in St. Peter's Basilica and the Sistine Chapel. The soldiers got drunk and paraded around Rome in cardinal and papal robes. They also stood



under the Castel Sant' Angelo and threatened to eat Clement. Chamberlin added that priests were tortured to death, and nuns were raped and killed. "The German taste inclined toward drunkenness rather than cruelty," but they also "excelled at religious desecration." He noted that the Spaniards and some of the Italians would take everything from a victim, before sending him to a cruel death. Summer came. With thousands of bodies all over the city, the stench was awful and a plague started. Chamberlin noted that in June, Clement signed a treaty that put him at the mercy of Charles. He remained a prisoner in Castel Sant' Angelo.

### After the Sack of Rome

The people of Europe were shocked by the events in Rome. Chamberlin noted that Charles was also horrified by the destruction in Rome, and was debating what to do with Clement and the papacy. Clement, for his part, lived away from Rome over the next two years. Eventually, he made an uneasy peace with Charles, and crowned him as Holy Roman Emperor in 1530. It was the last papal coronation of an emperor. Duffy added that in return, papal states were returned to the Pope, Florence was returned to Medici rule, and Clement finally returned to Rome.

Rome lay in destruction. Duffy noted that it would take years for the city to recover. The population had dwindled, the artists had fled, and building and growth had stopped. There was also a spiritual change in the air. The Reformation was no longer a rumor from Germany. Protestant teachings now spread west to the Netherlands, France, Spain, and Italy.

### King Henry Sought an Annulment

While Clement and Rome were being attacked, England was firmly on the side of the Catholic Church. England's king, Henry VIII, wrote an attack on Luther's teachings. That support disappeared when Henry wanted to be rid of his first wife. He intended to marry another woman, in the hopes of having a son and heir to the throne. Thus began, as Antonia Fraser noted in *The Lives of the Kings and Queens of England*, the "king's great matter."

The marriage of Henry to Catherine of Aragon had been an attempt to unite Spain and England. His wife was the widow of his elder brother, which was prohibited by Church law. Duffy noted that Henry had gotten papal dispensation from Pope Julius II so that they could marry. Citing conflicting biblical text (and the lack of a son), Henry asked for an annulment of this "sinful" union.

In the past, Duffy noted, men with less to stand on had such rulings go in their favor. However, there was a major complication: Catherine of Aragon was the aunt of Emperor Charles. As Fraser wrote, the sack of Rome in 1527 "made Pope Clement VII a puppet of Charles V, who would never consent to his aunt being cast aside." Clement resisted making a decision for quite a while, and finally refused to grant the king's request. Henry then broke away from the Catholic Church, and started the Church of England.

Clement was blamed for the defection of England. However, as the *Catholic Community Forum* website, stated that "later canon lawyers maintain that, whether he

was influenced by Charles V or not, Clement followed the only course possible on legal grounds." In the meantime, Bunson noted, Protestantism was sweeping across Europe, and Clement failed to reform the Church, which was what his fellow Catholic leaders wanted.

### Later Years

Later in life, Clement did have two small triumphs. Emperor Charles agreed to allow Clement's ward and great niece, Catherine de' Medici, to marry the son of the king of France. Clement traveled to France and performed the wedding in October of 1533. She would eventually become queen of France. Charles also agreed to allow his daughter to marry Clement's nephew (some say his son). A few months after his niece's marriage, Clement became ill and never recovered. He died on September 25, 1534, hated by the people of Rome, who never forgave him for the destruction of 1527. Three weeks after his death, his rival, Alessandro Farnese, became Pope Paul III.

In general, historians have not been kind to Pope Clement VII. He is remembered because of the historical events that happened during his papal reign, not because of his accomplishments. Duffy simply called him "a disastrous pope." Chamberlin however, did give him some minimal credit, writing "where Medici interests were at stake, Clement proved himself a statesman of the first rank."

### Books

- Bunson, Matthew, *The Pope Encyclopedia*, Crown Trade Paperbacks, 1995.  
 Chamberlin, E.R., *The Bad Popes*, Dorset Press, 1986.  
 Duffy, Eamon, *Saints and Sinners-A History of the Popes*, Yale University Press in association with S4C, 1997.  
 Kelly, J.N.D., *The Oxford Dictionary of Popes*, Oxford University Press, 1991.  
*The Lives of the Kings and Queens of England*, Edited by Antonia Fraser, University of California Press, 1995.  
 Walsh, Michael, *An Illustrated History of The Popes-Saint Peter to John Paul II*, St. Martin's Press, 1980.

### Online

- "Patron Saints Index: Pope Clement VII," *Catholic Community Forum* website, <http://www.catholic-forum.com> (November 18, 2000).  
 "Popes Through the Ages: Pope Clement VII," *New Advent website*, <http://www.newadvent.org/Popes/ppc107.htm> (November 18, 2000). □

## Jackie Coogan

**Best known for his role in Charlie Chaplin's *The Kid*, Jackie Coogan (1914-1984) was one of the first and best known child actors. Because of the legal problems Coogan faced in obtaining the money he earned as a child star, the California legislature passed ground-breaking legislation protecting child actors and their earnings.**



Coogan was born October 26, 1914, in Los Angeles, California, the son of John Leslie Coogan, Sr. (also known as Big Jack), and his wife Lillian (nee Dolliver). Coogan's parents were entertainers. His mother's whole family was involved in vaudeville, and she herself had been a child actress on stage known as Baby Lillian. John Coogan also worked as a dancer and comedian on the vaudeville circuit. When the couple married, they developed own stage act. John Coogan was a comedian, while his wife served as his foil and singer.

### Made Stage Debut

Coogan spent the first three years of his life primarily in the care of relatives, though he did appear in one film with his mother as an infant, *Skinner's Baby* (1917). When he was a toddler, his parents took him on the road with them. Coogan started to do imitations and dance steps, and his father brought him on stage one night for a curtain call. The audience's response to Coogan's charming appearances compelled the tour promoter to insist that young Coogan became part of the act, for which the family was paid extra. When the vaudeville show made its way to Los Angeles, up-and-coming director/comedian Charlie Chaplin caught the act. Chaplin was looking for a child actor and decided that young Coogan fit the bill.

### Appeared in *The Kid*

Chaplin signed Coogan to appear in his movie at the rate of \$75 per week. As part of the deal, Coogan's father would also appear in the film and work as Chaplin's assistant. Though the transition from stage to film was difficult for the young actor, who was used to the reaction of a live audience, Coogan still managed to be a natural on film. To prepare for work on Chaplin's masterpiece, Coogan appeared in one movie called *A Day's Pleasure* (1919). He then worked with Chaplin on *The Kid* (1921), which took over a year to film. In the movie, Chaplin's famous character, the Little Tramp, adopts a child, played by Coogan, but is forced to give him up in order to save him. *The Kid* was a box office smash, and Coogan nearly stole the movie which made him a star. *The Kid* became one of Chaplin's best known pictures.

### Star on the Rise

To help build on this burgeoning career, his father founded Jackie Coogan Productions. John Coogan produced and sometimes wrote many of his son's features. Some of these early movies included: *Peck's Bad Boy* (1921), *Oliver Twist, My Body, and Trouble* (all 1922). By 1923, Coogan was the top box office star in the United States. He appeared in two more successful films: *Daddy* and *Circus Days*. That same year, Coogan signed a contract with Metro-Goldwyn-Mayer. In addition to a \$500,000 bonus, Coogan made \$1 million for four movies over two years plus a percentage of the profits. One of the films was *Long Live the King* (1924), allegedly the first film to bring in one million dollars.

To capitalize on his son's success, John Coogan signed a number of merchandise and endorsement deals. There

were Coogan caps, wagons, clothing, cups, dolls and chocolate bars. His image appeared on many products. The young actor was making millions of dollars and his father was investing some of the money. The family also lived the high life, though Coogan himself only had a weekly allowance of \$6.25. His home featured one of the first swimming pools in southern California. Coogan also owned a dairy ranch, which produced the milk he drank, as well as his own railroad car.

Coogan used his fame for philanthropic purposes. In the early 1920s, for example, he worked for the Children's Crusade, a group that raised money and collected clothing and food for war orphans in Armenia and Greece. For his work, he was honored by the League of Nations and met the Pope. Because of his fame, Coogan also met many mayors and was given the keys to many cities. At its height, Coogan's fame was so great that he once said, according to Neil A. Grauer of *American Heritage*, "Other boys went to see Babe Ruth. But Babe Ruth came to see me."

### Faced Career Struggles

As Coogan reached adolescence in the late 1920s, his popularity began to decline. He continued to make movies on his Metro-Goldwyn-Mayer contract until it ended in 1928. The more successful films included *A Boy of Flanders* (1924), *The Rag Man* (1925), and *Johnny Get Your Gun* (1927). In the latter, Coogan's now-famous "Dutch Boy" hair cut was sheared into a more mature look.

During this time, Coogan performed in a stage show with his father. He also concentrated on his education. Until the age of ten, Coogan was tutored. He then attended Urban Military Academy as well as other prep schools. After graduation, Coogan attended several colleges, including Villanova and University of Southern California. Poor grades forced him to leave Santa Clara University in 1932.

Coogan made a couple of films for Paramount, including *Tom Sawyer* (1930) and *Huckleberry Finn* (1931). While he was a talented actor, there was not much of an audience for his films. Coogan agreed to make short features for the low-budget Talisman Studio in 1933.

### Legal Battle

When Coogan turned 21 years old, he expected to gain control of the money he had earned as a child star. But in May 1935, just before his 21st birthday, a formidable event occurred. On the way home from a dove hunting trip to Mexico Coogan, his father, two actor friends, and the foreman of his ranch were involved in a serious car accident. All the occupants were killed except Coogan, who suffered broken ribs. He later speculated that the legal problems that followed would not have occurred had his father lived.

Soon after Coogan turned 21, he asked his mother for the money that had allegedly been held in trust for him. He had earned at least four million dollars over the course of his career. She refused, arguing that parents were entitled to all of their children's earnings. He was completely cut off by her, and given only \$1000. Coogan's mother lived in a house that he had paid for with her second husband, Arthur

Bernstein, the family's lawyer and financial advisor. As Coogan considered his options, he began a vaudeville tour in 1936-37. He also appeared in the film *College of Swing* (1938). Appearing with him was Betty Grable, whom he had married in 1937.

In 1938, Coogan took legal action against his mother, claiming the assets of his company, Jackie Coogan Productions. He wanted a full financial accounting of earnings. His mother and stepfather fought him all the way, though public opinion was on Coogan's side. Some who testified on Coogan's behalf emphasized that his father had promised to leave the money to his son. The legal wranglings deeply affected Coogan's life. He claimed that his stepfather, who had many Hollywood connections, made it difficult for to find work in films. Coogan did a stage tour with Bob Hope, however. He also found other stage work in New York and in summer stock. The legal problems contributed to the end of Coogan's marriage to Grable in 1938.

The settlement from the suit was finalized in 1940, with Coogan and his mother splitting the remaining assets. Coogan received half of \$250,000, which was soon gone as he settled debts. Coogan and his mother later reconciled, and his lack of funds compelled him to move back into the family home. Because of what happened to Coogan, the California legislature passed a law known as the Coogan Act (Child Actor's bill). It said that 50 percent of a child actor's earnings must be held in trust, savings, or interest until he or she reaches the age of maturity. It was first introduced in 1939 and passed in 1940.

### Served in World War II

In the early 1940s, Coogan joined the medics before the United States officially entered the second world war. He later became part of the Army Air Corps, as he had already obtained a pilot's license as a teenager. Coogan worked as a glider instructor and served in Burma as a volunteer member of the First Air Commando Force. He was the first glider pilot to land Allied troops behind enemy lines in Burma. One glider he was aboard crashed. Everyone was killed by the Japanese except Coogan, who was at the bottom of a pile of bodies. He served with the military for five years before being honorably discharged in 1944. Coogan received several war citations for his service, including the Air Medal.

After returning to the United States, Coogan continued his civic duty, appearing in War Bond drives in 1946. He also tried to restart his career in entertainment, though he also worked in sales and produced an ice show. Coogan began appearing in nightclubs and toured with an orchestra. He eventually made his way back to film and later television, but was never able to recapture the success of his early career. He developed a drinking problem and was arrested for drunk driving. It is alleged that Coogan also had a drug problem and was arrested for marijuana possession.

### Became Minor Television Star

Though Coogan played mainly supporting roles in movies of low to medium quality after the 1940s, he made numerous guest appearances on television. He even re-

ceived an Emmy Award nomination for a 1956 role in an episode of *Playhouse 90*. In the mid-1960s, Coogan portrayed Uncle Fester in the short-lived *The Addams Family* television series. Though he was initially rejected, Coogan desperately wanted the role and went to great lengths to resemble the cartoon character. Coogan had previously been a regular on the shows *Cowboy G-Men* and *McKeever and the Colonel*. He made his last movie in 1980, playing a small role in *The Escape Artist* (1982).

After suffering from heart and kidney ailments, Coogan succumbed to heart failure on March 1, 1984, in Santa Monica, California. He was survived by fourth wife, Dorothea Lamphere and four children: Anthony, Chris, Joan, and Leslie. Later, one grandson, Keith Coogan, came to some prominence as a young actor in his own right.

### Books

- American National Biography*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.
- The Annual Obituary 1984*, edited by Margaret Levy, St. James Press, 1985.
- Aylesworth, Thomas G., *Hollywood Kids: Child Stars of the Silver Screen from 1903 to the Present*, E.P. Dutton, 1987.
- Dye, David, *Child and Youth Actors: Filmographies of Their Entire Careers, 1914-1985*, McFarland and Company, Inc., 1988.
- Variety Obituaries*, Garland Publishing, 1988.

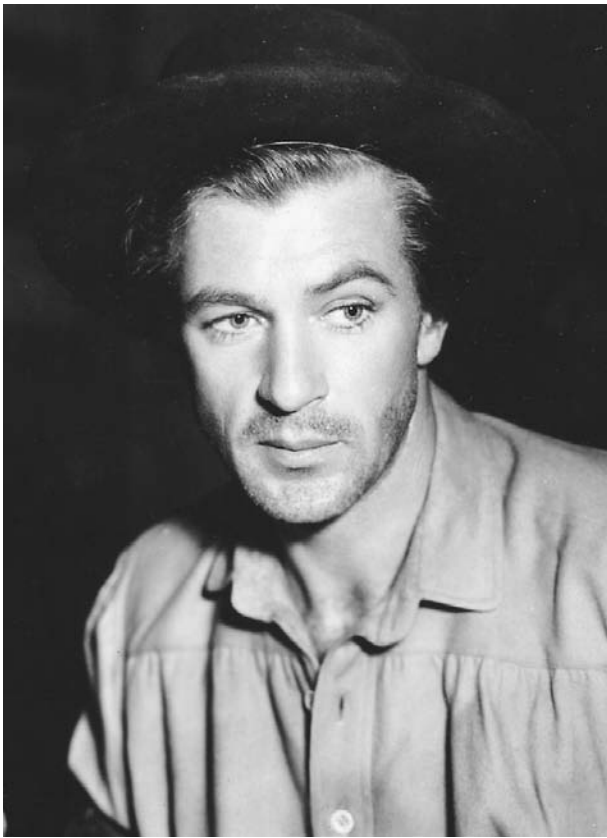
### Periodicals

- American Heritage*, December 2000.
- New York Times*, March 2, 1984.
- Time*, March 12, 1984. □

## Gary Cooper

**Gary Cooper (1901-1961) possessed a distinctive screen image that mirrored much that was worthy in the American character. By box office figures, Cooper was the most popular male film star of the 1930s, 1940s, and 1950s. Although he had great limitations, such accomplished performers as Charles Laughton, John Barrymore, and Charles Chaplin considered him America's most skilled film actor.**

Gary Cooper was born on May 7, 1901 in Helena, Montana, to Charles Henry Cooper, a lawyer, and Alice Louise Brazier, both English immigrants. As a lawyer, assistant U.S. attorney, and State Supreme Court justice, Charles Cooper was grimly determined to bring order to Helena, which still honored the vigilante tradition. His wife was equally fixed upon providing her two sons with a proper education, removed from the crudeness of a small western community. For four years Cooper attended Dunstable Public School in England. Totally unprepared for the rigor and snobbery of English secondary education, he found the experience sufficiently painful to become permanently shy and withdrawn.



Cooper worked on his father's ranch in 1918 and 1919, then enrolled in Wesleyan College at Bozeman, Montana, in 1920. After a serious automobile accident, which left him with a broken hip (and a characteristic gait), Cooper transferred to Grinnell College, in Grinnell, Iowa, in 1921. At Grinnell he proved to be an indifferent student. Art ranked as his sole passion, but he displayed little talent as an illustrator. Quitting Grinnell in 1924, Cooper went to Los Angeles. There he unsuccessfully sought work as a political cartoonist or artist for an advertising agency. He became a door-to-door salesman of discount coupons for a photography studio in order to earn a living.

### Secured Key Supporting Role

Cooper took the advice of two Montana friends who were former rodeo stars, and joined them as an extra in motion picture westerns in 1925. Soon realizing how much leading cowboy players earned, he decided to become an actor. He took the name "Gary" to distinguish himself from an abundance of Frank Coopers then in Hollywood. But not until *The Winning of Barbara Worth* (1926) did he secure a key supporting role. Although the film received mixed notices, Cooper won much praise. Paramount Pictures soon signed a contract with him.

Cooper possessed a natural, understated capacity to project himself before a camera. In *Wings* (1927), a World War I epic, he appeared for only 127 seconds, yet his portrayal of a doomed flyer stole the film. Somehow, Cooper bridged the gap between the male acting styles of the

1920s. Neither completely the child-boy of Buddy Rogers, nor the hardened warrior of William S. Hart, he managed to combine a measure of innocence about women and ideas with a knowledge about the ways of the West and its traditions.

### Success with Talking Pictures

Cooper was soon starring in films and, with the aid of skilled sound engineers, easily shifted his talents and light baritone voice to talking pictures. One of his first, *The Virginian* (1929), helped to stereotype him as the classic cinema man of the West (even though fewer than one-fourth of all his feature films were Westerns). In *Morocco* (1930) Cooper played a narcissistic cad in the Foreign Legion, while in *A Farewell to Arms* (1932) he sensitively portrayed the suffering protagonist of Ernest Hemingway's novel. His critical notices tended to improve, though some reviewers dismissed him as a mere matinee idol.

Cooper married Veronica Balfe, an aspiring actress, on December 15, 1933; they had one daughter. The marriage supposedly indicated Cooper's inclination to settle down after a series of torrid love affairs with such actresses as Clara Bow and Lupe Velez. But Cooper proved an unfaithful husband. He frequently had affairs with female costars and briefly separated from his wife in 1951-1952.

Part of Cooper's success on screen was due to his capacity to appeal to both women and men. Women found his boyish charm and good looks irresistible. Men regarded his unassuming, polite manner less threatening than the style of such other love idols as Clark Gable.

### Screen Image was Transformed

Between 1936 and 1943, Cooper's career took a new direction. He enjoyed a succession of box office and critical triumphs that transformed his screen image from the young (sometime) roue to an inherently good Mr. Everyman. For director Frank Capra, Cooper starred in *Mr. Deeds Goes to Town* (1936) and *Meet John Doe* (1941). An Academy Award and New York Film Critics Prize for best actor resulted from his portrayal of the title character in *Sergeant York* (1941). A year later he gave what some critics held to be an even finer performance as Lou Gehrig, in *The Pride of the Yankees*. In 1943 he again starred as a Hemingway hero in *For Whom the Bell Tolls*, which, while drained of its leftist political material, proved a box office hit because of the romantic pairing of Cooper and Ingrid Bergman. Most of these films cast him as a noble hero. "Whatever the deep psychological or physiological roots of his fascination" wrote the *New York Times's* Frank Nugent in 1942, "the simple fact is that to a large bloc of the population, Mr. Cooper has come to represent the All-American man."

That image was hard to maintain between 1943 and 1952, as Cooper groped for good vehicles. Such attempts at self-parody as *Casanova Brown* (1944) and *Good Sam* (1948) served him ill, and potboilers like *Dallas* (1950) were best forgotten. His boyish thinness turned to middle-aged gauntness, and improper lighting often caused him to appear far older than his years. Furthermore, into the 1950s he was wracked by an unhappy personal life and ill health (a

painful back and ulcers), which often prevented him from selecting good scripts and delivering able performances. His lack of self-confidence caused Cooper to rely for career advice on such middlebrow trendsetters as director Cecil B. DeMille and gossip columnist Hedda Hopper. They encouraged him to protect his screen image by choosing “safe” stories.

The influence of DeMille and Hopper showed in other ways. In 1944 they persuaded Cooper to deliver a radio talk opposing President Franklin Roosevelt’s bid for reelection. Cooper referred to Roosevelt’s “foreign notions,” adding, “I don’t like the company he’s keeping.” Some construed such references as aimed at the president’s Jewish counselors.

Two years later Cooper testified as a “friendly” witness before the House Un-American Activities Committee (HUAC), which was investigating Communism in the film industry. He vaguely described Communist infiltration at social gatherings and story conferences while demonstrating his total ignorance of Karl Marx. “From what I hear, I don’t like it [Communism] because it isn’t on the level,” he said.

### High Noon

Ironically, in the years after his HUAC testimony, Cooper’s greatest critical success came with a film scripted by Carl Foreman, a writer accused of Communist biases. In *High Noon* (1952), a western, Cooper played Will Kane, a retiring town marshal. On his wedding day Kane has to defend himself against an old nemesis—arriving on the midday train—who intends to kill him. As noon approaches, both the townspeople he has served and his bride desert him. Cooper masterfully played the tortured marshal, whom he admiringly identified with his father. His physical maladies and weariness, which so hampered his later performances, worked to his advantage in *High Noon*. So did close editing, skillful direction, and an evocative musical score. The film brought Cooper a second Academy Award for best actor.

Cooper’s subsequent roles drew mixed notices. Occasionally critics underrated good films such as *Vera Cruz* (1954), directed by Robert Aldrich, and *Man of the West* (1958), directed by Anthony Mann. Most hailed his portrayal of a Quaker father in *Friendly Persuasion* (1956). Otherwise he remained subject to miscasting or indifferent work and inept direction, problems he eventually recognized.

By 1960, Cooper had decided to alter the direction of his career. Entering television, he narrated a widely hailed documentary, “The Real West” (1961), which tried to separate the frontier realities from the images in the television westerns he had come to detest. Cooper also planned to play more morally ambivalent characters, beginning with *The Naked Edge* (1961), in which he portrayed a mercurial businessman suspected of murder by his wife.

As Cooper lay dying of cancer, Pope John XXIII, President John F. Kennedy, and Queen Elizabeth II sent get-well messages, which demonstrated Cooper’s position as a beloved modern folk hero, and also the industry’s mythmaking capacity. He died at Los Angeles on May 13, 1961. His

death, which followed Gable’s by about six months, seemed to many to signal the end of an era in Hollywood.

Like many American movie stars, Cooper was not a great actor. Yet he possessed a distinctive screen image that mirrored much that was worthy in the American character. By box office figures, Cooper was the most popular male film star of the 1930s, 1940s, and 1950s. Although he had great limitations—ones he perhaps too willingly accepted—such accomplished performers as Charles Laughton, John Barrymore, and Charles Chaplin considered him America’s most skilled film actor. On stage or live television, Cooper was usually a disaster. But before a camera he could evoke the most favorable image of the wholly decent and innocent American. He epitomized what one writer called “our pioneer belief in the triumph of good over evil.”

### Books

Anger, Kenneth, *Hollywood Babylon*, 1965.  
Arce, Hector, *Gary Cooper*, 1979.  
Carpozi, George, *The Gary Cooper Story*, 1970.  
Dickens, Homer, *The Films of Gary Cooper*, 1970.  
Jordan, Rene, *Gary Cooper*, 1974.

### Periodicals

*Esquire*, May 1961.  
*McCall’s*, January 1961.  
*New York Times*, on May 14, 1961.  
*New York Times Magazine*, July 5, 1942.  
*Quarterly Journal of Speech*, April 1975.  
*Saturday Evening Post*, February 18–April 7, 1956.  
*This Week Magazine*, August 23, 1936.  
*Time*, March 3, 1941. □

## Roger Corman

**Roger Corman (born 1926), a filmmaker with several hundred films to his credit, has rightly been called the “King of the B Movies.” His low-budget films made for Hollywood studios included one of the first “biker” movies, *The Wild Angels*, as well as numerous horror films based on stories by Edgar Allan Poe. Since 1970 Corman has operated successful independent film production and distribution companies.**

Roger Corman’s childhood gave few clues that, in later years, he would create hundreds of low-budget films that would make him one of Hollywood’s best-known directors. He was born in Detroit, Michigan, on April 5, 1926, the first child of European immigrants William and Ann Corman; his brother Gene (who also became a producer) was born 18 months later. As a child Corman was more interested in sports and building model airplanes than in film. William Corman, an engineer, was forced to



take a huge pay cut during the Great Depression that began in 1929. In his autobiography, *How I Made a Hundred Movies in Hollywood and Never Lost a Dime*, Corman speculated that this event might have caused him to be so thrifty when making films.

The family moved to the “poor side” of Beverly Hills, California, while Corman was in high school. He became fascinated with the stories of Edgar Allan Poe (asking for a complete set of Poe’s works as a gift), but he planned to become an engineer like his father. After graduating from high school, Corman studied engineering at Stanford University and participated in the Navy’s officer training program. In 1947, Corman graduated from Stanford and, after several months of unemployment, took an engineering job. He realized immediately that this was not the work for him, and quit the first week. Through a family friend he was hired as a messenger at Twentieth Century Fox. His lifelong career in the film industry had begun, to be interrupted only briefly in 1949, when he became irritated with studio bureaucracy and spent a year studying and traveling in Europe.

### Early Films Set Pattern

While working in Hollywood as a literary agent after returning from Europe, Corman also began to write screenplays. He sold his first screenplay, *Highway Dragnet*, to Allied Artists in 1953 and also became the film’s associate producer. The next year Corman used the money he made from this work to finance his first independently produced film, *The Monster from the Ocean Floor*. In this film,

Corman established the pattern that would characterize his later work: an incredibly low budget (generally under \$100,000, unusual even in those days); a fast shooting schedule (often two weeks or less); and a set theme. Monsters, aliens, supernatural villains, and other frightening characters almost always lay at the heart of Corman’s films.

During the next five years Corman produced or directed more than 30 films for American International Pictures (AIP), sometimes completing six or more films per year. These included cult horror classics such as *The Beast with a Million Eyes* (1955), *It Conquered the World* (1956), *The Day the World Ended* (1956), and *The Brain Eaters* (1958). He also branched out into gangster films, as in 1958’s *Machine Gun Kelly* (starring Charles Bronson); westerns, beginning with 1955’s *Five Guns West*; and teen-oriented films, with flimsy plots but catchy titles like *Teenage Doll* (1957) and *Rock All Night* (1957).

Always looking for ways to cut costs, Corman frequently acted in these films when more actors were needed, and others on the set also pitched in to play characters or trade jobs when necessary. As pointed out by Greg Villepique in *Salon*, Corman also injected a great deal of slightly bizarre wit into his films. For instance, when the evil coed in 1957’s *Sorority Doll* is discovered beating up one of the pledges, she protests, “All I did was spank her a little.”

### Series of Horror Classics Followed

In 1959 Corman directed one of his best-known horror classics, *A Bucket of Blood*. Walter Paisley (a character who returns in later Corman films) is a busboy in a beatnik coffeehouse, who discovers a hidden “talent” for sculpture when he coats a neighbor’s dead cat in plaster. When there is a demand for more of his work, he takes the obvious Corman route and human “sculptures” start to appear (as people in the neighborhood also start to disappear). *A Bucket of Blood*, shot in only five days, introduced a decade of similar films from Corman. He followed up with *The Little Shop of Horrors* (1960), in which the main human character Seymour Krelboin, an assistant in a florist shop, takes second billing to Audrey Jr., a giant blood-eating plant. Audrey Jr. spends much of the film crying out “Feed me!” and growing leaves that bear the faces of the people Seymour has killed to obtain blood. After rehearsing for three days, Corman completed filming in a mere two days, perhaps a record for a feature film. In his autobiography, Corman confessed that he had been told by AIP to make a film for less than \$50,000, and so created *Bucket*; when it was a success, he “did *Little Shop* in two days on a leftover set just to beat my speed record.” *Little Shop* was notable for featuring newcomer Jack Nicholson as a masochistic undertaker. (In 1982, it also was adapted into an award-winning stage musical.)

Based on the success of *Bucket* and *Little Shop*, Corman found himself in an unusual position. AIP gave him larger budgets and he was able to spend more time shooting his films. He embarked on some of his most famous films, a series based on stories and poems by Edgar Allan Poe and starring Vincent Price. Outstanding among these were Corman’s first technicolor films, *The Fall of the House of*

*Usher* (1960), *The Pit and the Pendulum* (1961), *The Masque of the Red Death* (1964), and *The Tomb of Ligeia* (1965). For *Masque*, Corman reused elaborate castle sets from the historical epic *Beckett*. The film's cinematographer, Nicholas Roeg, created a surrealistic atmosphere that he later used in his own films, such as *Don't Look Now*. 1963's *The Raven*, based on a poem by Poe, starred Boris Karloff, Vincent Price, Peter Lorre, and Jack Nicholson, and was a horror-comedy that had no clear story line. After *The Raven* was completed, Corman decided to reuse the castle sets for another quick film before tearing them down, and got Karloff to stay for two more days to shoot *The Terror*, costarring Jack Nicholson and directed by Nicholson and Francis Ford Coppola. However, it took several months after Karloff's departure to piece together the film; Corman called it the longest production of his career, but also said it was "a classic story of how to make a film out of nothing."

During the civil unrest of the late twentieth century, Corman (an acknowledged liberal) nevertheless remained devoted to the apolitical film subjects that had made him famous. In his *Salon* article, Villepique discussed one of the only films in which Corman explored a political subject. 1962's film *The Intruder* starred William Shatner as a Northern racist who travels south to fight school integration. Corman himself went to the Deep South to shoot the film, and used local residents as film extras without revealing how critical the film was of civil rights opponents. He and his crew just managed to finish the film before being ordered out of town by the local police. *The Intruder* was a failure in theaters, even after he gave it a new name more typical of his films, *I Hate Your Guts!*

Some of Corman's other films of the 1960s focused on characters who later became stereotypes of that decade's lifestyles. *The Wild Angels* (1966) was one of the first films to look at "biker" culture; it featured little-known actors Peter Fonda and Nancy Sinatra. Another low-budget production, *The Wild Angels* was extremely violent for its time. However, it not only won a prestigious award at the Venice Film Festival, but also paid for itself many times over, grossing more than \$25 million. 1967's *The Trip*, a pioneer psychedelic film, was starred in and written by Jack Nicholson. Other notable Corman films of the 1960s and early 1970s included *Voyage to the Prehistoric Planet* (1965), *Bloody Mama* (1970), starring Shelley Winters as the mother of an outlaw gang, and *Women in Cages* (1971).

### **Founded Independent Film Companies**

Corman, whose films still were considered low-budget but now often cost two million dollars, became increasingly frustrated with what he considered the wastefulness and excessive interference of the major Hollywood studios. In 1970, he established New World Pictures, which immediately turned a profit and soon became the country's largest independent film distribution company. New World continued to produce Corman staple items like *Candy Stripe Nurses*. But the profits from these films also enabled New World to distribute art films by noted directors such as Francois Truffaut and Federico Fellini.

In 1983 Corman decided to stop distributing films so that he could devote more attention to producing them. He sold New World and set up a new company, Concorde-New Horizons, which devoted itself largely to producing horror and martial arts films for distribution to theaters and a cable television series, "Roger Corman Presents." Corman has lived in Santa Monica, California, with his wife Julie Corman (also a producer), for many years. He continues to provide his fans with installments of *Alien Avengers* and other films with the typical Corman features.

Despite his nickname, "King of the B Movies," Corman's films nevertheless have received critical acclaim in addition to their ongoing popularity with filmgoers. His awards have ranged from a Golden Lion at the 1966 Venice Film Festival to the Career Achievement Award of the Los Angeles Film Critics Association (1996). Perhaps one of the most distinguished features of Corman's long career has been his ability to recognize young screen talent. Among the future film stars who worked with Corman early in their careers were Peter Fonda, Jack Nicholson, Talia Shire, and Diane Ladd; and directors Martin Scorsese, Francis Ford Coppola, John Sayles, and James Cameron.

Corman has retained a fondness for the early horror films that established his career. In *How I Made a Hundred Movies in Hollywood and Never Lost a Dime*, Corman confessed that, of the more than 300 films that he produced or directed, *Creature From the Haunted Sea* (1961) had his favorite ending. In this film, a mobster/sea captain murders a group of smugglers, steals their chest of gold, and then claims they were devoured by a sea monster. "We have always killed off our monsters," said Corman. "This time, the monster wins." He insisted on a final scene that showed the sea monster on the ocean floor, sitting on the chest of gold and happily munching on a stack of skeletons.

### **Books**

Corman, Roger, *How I Made a Hundred Movies in Hollywood and Never Lost a Dime*, Da Capo Press, 1998.  
McGee, Mark Thomas, *Roger Corman, the Best of the Cheap Acts*, McFarland, 1988.

### **Periodicals**

*Entertainment Weekly*, May 19, 1995.  
*Forbes*, April 15, 1991.

### **Online**

"Biography of Roger Corman," *Concorde Pictures*, <http://www.concordepictures.com> (November 7, 2000).  
"Roger Corman," *Internet Movie Database*, <http://www.imdb.com> (November 3, 2000).  
"Roger Corman," *Salon*, <http://www.salonmag.com/people/bc/2000/06/13/corman> (November 7, 2000). □

## **Pierre de Coubertin**

**French aristocrat Pierre de Coubertin (1863-1937)**  
was the founder of the modern Olympic Games.



**P**ierre Fredy, Baron de Coubertin, was born to a wealthy family in Paris on New Year's Day of 1863. He was raised with the notion that the French people had been humiliated by the Prussians during the Franco-Prussian War. Coubertin believed this defeat came about because the French were weak, not educated to deal with current life, and untrained in physical sports. The French educational system emphasized the life of the mind exclusively, and many people believed that physical activity would take energy away from mental growth. Coubertin felt this was an unbalanced approach, and that excessive intellectualism had led to the defeat of his country.

### Early Interest in Sports

As the member of a wealthy family, Coubertin did not face the pressure of having to make a living as a young man. He rode horses, rowed, boxed, fenced, and circulated in high Parisian society. Despite his easy life, (or because of it), he was haunted by the need to create some meaning, to have some greater purpose than merely chatting with other aristocrats or attending parties.

During his early teens, Coubertin had read a great deal of English "schoolboy" novels, in which the heroes were rugged, vigorous youths who excelled in sports and were admired by all. As J. A. Lucas noted in *Olympism* "Baron Pierre de Coubertin was convinced that the sports-centered English public school system of the late 19th century was the rock upon which the vast and majestic British empire rested." He was fascinated by the image of such hardy

people. In 1883, against his parents' wishes, Coubertin traveled to England to visit such schools and to learn about the British attitude toward sports and physical conditioning. It would be the first of twelve such visits, during which he would develop his lifelong philosophy on physical education.

Coubertin also traveled to the United States, studied physical education there, and wrote and spoke to American, British, and French audiences about his interests. He was a prolific writer, producing over 20 books and hundreds of articles during his lifetime. As Richard D. Mandell wrote in *The First Modern Olympics*, most of his writing was dry and repetitive, and he had to use part of his vast fortune to pay for its publication. His works on the early Olympics have survived because of their historical interest.

Coubertin's grandiose plans for wholesale reform of the French educational system never came to pass; not did his desire to revitalize all of French culture. However, he will be remembered forever as the founder and organizer of the modern Olympic Games. The Games, originally celebrated in ancient Greece as part of ancient religious beliefs, had not been held for almost 1500 years.

### Sought Support for his Olympic Plan

As Mandell pointed out, Coubertin had little contact with athletes, but he was superb at convincing bureaucrats and wealthy supporters that the Olympics were a worthy cause. The fact that he was an energetic and optimistic member of the nobility made it hard for them to refuse. He organized banquets and assemblies at which he prodded them to take action. He presented his new Olympic Committee as a strong and growing organization worthy of their support. However, as Mandell noted, "His '*Comite international olympique*'-confidently referred to at the front of brochures, listed at the top of letterheads, and accompanied by the five interlocking rings in the common colors representing those on all the national flags-was for many years the frailest of paper structures."

Coubertin became established as an expert on physical education. He began a campaign to convince French authorities that a program of physical education, more organized amateur athletic opportunities, and a reform of the educational system, were necessary, and that he should be placed in charge of such a program. Some bureaucrats were convinced, to the extent that they commissioned him to hold a "Congress for Physical Education in June 1889. Although he was empowered to charge admission to the congress, Coubertin distributed free tickets instead, and held exhibitions of horse riding, fencing, and track and field. He also arranged for a soccer game, rowing, tennis, and other events.

Surprisingly, Coubertin was attacked by many for holding this congress. His attackers felt that his methods were too British, and that he was turning his back on the French way. However, the criticism brought him a great deal of publicity. In the next few years, he continued to write, speak, and hold athletic events. In 1892, at a "jubilee" of the French Union of Athletic Sports Societies, according to Mandell, he made his first proposal for the institution of the

modern Olympic Games: "I hope you will help us in the future as you have in the past to pursue this new project. What I mean is that, on a basis conforming to modern life, we reestablish a great and magnificent institution, the Olympic Games."

His proposal did not meet with much enthusiasm, since most of those present had no idea what he was talking about. The original Olympic Games were part of ancient Greek religious ritual, and athletes customarily competed without clothes. Was this what Coubertin meant? Coubertin himself was unsure what form these new games would take, or what countries would be involved, but he was undeterred by the lack of support. In 1894, he held an international congress of athletic associations.

### International Olympic Committee

Seventy-nine delegates from 12 countries attended. Coubertin had written on the invitations, "Congress for the Reestablishment of the Olympic Games," and planned the event to be as lavish and momentous as possible, so that those attending would believe they were now a part of history. The congress divided into two committees, one of which was to discuss the issue of amateur athletes versus professionals—a debate that continued throughout the twentieth century—and the other of which was to discuss the revival of the Olympics. Before the congress was over, this second committee had agreed on the basic structure of the games. They would take place every four years, just as the ancient Olympics had. They would be international in scope, and involve modern sports. They would be for adult athletes only. Athletes who made money from their sports would not be allowed to participate. Different nations would host the events, rather than being held in the same nation repeatedly. The committee also established the first International Olympic Committee (IOC), composed of members who would represent the Olympic Games to the leaders in their home countries. The committee agreed that the first modern Olympics would take place in Greece, the ancient home of the Games.

### First Modern Olympic Games

As Jeffrey Segrave and Donald Chu pointed out in *Olympism*, "The choice of Athens for the new world Games was unfortunate. Greece was in political and military turmoil, and utterly bankrupt." Coubertin, however, visited Athens and became convinced that the Greek people truly wanted to host the Games. Crown Prince Konstantine of Greece took the helm of the Games Committee, and Greek fundraisers came up with \$100,000. A merchant, George Averoff, donated \$300,000 more. The city was renovated and decorated, and the Games began on April 5, 1896. Segrave and Chu wrote, "The 33-year-old Baron saw a life-dream fulfilled. The years ahead were filled with crisis and a halting progress. On this day, however, he was radiant with joy."

Later Olympics, in Paris and St. Louis, were not as positive, as these events were nearly eclipsed by world's fairs; the IOC and Coubertin were nearly displaced. However, the Games of 1912, held in Stockholm, hewed more

closely to Coubertin's ideals. Mandell wrote that these Games "were independent of any other distracting public festival and took place in facilities especially designed and built for the occasion." In addition, after these Games, Coubertin began to achieve recognition as the founder of the modern Olympic movement.

### Later Years

During World War I, Coubertin moved the headquarters of the IOC to Lausanne, Switzerland. He continued to promote his idea that the Games encourage peace and communication among nations through nonviolent competition in sports. He had volunteered to serve in the military, but instead, was assigned to oversee the physical education programs in French provincial schools. By this time, Coubertin had spent most of his formerly large fortune to promote the Games. What was left disappeared in the rampant inflation that took place during the war. Impoverished, he dismissed his servants and sold his family home. His sister-in-law was killed when the Germans bombed Paris, his two nephews were killed in combat, and his beloved son suffered severe sunstroke at the age of two, became catatonic, and never recovered. Coubertin's daughter, was mentally ill and required care. Coubertin's wife, in response to these tragedies, became compulsive and controlling, and refused to give any of her own money to support the family. Coubertin was penniless during the last years of his life, but his wife refused to give him any spending money.

After the 1924 Olympics in Paris, which were very successful, Coubertin retired from his post as president of the IOC. In his later years, he became isolated and bitter. However, the international tradition he created was now strong and full of life. He died in Geneva, Switzerland on September 2, 1937. After his death, one final Olympic ritual occurred. In his will, Coubertin left directions that his body should be buried in Lausanne, but his heart should be removed and buried in holy soil amid ruins on the site of the ancient Olympic Games. These wishes were honored.

An *Encyclopedia Britannica* article noted that "Coubertin's extraordinary energies, his taste for cultural symbolism, his social and personal connections, and his willingness to exhaust his fortune in pursuit of his ambitions were critical to launching the Olympic Movement."

### Lasting Influences

Coubertin left influences on the Olympic Games that endure today. The vast pageantry, and the ceremonial and ritual opening and closing of the games, began with him. Because French people at the time were not interested in sport for sport's sake, and enjoyed elegant, artistic spectacles, he accompanied the events he organized with speeches, banquets, and solemn assemblies, often including displays of fireworks and torch-lit parades. He believed that sports should incorporate elements of theater and ritual in order to captivate the minds and hearts of participants and spectators.

Coubertin also contributed the paradoxical notion that the Olympics can intensify national pride and patriotism of individual nations, and at the same time, prevent conflict



between nations because all the nations are involved together: that "the mixing of patriotism and competition will somehow further universal peace," as Mandell noted. He quoted Coubertin, who wrote in 1896, "The Olympic Games, with the ancient [Greeks], controlled athletics and promoted peace. Is it not visionary to look to them for similar benefactions in the future?"

### Books

Kanin, David B. *A Political History of the Olympic Games*, Westview Press, 1981.  
Mandell, Richard D. *The First Modern Olympics*, University of California Press, 1976.  
*Olympism*, edited by Jeffrey Segrave and Donald Chu, Human Kinetics, 1981.

### Online

"Coubertine, Pierre, Baron de," *Britannica.com*, <http://www.britannica.com> (January 5, 2001). □

## Bob Cousy

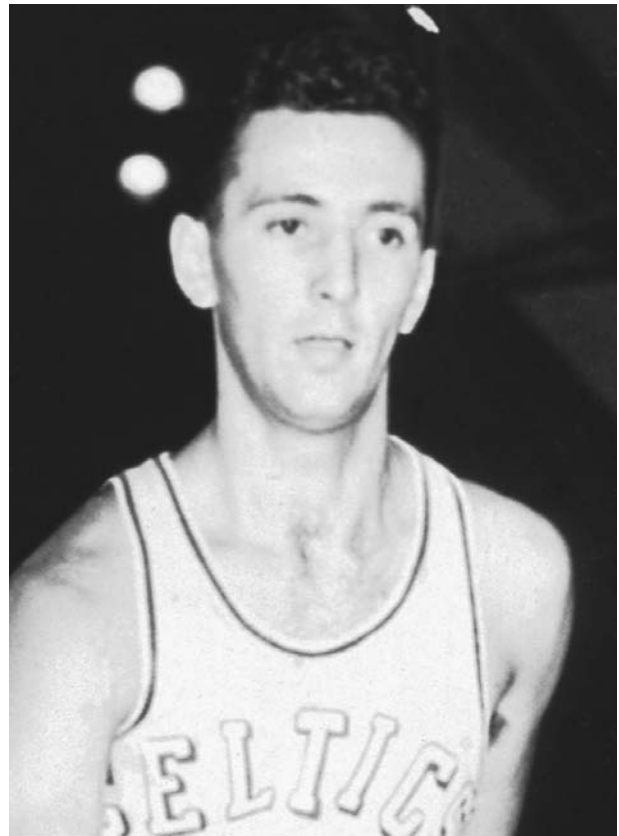
**Known as "the Houdini of the Hardwood," Bob Cousy (born 1928) was a pioneer in the National Basketball Association (NBA). Many consider him the definitive point guard and an excellent playmaker, one of the best ever to play the game of basketball.**

Cousy was born on August 9, 1928, in New York City. He was the son of French immigrants from Alsace, Joseph and Julliette (nee Corlet) Cousy. His father was a taxi driver and airline worker, while his mother worked as a secretary and language teacher. Cousy spent his early years in the East Side of Manhattan. He participated in such sports as stickball, boxball, and the stealing of hubcaps, but not basketball.

When Cousy was 12, the family moved from Manhattan to St. Albans, Queens. There, he learned to play basketball for the first time when he was 13. His early years were inauspicious. While attending St. Albans' Andrew Jackson High School, Cousy was cut two different times from the junior varsity squad. However, he was welcomed back after he broke his right arm, and was forced to learn to dribble and shoot with his left. His ambidexterity made him valuable. By the time he was a junior, Cousy was the team's star. As a senior, he won New York City's scoring title. Cousy scored 26 points in his last high school game.

### Stand-Out College Player

Taking up a scholarship offer from Holy Cross College in Worcester, Massachusetts, Cousy entered the school in 1946. He was platooned as a first-year student, 1946-47, the year Holy Cross won the NCAA title. Cousy played regularly beginning in the 1947-48 season, and soon became one of the best known players in college basketball.



He had many flashy moves, and was responsible for popularizing the behind-the-back dribble. Yet Cousy was also benched at times because of this play by coach, Alvin Julian. At one point, Cousy considered transferring to St. Johns. He stayed the course and Holy Cross became a college basketball powerhouse. The team had two long unbeaten streaks while Cousy was a member. In the 1947-48 season, it won 18 consecutive games, and in 1949-50, 26 straight. Both streaks ended in the NCAA playoffs, though the 1949-50 team went on to win the National Invitational Tournament (NIT). Cousy himself garnered All-American honors. During his senior season, he averaged 19.4 points per game and was a co-captain. He graduated in 1950 with a B.S. in business.

### Began Pro Career in Boston

After graduating from Holy Cross, Cousy's career plans were not set in stone. In addition to considering a career in professional basketball, he also thought about opening a driving school. Basketball won out. In the 1950 National Basketball Association draft, Cousy was a first round draft choice by the Tri-Cities Blackhawks, then traded to the Chicago Stags. Because Cousy was well known in Boston, the Celtics and their coach Red Auerbach were vilified for not selecting him in the draft. Auerbach was unimpressed by Cousy's size (about 6'1" tall) and razzle-dazzle style of play. However, the Stags folded before the 1950-51 season began and the team's players were distributed to three other teams in a dispersal draft. The Celtics drew Cousy's name out of a hat and he negotiated a contract for \$9000 per year.

with the team. Auerbach soon began to appreciate the player he did not originally want.

### Became Force in League

In Cousy's rookie season, 1950-51, the Celtics improved from one of the worst teams in the league to one with a winning record. Though the team lost in the first round of the playoffs, Cousy helped on numerous fronts. He posted impressive numbers, averaging 15.6 points per game and 4.9 assists per game. Cousy was named Rookie of the Year and finished ninth in the NBA scoring race. He was also a first-team All-Star.

What was even more valuable to the Celtics was the way he refined the point guard position. He could see plays that no one else could with his extraordinary peripheral vision. Cousy also had large hands, excellent timing, outstanding reflexes, and a deft touch with the basketball that allowed him to make these extraordinary plays. Cousy had the ability to make passes anywhere with both hands, including blind, behind-the-back passes, passes between his legs and over his shoulders. He could also dribble with both hands, make outside shots, and penetrate. While it took some time for his teammates to get used to his accurate, if unorthodox passes, it made Cousy a hard player to defend. Cousy's playing style also attracted an audience to the struggling young NBA, which welcomed the attention. Cousy made the game fun and people came just to see him.

Cousy gradually improved his game in the early 1950s. In the 1951-52 season, he averaged 21.7 points per game and 6.7 assists per game, but the Celtics again lost in the first round of playoffs. By 1952-53, he was leading the league in assists, averaging 7.7 per game. In the semi-finals that year, Cousy played his most legendary game, scoring 50 points (including 25 in regulation) in a four overtime game against Syracuse on March 21. He also made 30 of 32 free-throw attempts. Though the Celtics made it to the finals, they eventually lost the league title.

Cousy reached the height of his career in the mid-1950s. He led the NBA in assists from 1953-60, and was also always near the top of the league in scoring and free-throw percentage. In 1953-54, Cousy was the second highest scorer in the league, averaging 19.2 points per game and the All-Star Game MVP. A few years later, in 1956-57 Cousy was both the league's MVP and All-Star Game MVP. He led the league in assists (7.5 assist per game) and was eighth in scoring with 20.6 points per game. In 1956, he also became the first NBA player to appear on the cover of *Sports Illustrated*. The Celtics had the best record in the league and won the NBA championship in seven games over the St. Louis Hawks. With the addition of Bill Russell in the late 1950s, the Celtics won the NBA championship six of Cousy's seven last seasons with the team (except 1957-58). He also appeared in the All-Star Game every year he played with the Celtics, save 1961-62, and was a 12-time all-NBA selection. Cousy was a league leader in other ways: in 1955, he helped organize the NBA Players Union. His affect on the league was recognized near the end of his career. In 1962, a sports editor poll named him the NBA's number one player of all time.

### Retired from Celtics

Cousy retired from the Celtics after the 1962-63 season, making \$30,000 per year. During his last regular season home game, March 17, 1963, he received a 20-minute farewell. The Celtics went on to beat the Lakers in finals to secure yet another NBA championship. Though many believed Cousy was still near the top of his game, he knew his skills were on the decline. For example, his scoring average was down to 13.2 points per game. He told Tom Callahan of *Time* magazine, "I was very conscious of my skills eroding. . . . The minute there is even a subtle diminishment of legs, you're the first to know. I became aware of when I should stop wanting the ball in key situations. For a couple of years, I decoyed myself at those moments, making sure Sam Jones, Tommy Heinsohn or whoever ended up with the shot." Cousy could have played longer, but the decline would have been too obvious, and he feared any marketability he had would have been lost. He had already done numerous commercial endorsements during his playing years.

Over the course of Cousy's career in Boston, he scored nearly 17,000 points and 7,000 assists in 917 regular season games. He averaged 18.4 points per game, and had a career .803 foul shooting percentage, and .375 field goal percentage. When he retired, he held two NBA records, later surpassed, for most minutes played (30,230) and most assists (6949). Cousy was also fourth-leading scorer of the time (16,995 points) and second in total games played (917). He was the only player to play in 13 All-Star games, and only fouled out 20 times. In his 109 playoff games, Cousy averaged 18.5 points per game, 8.6 assists per game, and had an .801 foul shooting percentage.

### Began Coaching Career

Immediately after retirement, Cousy began a coaching career, first on the college level. Remaining in Boston, he coached the Boston College team from 1963 through 1969, posting a record of 117-38. In four seasons, the team racked up more than 20 victories. Cousy also took the team to several NCAA tournaments and one NIT tournaments. Cousy left the college ranks in 1969 in part because he did not like to recruit.

Cousy was immediately hired by an NBA team. In 1969-70, Cousy was the coach of the Cincinnati Royals. He briefly unretired as a player during the season and played in seven games. Cousy made the move to help his team and was well-paid for the effort. At the time, he was the oldest player to ever play in the NBA. In the 1970-71 season, the team moved to Kansas City-Omaha and was renamed the Kings. Cousy remained as coach until 1974, when he retired. His record as a professional coach was 141-209. During his tenure as coach, his accomplishments as a player were not forgotten. Cousy was inducted into the Naismith Hall of Fame in 1970, and he was named to the All-NBA Silver Anniversary Team in 1971. He was later named to the 35th and 50th Anniversary Teams as well.

### Became Television Commentator

After retiring as a coach, Cousy could not leave behind the game. Beginning in 1974, he was a color commentator for Celtics games for many years. Known for his blunt opinions, Cousy told Terry Pluto of Knight-Ridder/Tribune News Service "Some games, I really have to bite my tongue on the air. I get so mad at those guys, I want to run on the court and just wring a few necks." In the late 1990s, he added another basketball role, working as a marketing representative for the Celtics' front office. Cousy also remained involved in the labor movement in basketball, believing pre-1965 players should have better pensions. Though Cousy despised old timers charity games, he suited up for at least one that benefited the pensions of older players.

Cousy also worked outside basketball. He served as the commissioner of the American Soccer League from 1974-79. He also ran for a Congressional seat, but lost the election. Cousy even took on an acting role. In 1994, he appeared in the movie *Blue Chips*, a movie about the corruption in recruitment of college basketball players. Cousy played the athletic director of the fictional Western University. Still, it is as a real basketball player that Cousy remained best known. His former coach, Auerbach, was quoted in *The Modern Encyclopedia of Basketball* as saying "Cousy was one of the greatest all-around basketball players in the game, and undoubtedly he was the best backcourt player."

### Books

- Biographical Dictionary of American Sports: Basketball and Other Indoor Sports*, edited by David L. Porter, Greenwood Press, 1989.
- Complete Marquis Who's Who*, Marquis Who's Who, 1999.
- Hickock, Ralph, *The Encyclopedia of North American Sports History*, Facts on File, 1992.
- Hickock, Ralph, *A Who's Who of Sports Champions: Their Stories and Records*, Houghton Mifflin, 1995.
- The Modern Encyclopedia of Basketball*, edited by Zander Hollander, Dolphin Books, 1979.
- The Official NBA Basketball Encyclopedia*, edited by Alex Sachare, Villard Books, 1994.
- Pachter, Marc, et al., *Champions of American Sport*, Harry Abrams Publishers, 1981.
- Taragano, Martin, *Basketball Biographies: 434 U.S. Players, Coaches and Contributors to the Game, 1891-1900*, McFarland and Company, 1991.

### Periodicals

- Boston Globe*, August 27, 1999; May 26, 1999.
- Entertainment Weekly*, March 4, 1984.
- Knight-Ridder/Tribune News Service, February 8, 1997.
- Sports Illustrated*, Fall 1991; November 11, 1996.
- Telegram and Gazette*, August 27, 1999.
- Time*, December 24, 1984.

### Online

- "The 50 Greatest Players in NBA History: Bob Cousy," *NBA 50*, <http://www.nba.com/nbaat50/greats/cousy.html> (January 3, 2001).
- "NBA Legends: Bob Cousy," *NBA History*, [http://www.nba.com/history/cousy\\_bio.html](http://www.nba.com/history/cousy_bio.html) (January 3, 2001).

Schwartz, Larry, "Celtics tried to pass on ultimate passer," *ESPN.com*, <http://espn.go.com/sportscentury/features/00014144.html> (January 3, 2001). □

## Bartolomeo Cristofori

**Bartolomeo Cristofori (1655-1731), a harpsichord maker for a Florentine duke, built the world's first piano. He later made several technical alterations to improve the instrument's acoustics that have remained essential components of its construction.**

Almost nothing is known about the personal life of Bartolomeo di Francesco Cristofori, except that he was born in the northern Italian city of Padua on May 4, 1655. He became a harpsichord maker, and by 1688 his reputation brought him to the attention of Prince Ferdinando de Medici, son of the grand duke of Tuscany. The prince owned forty harpsichords and spinets, and hired Cristofori to both curate the collection and build new ones. The harpsichord, also called a *clavecembalo* or *clavicin*, dated back to the fourteenth century and took the form of strings stretched over a wooden sounding board. Notes emerged when a plectrum, or pick made from a bird's quill or leather, struck the string. Its main drawback was an inability to emit gradations in tone; striking the keys hard, or barely at all, produced the exact same vibration. Larger harpsichords, instruments that contained three or even four sets of strings, were eventually developed that gave an added depth to the sound. However, even the smallest harpsichord was expensive to build and maintain. They were the sole province of kings and minor nobles who possessed a fondness for the arts, like the Medicis.

The harpsichord was the predecessor of Cristofori's piano, but it also had links to a less rarified instrument. The dulcimer, an ancient stringed instrument probably brought to Europe from Asia by Romany gypsies, was a far more populist musical instrument. It was a simple stringed board, and could be played by those with a rudimentary musical ability. Literature of the era rarely even mentions it, so lowly was it considered to be inside established musical circles. A violinist named Pantaleon Hebenstreit improved on the dulcimer around 1700, creating a double one with a five-octave range. The player could inject much more emotion into the playing, and was able to produce a range of tones. Hebenstreit demonstrated his invention, which he called a Pantaleon, before King Louis XIV of France in 1705. Back in Germany, Hebenstreit gained a measure of renown, and others thought about improving on his innovation by making the two hand-held hammers into a series of keys instead, each of which would be connected to its own hammer. An instrument-maker in France named Marius and one Christoph Gottlieb Schroeter of Germany devised designs for such instruments, but they were never built.

## Improved on Harpsichord

Cristofori was probably unaware of Hebenstreit's Pantaleon.. He is thought to have started work on his own invention while in the service of the Medicis in Florence around 1698, though he may have begun as early as 1694. A 1700 inventory of the Grand Duke's musical assets listed an *arpicembalo che fail piano e il forte*, or "harpsichord that can play quietly and loudly." From there Cristofori constructed what became the first piano around 1709. Instead of the quilled jacks used to pluck the string on the harpsichord, Cristofori's innovation was to devise a way in which the strings were struck from below by individual hammers covered in deer leather. The truly revolutionary part of the process was the way by which the downward pressure of the key, when struck by a finger, was carried to the hammer that struck the string. He called it a *gravecembalo col piano e forte*, or "clavichord with soft and loud." The clavichord was another type of keyboard instrument similar to the harpsichord. The name was soon shortened to simply "pianoforte."

Cristofori's invention might have languished forever inside Florence's royal palaces had it not been for the Marquis Scipione Maffei, who wrote about it in 1711 in his *Giornale dei Letterati d'Italia*, a publication funded by the Medici family. An article titled "New Invention of a Harpsichord with the Soft and Loud" appeared in Volume V. "Everyone who enjoys music knows that one of the principle sources from which those skilled in this art derive the secret of especially delighting their listeners is the alternation of soft and loud," Maffei wrote. "This may come either in a theme and its response, or it may be when the tone is artfully allowed to diminish little by little, and then at one stroke made to return to full vigor—an artifice which has often been used, and with wonderful success, at the great concerts in Rome." Scipione then remarked that the harpsichord was unable to produce as many variations as a bowed string instrument, "and one might have considered it the vainest of fancies to propose constructing [a harpsichord] in such a manner as to have this gift. Such a bold invention, nevertheless, has been no less cleverly thought out than executed, in Florence, by Mr. Bartolommeo Cristofali." Unfortunately Maffei misspelled Cristofori's name.

## Died in Obscurity

Cristofori made about twenty of his pianofortes between 1709 and 1726. His patron Ferdinando died in 1713, but he remained curator under the prince's successor, Cosimo III. In 1716 Cosimo named him curator of all musical instruments in the Florentine royal collection. He continued to improve on his pianoforte: in 1720, he installed what would become the forerunner of the soft pedal in the form of two knobs at either side. Cristofori failed to win riches or fame for his invention, however. Most who tried the pianoforte dismissed it as far too difficult to master. Those who did possess a dexterity for the keyboard, such as accomplished organists and harpsichord players, tried it but were put off by the variations in tone; their attempts, which might have furthered its popularity, emitted clumsy sounds and were soon abandoned. Only in 1732 did the first music

written for the piano—twelve sonatas written by Florentine composer Ludovico Giustini—appear in print.

The piano languished in relative obscurity, eclipsed by the popularity of opera, which had emerged in Italy in the last century; music practitioners became more interested in the possibilities of the human voice as a musical instrument. Tuscany was also the center of the violin industry at the time. But Cristofori inspired others in Florence, and there emerged a small piano-making industry for a few years. His most famous apprentice was Giovanni Ferriri, who made several of them. It is thought that George Frederic Handel may have encountered one of Cristofori's pianos on a visit to Florence or Rome, and it is known that five of them were shipped to Spain after harpsichord virtuoso Domenico Scarlatti came to Florence.

## Germans Marketed the Instrument

In 1725, a German translation of Scipione's 1711 article appeared in Saxony. Titled *Critica Musica*, it included the diagram of the string mechanism Maffei had drawn. Gottfried Silbermann, an iconoclastic organ builder and clavichord maker from Dresden, is thought to have constructed the first two pianofortes in Germany around 1730. Silbermann knew Hebenstreit in Dresden, who had risen to the post of Royal Chamber Musician, and was hired to maintain the famed Pantaleon; he then secretly copied it and tried to sell it. After Hebenstreit discovered the treachery, he enlisted the help of his patron and was given exclusive rights over the instrument that bore his name. When Silbermann made the pianos, he refused to divulge his know-how. He invited Johann Sebastian Bach, a famed musician and composer in Leipzig by then, to play one, but Bach disliked its sound. Silbermann then worked to improve the instrument until a better version met with the composer's approval.

Various other forms of the instrument came into being in Germany during the latter decades of the eighteenth century, and German manufacturers perfected Cristofori's invention to such a degree that it was believed to have sprung from German soil itself. Even Ludwig van Beethoven, whose concertos and sonatas for the piano remain the some of the most revered of all classical compositions, wrote in 1816 that the instrument was most certainly a German invention. Cristofori died in Florence on January 27, 1731. A few of his pianofortes exist: an instrument dating from 1720 is in the collection of the Metropolitan Museum in New York, while another is in Leipzig and a third at the Museo degli Strumenti Musicali in Rome. A three-keyboard harpsichord thought to have been built by Cristofori, dated 1702 and with the coat of arms of Prince Ferdinando, resides at the University of Michigan in Ann Arbor.

## Books

Brinsmead, Edgar, *A History of the Pianoforte, with an Account of Ancient Music and Musical Instruments*, Cassell, Petter, and Galpin, 1879.  
*The Cambridge Companion to the Piano*, edited by David Rowland, Cambridge University Press, 1998.

Closson, Ernest, *History of the Piano*, translated by Delano Ames, Paul Elek, 1947.

Hipkins, Alfred J., *A Description and History of the Pianoforte*, Detroit Reprints in Music, 1975.

Loesser, Arthur, *Men, Women and Pianos: A Social History*, Simon and Schuster, 1954. □

## Jane Croly

**Jane Cunningham Croly (1829-1901) was probably the first female American journalist. For over forty years she held various editorial positions on newspapers and magazines. In 1868 she founded Sorosis, which became the first American woman's club of any consequence or endurance.**

Jane Croly was born in Market Harborough, Leicestershire, England, on December 19, 1829. She was the daughter of the Reverend Joseph H. and Jane Cunningham, and came to the United States when she was twelve years old. In her childhood she was taught by her father and brother at their home in Poughkeepsie, New York, and later in New York City. In her early girlhood Croly attended school at Southbridge, Massachusetts, where she edited the school paper, wrote plays, and acted as stage manager.

### Wrote on Women's Fashions

In 1855, Croly gained a place on the staff of the *Sunday Times* and *Noah's Weekly Messenger*, writing under the pseudonym, "Jennie June," because she felt the traditional shyness concerning women in public life. She became a special writer on women's fashions and was among the first to "syndicate" her articles. In 1856 she married David Goodman Croly, a New York journalist. Five children were born to them, but Jane Croly departed from the conventional mode of the time and continued her journalistic work.

For over forty years she held various editorial positions on newspapers and magazines. In the year of her marriage she called the first Woman's Congress, to meet in New York. She was editor, for a time, of *Demorest's Quarterly Mirror of Fashion*, and in 1860, when that journal and the *New York Weekly Illustrated News* were incorporated into *Demorest's Illustrated Monthly*, she became its editor, remaining as such until 1887. She was also connected with *Godey's* and with the *Home-Maker*. Jane Croly was probably the first woman correspondent in New York for out-of-town papers. For fifteen years she wrote letters for the *New Orleans Picayune* and the *Baltimore American*. She represented in New York the *New Orleans Delta*, the *Richmond Enquirer*, and the *Louisville Journal*. At various times she was editorially connected with the *New York World*, and the *Graphic Daily Times*, and, for nine years with the *New York Times*. She was also dramatic critic and assistant editor of the *Messenger* from 1861 to 1866.

### Founded Woman's Club

In 1868 Croly, in common with a number of New York women, was extremely indignant because her sex was completely ignored at the Charles Dickens reception. In protest and consistent with her advocacy of everything she considered for the betterment of women, she founded Sorosis, which was not the first woman's club, but was the first of any consequence or endurance. Croly was the first president of the New York State Federation of Women's Clubs. When her husband attempted to teach in America the philosophy of Positivism originated by Auguste Comte, Croly endeavored to aid him. In 1889 she founded the Women's Press Club in New York.

Of Croly's separate publications the most notable was *The History of the Woman's Club Movement in America*, a large volume published in 1898. In 1866 she published *Jennie June's American Cookery Book*, and in 1875 *For Better or Worse. A Book for Some Men and All Women*. In 1898 she met with an accident which crippled her, and subsequently she spent much of her time in England seeking rest and cure. She died in New York City on December 23, 1901.

### Books

Cunningham, John, *Jane Cunningham Croly, "Jennie June,"* 1904.

### Periodicals

*Critic*, March 1904.

*Harper's Bazaar*, March 3, 1900.

*New York Times*, December 24, 1901.

*Woman's Journal*, January 4, 1902. □

## Glenn Cunningham

**Glenn Cunningham (1909-1988), the "Kansas Ironman," was the world-record-holder in the mile race from 1934 until 1937. He was a member of the 1932 and 1936 U.S. Olympic teams.**

Glenn Cunningham was born in Atlanta, Kansas on August 4, 1909. His father, Clint Cunningham, was a water-well driller who also did odd jobs. In February of 1916, Cunningham and his older brother Floyd were badly burned in an accidental fire in their schoolhouse. Floyd died from the burns, and doctors thought that Cunningham's legs were so badly burned that they would have to be amputated. However, he eventually recovered after a long battle. Cunningham regained his strength by running. By the time he was 12, he had beaten all the local high school runners. His legs remained deeply scarred, however. Throughout his life, he would have to massage them and spend time doing long warm-up exercises in order to maintain circulation. In addition, his injuries meant that



he could never run smoothly or efficiently; he compensated with endurance and strength. It is interesting to speculate on how great he might have been if he had never been injured.

According to Corder Nelson and Roberto Quercetani in *The Milers*, "The middle 1930s may well be the most exciting short period in the history of the 1500 and mile. It was a time of world records and surprises, a time of great improvement and uneasy uncertainty for individuals." No runner had yet broken the 4-minute barrier in the mile, but some, including Cunningham, came close. Frank B. Bowles wrote in the *Biographical Dictionary of American Sports* that Cunningham "may have run a sub-4 minute mile in high school, but this feat has never been authenticated."

Cunningham attended the University of Kansas, where he ran for the track team and won his first big race, the 1932 NCAA 1500 meters. That summer, he was selected for the U.S. Olympic track team. At the 1932 Olympics, held in Los Angeles, he came in fourth in the 1500 meter race.

### The Kansas Ironman

In 1933, Cunningham graduated from the University with the highest academic record in his class. That same year, he won the AAU 800 meters with a time of 1:51.8, as well as the 1500 meters with a time of 3:52.3. In addition he won the NCAA mile for the second time, with a time of 4:9.8. Overall, he ran 20 races in Europe during that summer, as well as maintaining a busy indoor season and a hard outdoor season. That year, the first year he was called "Ironman," he was awarded the Sullivan Memorial Trophy,

which was given annually to the most outstanding amateur athlete.

Cunningham went on to graduate school at the University of Kansas, then earned a master's degree from the University of Iowa in 1936, and a Ph.D. in physical education from New York University in 1940.

In 1934, public interest in the mile race was at an all-time high. Cunningham began a tough competition in the mile against Bill Bonthron of Princeton. According to Nelson and Quercetani, "Madison Square Garden had to turn away thousands of people who wanted to see [Cunningham and Bonthron]. Their exploits made headlines throughout the country." The two ran some very close indoor races, tying each other in setting a new indoor record of 3:52.2 in the 1500 meters, then were pitted against each other in the mile on June 16 at the first Princeton Invitational Games. This event consisted of only four races, which began at five in the evening, after the Yale-Princeton baseball game. Only three runners were slated to run in the mile: Bill Bonthron, Glenn Cunningham, and Gene Venzki; most of the crowd of 25,000 spectators expected Bonthron to win by a large margin.

For the first lap, Venzke was in the lead, with Cunningham closely following. After another half-lap, Cunningham passed him and was in the lead. Bonthron moved in close behind Cunningham, holding steady and seemingly ready to speed past him at the end of the race. In the third lap, however, Cunningham put on a burst of speed. Nelson and Quercetani wrote, "His scarred legs churned wildly, and he looked as if he had started the last lap. Around the turn he opened up an alarming gap of ten yards over Bonthron." By the time he reached the backstretch, he was 20 yards in front of Bonthron, and Venzke was far behind. The crowd forgot about cheering for Bonthron, the home favorite, and switched to yelling for Cunningham, trying at the same time to figure out just how fast he was running. On the home-stretch, he was 40 yards ahead of Bonthron and driving for the record. He tore through the tape with a time of 4:06.7, a new world record. He kept running for a 30-yard cool-down, then jogged back to the finish line, where Bonthron congratulated him. His new strategy of running the second half of the race faster than the first half had paid off. His lap times were 61.8, 64.0, 61.8, and 59.1.

Later that summer, however, at the NCAA championships in Los Angeles, Bonthron was ready for this tactic. When Cunningham speeded up after two laps, Bonthron speeded up with him, and so did Venzke. Although Venzke couldn't keep up, Bonthron could, and did. Cunningham was unable to get away from Bonthron, and according to Nelson and Quercetani, "Bonthron exploded with an unbeatable kick which shot him five yards past Cunningham in the space of about 30 yards." Bonthron also beat Cunningham on June 30, in Milwaukee; despite the fact that Cunningham had run the 1500 in 3:48.9, a time that would have set a new world record, Bonthron had run it even faster, in 3:48.8. According to Nelson and Quercetani, Cunningham said, "It's a strange feeling to break a world's record and still lose."

Cunningham came back in 1935 and won the AAU 1500 meters with a time of 3:52.1. He also won the Wanamaker Mile in 4:11.0, with Venzke in second place and Bonthron in third.

In 1936, he won the metric mile in the AAU meet and in the trials for that year's Olympics. Knowing that he would run in the Olympics, he was cautious, not wanting to peak his speed and running condition too early. He hung back, running slowly and not pushing the pace; in one race, he said, "I'm going to win, no matter if it's going to take me the whole night," according to Nelson and Quercetani. He won that race with an almost comically slow time of 4:46.8.

### The 1936 Olympics

Cunningham's strategy of holding his speed in reserve seemed to work. At the Olympics, held in Berlin, he recorded his fastest-ever time in the 1500 meters-3:48.4, a new U.S. record-but unfortunately was outrun by Jack Lovelock of New Zealand, who set a new world record with his time of 3:47.8. Cunningham said of Lovelock, "He must be the greatest runner ever," according to Nelson and Quercetani.

In 1937 and 1938, Cunningham won the AAU title again, making 1938 the fifth time he had won the event-four of which wins were in successive years.

### Endurance and Pacing

Nelson and Quercetani noted that Cunningham admired endurance, and quoted him as saying, "If you stay in the running-if you have endurance-you are bound to win over those who haven't." In addition to endurance, runners need the skill of pacing. No one can sprint for a mile, so mile runners have to plan how they will spread out their effort over the distance so that they can complete it in as short a time as possible without burning out before the finish. On March 3, 1938, at the age of 28, Cunningham showed his endurance and his pacing when he ran an unofficial, but outstanding, mile in 4:04.4. It happened on the track at Dartmouth in Hanover, New Hampshire. The track there was known to be fast, and it was large, with only six-and-two-thirds laps to a mile. This meant that runners could run faster on the wide turns than they could on the tighter turns of a smaller track. Cunningham had a plan for this race; he would run his first three quarter-miles in 60, 63, and 61 seconds, and then go all out on the last quarter.

He ran the first quarter in 58.5, and worried that he had run it too fast and would not have the speed later when he needed it. He slowed down slightly and passed the half-mile on schedule. He hit the three-quarter mark in 3:04.2, and later said of that point, "I felt quite fresh," according to Nelson and Quercetani. On the last quarter he pushed himself to run as fast as possible, and hit the tape at 4:04.4, two seconds faster than anyone had ever run the mile before. The time was reported on the front page of the *New York Times*. However, track officials discounted the record because it was made on a large track. This was unfortunate; as Nelson and Quercetani pointed out, track insiders had long predicted that Cunningham would run that fast. Cunningham's unofficial record was not beaten until 1955.

Only a few days later, on March 12, Cunningham ran the Columbia Mile in 4:07.4, an official indoor record.

In 1939, he won the Baxter Mile for the fifth time, the Wanamaker Mile for the sixth time, the BAA indoor mile for the ninth time, and beat famed two-milers Don Lash and Greg Rice in 9:11.8.

### "The Parade of Great Milers Never Stands Still"

In 1940, his last season of competition, Cunningham wanted to win his last 1500-meter race and retire on a high note. However, as Nelson and Quercetani wrote, "The parade of great milers never stands still. No matter who is on top, ambitious young men are plotting to overthrow him." At the race, held in Fresno, California, Cunningham was up against some of the best new track talent, including Walter Mehl, who was an impressive two-miler who had won the Big Ten title in the mile in 1939.

Cunningham set the pace from the start, and the younger runners trailed him. The crowd of 14,000 fully expected to see him win, and cheered him on. Nelson and Quercetani wrote, "This was the master, at his peak for his last race, running with the grace and power of old, setting a pace as stiff as any he had ever run except for his "freak" 4:04.4. Actually, the spectators were surprised to see anyone staying close behind." They did stay, and in the home-stretch, Mehl strode past Cunningham. Cunningham had beat his own 1500-meter record with a time of 3:48, but came in second to Walter Mehl, whose time was 3:47.9.

From 1940 to 1944, Cunningham worked as physical education director at Cornell College, after which he served for two years in the U.S. Navy. Cunningham married Ruth Sheffield, in the summer of 1947. Although he might have used his name as a star athlete to make a great deal of money, he was more interested in helping others than in making a fortune. He and his wife opened the Glenn Cunningham Youth Ranch and over the next three decades, raised over 10,000 foster children, ten children of their own, and two daughters from Cunningham's earlier marriage. As Frank B. Bowles wrote in *Biographical Dictionary of American Sports*, "With virtually no outside help, the couple handled the youngsters with old-fashioned patience and tolerance." Cunningham often went on speaking tours as a lay preacher.

Because Cunningham had won 21 out of 31 races at Madison Square Garden, and set his best indoor mile there in 1938 with a time of 4:07.4, he was named the most outstanding track athlete to compete at the Garden during its first 100 years. Cunningham was elected to the U.S. Track and Field Hall of Fame and the National Track and Field Hall of Fame. He died in Menifee, Arkansas on March 10, 1988.

### Books

*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.  
Hanley, Reid M., *Who's Who in Track and Field*, Arlington House, 1973.

Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton Mifflin, 1995.

Krise, Raymond and Bill Squires, *Fast Tracks: The History of Distance Running*, Stephen Greene Press, 1982.

Nelson, Corder and Roberto Quercetani, *The Milers*, Tafnews Press, 1985. □

## Charles Brent Curtis

**Charles Brent Curtis (1860-1936) was elected to the United States Congress as a Republican in 1892. He completed 14 years of service in the House of Representatives and 20 in the Senate. Curtis was inaugurated as the thirty-first vice president of the United States in March 1929, the first Native American to have achieved this office.**

Curtis was born on January 25, 1860 on the Kansa/Kaw Indian-allotted land which would later become part of North Topeka, Kansas. He was the eldest of two children, his sister, Elizabeth, being born in 1861. His father, Orren Armes Curtis, was a white man whose English ancestors originally arrived in America in the early 1600s. Orren Curtis was born in Eugene, Indiana, in 1829. He appears to have been married several times prior to marrying Ellen Pappan, the mixed-blood daughter of his employer, in 1859. Ellen Pappan Curtis' mother, Julie Gonville Pappan, was of Kansa/Kaw, Osage, and remote Potawatomi ancestry. Julie had married three times, her last husband, Louis Pappan, being of French ancestry and born in St. Louis. Mrs. Pappan's mother, Wyhessee, a full-blood Kansa/Osage Indian, was the daughter of the Kansa chief Nompawarawah [White Plume] and the granddaughter of the Osage chief Pawhuska. It was White Plume who had his portrait painted by Charles Bird King in the 1820s. Wyhessee married Louis Gonville who appears to have been of French Canadian and one-quarter Potawatomi ancestry.

Although Charles Curtis was later variously described as being of one-half, one-quarter, and one-eighth Indian ancestry, none of these appears to be correct. Technically, based on his somewhat confused and contradictory genealogy, Curtis was of a little over one-eighth Indian ancestry, and predominantly of English and French extraction. Whatever the case, Curtis identified himself as a Native American, although he was not sentimental about his ancestry and was not above employing his Indianness in whatever manner was most politically useful during his career.

Raised among his numerous Kansa relatives on their Indian allotments along the north shore of the Kansas River, Curtis was influenced by his maternal grandmother, Julie Gonville Pappan. Curtis resided with her on the Kansa reservation near Council Grove some 60 miles west of Topeka, following the death of his mother from cholera in April 1864. However, southern Cheyenne and Arapaho raids and conflicts with the residents of the Kansa reservation, between 1866 and 1868, resulted in Curtis being

returned to the relative peace of north Topeka in 1868. On his return to Topeka, Curtis came under the dominant control and influence of his white grandmother, Permelia Curtis, who was to oversee his education and employment. She also laid the groundwork for Curtis' lifelong allegiance to the Republican Party.

In 1878, Curtis was briefly dropped from the Kansa annuity roll because he was not present at the time of the annuity distribution and because he did not have a primary residence on the Kansa reservation. At the time, the registry regarded him as being of one-eighth Indian ancestry. This did not affect his Kansa legal enrollment, however, since his grandmother, Julie Pappan, was recorded in the treaty of 1825.

Completing three years at Topeka High School, Curtis began the study of law in 1879 with A. H. Case, a local attorney, and was admitted to the bar in 1881, at the age of 21. Almost immediately, he involved himself with local political affairs, a field of interest that was to occupy the rest of his life. In 1885 he was elected the county attorney for Shawnee County, Kansas. Curtis was elected to the United States House of Representatives as a Republican from the Fourth District in 1892 and remained in the house until January, 1907, completing 14 years of service there.

### Passage of the Curtis Act

In the late nineteenth century, Curtis became involved in legislation which resulted in the General Allotment Act. Passed in 1887, the act divided reservation lands among Native Americans and the surplus land went to U.S. settlers. On June 28, 1898, the Curtis Act was passed, extending the disastrous processes of the General Allotment Act (1887) to the Five Civilized Tribes of Oklahoma. It had generally been viewed that the application of the allotment was inevitable and Curtis, an avowed assimilationist who was an ardent supporter of allotment, achieved a compromised bill which attempted to somewhat modify the process. Nevertheless, Curtis will be remembered as being the author of the legislation that destroyed tribal sovereignty in the Indian Territory (later Oklahoma). Curtis, who held his own 40-acre Kansa allotment jointly with his sister throughout his life, actually reduced his own status as a Native American through the passage of the General Allotment Act. He felt, however, that the acculturative progress of the American Indian was being hindered by the continuation of communal ownership of lands, herds, and other tribal resources.

In 1907 Curtis was designated by the Kansas State Legislature to fill an unexpired term in the United States Senate. In the same year he was elected to the Senate, but he lost a reelection campaign in 1912. In 1914, Curtis was reelected to the Senate, defeating Senator Joseph L. Bristow, and continued in that senatorial position until 1926, some 20 years in the Senate. During his years in the Senate, Charles Curtis' name was prominent on a number of bills; however, he was recognized moreso for his politicking on the Senate floor. He was a conservative Republican and party regular who was designated party whip in 1915. Curtis replaced Henry Cabot Lodge as majority leader in 1924. That year also marked the death of his wife.



Curtis was philosophically and politically antagonistic to some forms of traditional Native American tribal government. In his capacity as chairperson of the Senate Indian Affairs Committee in 1921, Curtis supported the bill of Secretary of the Interior John Barton Payne to minimize the sovereignty of the Pueblo tribal governments by clarifying how federal jurisdiction was to be applied over the Pueblos. With the end of the sixty-sixth Congress, the Payne Bill was not acted upon, although the complex issues involving Native American sovereignty and land title were to be repeatedly addressed in future congresses.

According to William E. Unrau, Charles Curtis' political philosophy can be summarized as follows: "Curtis supported the gold standard, high tariffs, prohibition, restrictive immigration, deportation of aliens, and generous veterans benefits; opposed the League of Nations; and took the view that depressions were natural occurrences that inevitably would be followed by periods of prosperity, championed female suffrage, government assistance to farmers" especially Kansans.

### Became Vice President

In 1928, at the Republican national convention, Curtis initially opposed Herbert Hoover's presidential nomination as their candidate. Fellow delegates were able to resolve his objections, and Curtis was designated as the vice-presidential candidate. The Republican victory in the 1928 national elections was achieved after an acrimonious battle.

Curtis was inaugurated as the thirty-first vice president of the United States in March 1929, the first Native American to have achieved this office. During his tenure, Curtis spoke for American Indians whenever the occasion arose. Most political analysts view him as having served a rather lackluster tenure as vice president. Some have disagreed, however, pointing out the effective role that he played in the complex negotiations of policy behind the scenes, and his major place in negotiations with American Indians, although he attempted to avoid controversy where possible.

Although Curtis was re-nominated with Hoover in 1932, they were defeated. Curtis retired from active politics and returned to the practice of law in Washington, D.C.

Curtis married Anna E. Baird of Topeka in 1884. Mrs. Curtis' parents had migrated to Topeka from Altoona, Pennsylvania, and were prominent Baptists in the community. The Curtises had one son and two daughters: Harry, who graduated from Harvard Law School and established a practice in Chicago; Hermelia, who married an army officer; and Leona, who married a prominent industrialist of Providence, Rhode Island. Curtis died of a heart attack on February 8, 1936, in the Washington, D.C., home of his half-sister, Dolly Curtis Gann, who had served as his official hostess during his years as vice president. Curtis' remains were returned to Topeka, the place of his beginnings.

### Books

- Gann, Dolly, *Dolly Gann's Book*, Doubleday, Doran, 1933.  
*Indian Lives: Essays on Nineteen Twentieth Century Native American Leaders*, edited by L. G. Moses and Raymond Wilson, University of New Mexico Press, 1985.  
*Kansas and the West: Bicentennial Essays in Honor of Nyle H. Miller*, edited by Forrest R. Blackburn, Kansas State Historical Society, 1976.  
 Kelly, Lawrence C., *The Assault on Assimilation: John Collier and the Origins of Indian Policy Reform*, University of New Mexico Press, 1983.  
*Mixed-bloods and Tribal Dissolution: Charles Curtis and the Quest for Indian Identity*, University of Kansas Press, 1989.  
 Seitz, Don C., *From Kaw Teepee to Capitol: The Life Story of Charles Curtis, Indian, Who Has Risen to High Estate*, Frederick A. Stokes, 1928.

### Periodicals

- American Mercury*, August 1929.  
*Emporia State Research Studies*, 10: (nd).  
*Kansas Historical Quarterly*, 14:15, January 1947.  
*Literary Digest*, January 3, 1925.  
*Nation*, April 7, 1928; August 1, 1928.  
*Outlook*, May 16, 1928.  
*Saturday Evening Post*, February 9, 1907. □

# D

## Glenn Davis

**Known as “Mr. Outside,” Glenn Davis (born 1925) played on exceptional Army football teams in the 1940s. He won the Heisman Trophy in 1946.**

Glenn Woodward Davis was born December 25, 1925, in Claremont, California (some sources say December 26, 1924, in Burbank, California), with a fraternal twin brother, Ralph. They were the sons of Ralph Davis, a bank manager who also owned citrus trees, and his wife Irma. Davis and his family, including an older sister Mary, spent most of their formative years in LaVerne, California.

By the time he reached high school, Davis was a celebrated athlete. Some observers believed he was one of the finest athletes produced in Southern California. While attending Bonita High School, Davis played in four sports, (football, baseball, basketball and track), and won 13 (some sources say 16) letters over his high school career. For his athletic prowess, Davis won numerous honors. In 1942, the year he led Bonita to a Southern California high school scoring record of 236 points, he was named the CIF (California Interscholastic Federation) Football Player of the Year. Davis was also honored for his efforts in baseball at center field, winning All-CIF recognition. The following year, Davis won the Knute Rockne Trophy for being the best track star in Southern California.

### Entered Military Academy

After graduating from Bonita High School in 1943, Davis attracted much attention from colleges because of his athletic abilities. One school that was very interested was

the United States Military Academy. Davis agreed to enter only if his twin brother would be admitted as well. Davis’s primary sport was football, and he proved his worth during his plebe (first) year. Playing fullback, he gained 1028 yards rushing in 144 carries. Army finished the season with a record of seven wins, two losses, and one tie, and was ranked seventh in the nation in total offense.

Though Davis was ready for college athletics, he was not prepared for the academic rigors of West Point and the time constraints created by the demands of athletics. He had to be tutored throughout the football season, especially in his weakest subject, mathematics. After his first term, he was expelled for failing math. Davis returned to California and attended an intensive four-month math course at a prep school, Webb School for Boys. Because he successfully completed the course, Davis was readmitted to West Point for the 1944-45 school year, but was again a plebe.

### Paired with Blanchard in the Backfield

At the beginning of the 1944 football season, Davis switched to halfback from fullback because of the transfer of another man in the backfield, Doc Blanchard. Though the pair started out as second string players, they soon made a name for themselves, “the Touchdown Twins.” Davis became known as “Mr. Outside” and Blanchard was “Mr. Inside.” Some believe that the pair formed one of the greatest backfield pairings in college football history, in part because their skills complemented each other and their combination of speed and strength helped the Academy dominate their opponents. Dave Newhouse in *Heisman: After the Glory* wrote “While teammate and friend Doc Blanchard softened up opposing defenses on the inside, the speedy Glenn Davis would make them pay outside. He was poetry in motion. He brought grace and style to an other-



wise forceful offensive machine. Glenn Davis ran like the wind and blew away defenses with an elusive agility unmatched in college football."

Davis played on three of the best teams Army ever put together. During the 1944 season, he set NCAA records by averaging 11.5 yards a carry and by scoring 20 touchdowns in nine games. In one of his best games of the season against arch-rival Navy, Davis had a touchdown run of 52 yards and an interception that prevented Navy from scoring a touchdown. Army won the game 23-7. For his efforts, Davis won the Maxwell Award and Walter Camp Trophy as player of the year. He also finished second in voting for the Heisman trophy, given to the best college player in the country.

The 1945 Army team is often considered one of the best ever. Davis slightly bested his previous record by averaging 11.51 yards per carry, but only scored 18 touchdowns in nine games. He had another spectacular game against Navy, running in two touchdowns for 33 and 49 yards. Army again won, 32-13. Though Davis had a great season, it was Blanchard who won the Heisman, while Davis finished second.

### Won Heisman Trophy

Davis's statistics were better in the 1944 and 1945 seasons than in 1946 when he only averaged 5.8 yards per carry and scored 13 touchdowns in ten games. Yet he played two of the best games of his college career in 1946. In the annual game against Navy, Davis had 265 yards of

total offense, including running 40 yards for a touchdown, catching a 30-yard pass, and throwing a pass for 27 yards and a touchdown. Army won the game 21-18. More impressively, Davis basically won the game against the University of Michigan on his own. Blanchard was injured as was quarterback Arnold Tucker. Playing for 60 minutes, Davis rushed for 105 yards, including a 58-yard scoring run. He completed seven of eight passes for 160 yards, including a 31-yard touchdown pass. He caught a 31-yard touchdown pass, intercepted two passes, and made a defensive play at the end of the game that ensured Army's 20-13 victory. Despite having a subpar season on the whole, Davis finally won the Heisman Trophy, receiving 792 votes. He was also honored as the Associated Press's athlete of the year and TSN's player of the year.

At end of his college football career, Davis had gained 6494 yards in 637 carries. He had a total of 59 touchdowns, an NCAA record at the time, and passed for 12 more. He averaged one touchdown for every nine plays. Davis was named an All-American three times, and could have won the Heisman three times as well.

### Excelled at Other Sports

Football was not Davis's only sport at West Point. In addition to playing guard on the basketball team, Davis was a star centerfielder on the baseball team. He could have played professional baseball. The many teams that were interested in Davis's services included the Brooklyn Dodgers who offered him a \$75,000 contract and significant signing bonus. Davis declined to pursue baseball because after fulfilling his military commitment, he would have been very old for a major league rookie at the time and feared he would not be able to catch up.

Davis was also a track star, though he did not pursue it as seriously as football and baseball. While many believed he could have been an international track star, he did not compete on a consistent basis. Nonetheless, as a sprinter, he once won the 100-yard dash in 9.7 seconds, tying an Army record. He set a West Point record in the 220-yard dash with a time of 20.9 seconds. Davis showed his all-around abilities in the Academy's Master of the Sword test, which involved numerous skills including a 300-yard run, several jumps, rope climb, softball throw, and sit-ups. Davis scored a record 962 1/2 points out of a possible 1000. Though Davis was considered the best complete athlete ever produced by the Academy, when he graduated in 1947, he was ranked 305 out of a class of 310.

### Denied Chance to Play Professional Football

After graduating in 1947, Davis joined the Army while Blanchard joined the Army Air Corps. However, he and Blanchard still desired a career in professional football. The pair was offered huge bonuses and salaries by the professional teams. Upon graduation, each man received a standard 60-day furlough. Both Davis and Blanchard asked for an extended furlough to allow them to play, but the request was denied. They also tried to cut a deal that would allow them to play football during the fall and serve in the military

during the rest of the year for several seasons. This deal also was turned down, in part because of a political uproar. Many believed the Army had spent too much time, money, and effort training them to allow them to play football.

### Appeared in Film

Davis and Blanchard did manage to make money off their illustrious football careers during their first 60-day leave. They appeared in a low-budget film about their lives and football careers entitled *Spirit of West Point*. They were paid \$25,000 each and five percent of the profits for their work. The film did not receive good reviews, but Davis suffered a greater injury during the filming. Running for a touchdown for the cameras, he tore the ligament and damaged cartilage in his right knee and had to undergo surgery.

While Davis served his three years in the Army, he managed to keep his football abilities intact. Though he was criticized, Davis practiced with the Los Angeles Rams and played in an exhibition game during his leave in 1948. Despite these criticisms, the Army also used Davis's abilities for its own benefit. In 1949, he was assigned to West Point to coach the plebe football team's back field.

### Played Professional Football

After being discharged from the Army in 1950, Davis finally got his chance to play professional football. He spent two seasons with the Rams, despite the negative effects of his knee injury on his playing ability. He told Newhouse in *Heismen: After the Glory*, "I was as good a football player as a senior in high school as I was with the Rams." Though he may not have been the same player in his eyes, he still managed to lead his team in rushing during his 1950 rookie season. Davis also still ran fast. He was timed by a University of Southern California track coach carrying a football in full uniform 100 yards in 10 seconds.

During the season, Davis also had 42 catches, seven touchdowns, and passed for two more. The Rams won the NFL championship that season, winning the championship game against the Cleveland Browns. Davis's contribution was an 82-yard pass play score. He also made the Pro Bowl. But Davis's professional career was cut short in 1951 when he re-injured his knee. In his professional career, he had 152 rushing carries for 616 yards, averaging 4.1 yards a carry, and scoring four touchdowns. He also caught 50 passes for 682 yards and five touchdowns, for a 13.6 yards a carry average.

After his football career ended, Davis went to Texas to work in the oil business for several years in the early 1950s. He did try to return to football in 1953 with the Rams, but quit after an exhibition game. In the mid-1950s, Davis was hired by the *Los Angeles Times*, and by the late 1950s, he was employed there as a special events director. Until he retired in 1987, Davis oversaw the newspaper's charity fundraising events, primarily sporting events, concerts, and banquets. Though out of football, Davis's career was still remembered fondly. He told Ron Fimrite of *Sports Illustrated* in 1988, "It's amazing, but I still get at least a half dozen fan letters every week. . . . After all these years, that's really something."

### Books

- Biographical Dictionary of American Sports: Football*, edited by David L. Porter, Greenwood Press, 1987.  
 Brady, John T., *The Heisman: A Symbol of Excellence*, Atheneum, 1984.  
 Hickok, Ralph, *The Encyclopedia of North American Sports History*, Facts on File, 1992.  
 Hickok, Ralph, *A Who's Who of Sports Champion: Their Stories and Records*, Houghton Mifflin Company, 1995.  
 Newhouse, Dave, *Heismen: After the Glory*, The Sporting News Publishing Co., 1985.

### Periodicals

- Associated Press State and Local Wire, October 4, 1999.  
*New York Times*, October 1, 1995.  
*The Record*, September 29, 1995.  
*Sports Illustrated*, November 21, 1988. □

## Robert De Niro

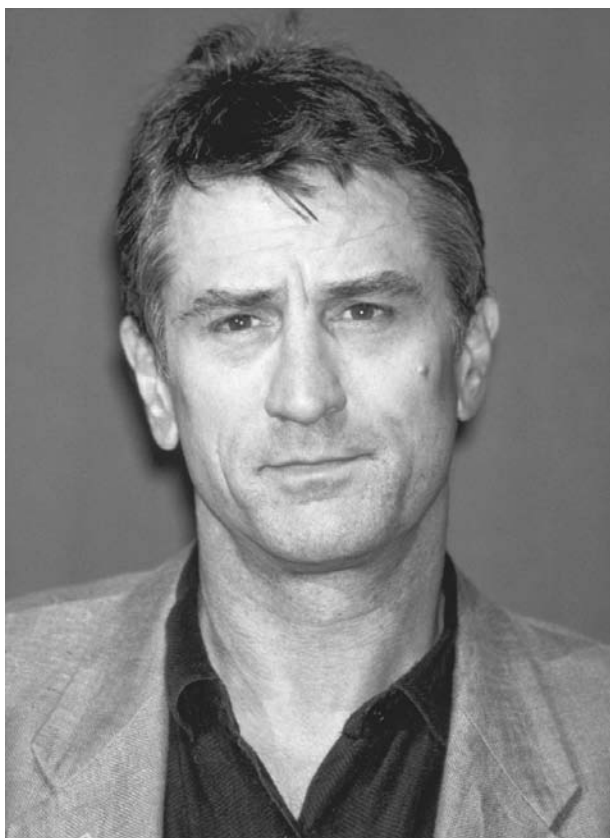
**One of the greatest American actors of his generation, Robert De Niro (born 1943) is known for his total immersion in roles. Whether driving a cab to prepare for *Taxi Driver* or gaining 60 pounds to play boxer Jake La Motta in *Raging Bull*, De Niro studies his characters intensely. The Oscar-winning actor is best known for his roles in gangster-related films such as *The Godfather, Part II*.**

In a 1976 interview, De Niro explained his approach to preparing for a role. "Actors must expose themselves to the surroundings and keep their minds obsessed with that," he said. ". . . I always look at everything. . . . If you don't practice, you don't know your subject and it can't be natural . . . You've got to physically and mentally become that person you are portraying."

### Bobby Milk

De Niro was born in New York City on August 17, 1943. His father, Robert De Niro Sr., was a sculptor, painter and poet. His mother, Virginia Admiral, also sold paintings. His parents had a salon in Greenwich Village that attracted other artists and intellectuals. They divorced when their son was a young child. As he approached adolescence, De Niro was shy and sickly looking. His pale complexion earned him the nickname "Bobby Milk" in the ethnic neighborhood of "Little Italy," where he grew up. His first stage role, at age ten, was as the cowardly lion in a local production of *The Wizard of Oz*.

At the age of 16, De Niro got his first paying role, in a production of Chekhov's *The Bear*. He was hooked. Dropping out of high school just a few credits short of graduation, he studied Method acting under Lee Strasberg and Stella Adler. For the next 14 years De Niro performed off-Broadway, in dinner theaters, in touring productions, and occasionally in television commercials and small films.



Director Brian De Palma gave De Niro his start in films.. He cast the young New Yorker in the little-noticed, small-budget films *The Wedding Party*, *Greetings*, and *Hi, Mom!* In *Greetings* De Niro had the lead role as a draft dodger. Soon, actress Shelley Winters took him under her wing. She helped him land a part in the low-budget Roger Corman film *Bloody Mama*. He played one of the sons of her character, the legendary killer Ma Barker. De Niro prepared by spending weeks in the Ozark Mountains, perfecting an Arkansas dialect. De Niro next appeared in a string of poorly received films, including *Jennifer on My Mind*, *Born to Win*, and *The Gang That Couldn't Shoot Straight*. Though the movies were panned, some film critics started to notice his exceptional performances.

### “You Talkin’ to Me?”

In 1973, De Niro, who was turning 30, finally won widespread acclaim with two remarkable performances. He portrayed a dying baseball pitcher in *Bang the Drum Slowly*. De Niro had never played baseball and wasn't an athlete but, through constant practice, intense study of ball-players in person and on film, and reading books about baseball, he made his performance believable. Later that year, De Niro appeared as a nervous, explosive young hoodlum in *Mean Streets*, the first of many collaborations with director Martin Scorsese, a contemporary who also grew up on New York's Lower East Side. The authenticity of his performance was startling. It “looked as if a rogue had come in off the streets,” wrote biographer David Thomson,

and the portrayal seemed “an assertion of how out of conventional control he was.”

In 1974, De Niro was cast as the young Vito Corleone in Francis Coppola's blockbuster *The Godfather, Part II*. He prepared by studying the Sicilian dialect for weeks and by striving to capture the accent and mannerisms of Marlon Brando, who had played the older Corleone in the original *Godfather*. “De Niro is right to be playing the young Brando because he has the physical audacity, the grace and the instinct to become a great actor,” wrote critic Pauline Kael. The breakthrough role, in which he speaks only 17 words of English, won De Niro the Academy Award for Best Supporting Actor.

De Niro continued gaining critical acclaim with his role as the cab driver Travis Bickle in Scorsese's *Taxi Driver* in 1976. His Oscar-nominated portrait of a bigoted, vengeful Vietnam veteran was an iconic performance. To prepare for the role, De Niro lost 35 pounds and listened repeatedly to a taped reading of the diaries of assassin Arthur Bremer, who shot presidential candidate George Wallace in 1972. He also got a provisional cab driver's license and drove around New York for several weeks.

De Niro's gutsy, disturbing performance drove the controversial film. “The genius of the acting consists of De Niro's refusal to simplify,” wrote Thomson. “He never opts for sacred monster or shaman. The long, lone sequences establish an hallucinatory confessional with the audience. . .” Playing with his gun and practicing his bravado in front of a mirror—a scene the actor improvised—De Niro tries out the memorable line: “You talkin’ to me?” The phrase became an enduring part of the American lexicon—shorthand for a fed-up, won't-take-it-anymore attitude and a code for white male rage. “It is a picture of a man on the brink of the abyss which is both chilling and comical,” wrote biographer Andy Dougan.

### Disappeared into Roles

Over the next quarter-century, De Niro would become one of the most prolific and celebrated actors in Hollywood. He was known for immersing himself in his roles—so much so that for many years he often went unrecognized in public. One of De Niro's acclaimed early portrayals came in the controversial, Oscar-winning Vietnam War drama *The Deer Hunter*, in which he played a redneck steelworker traumatized by his combat experiences. To grow into the role, he entered the world of Ohio Valley steel mills. “I talked with the mill workers, I drank and ate with them, and I played pool with them,” De Niro explained. “I tried to come as close to being a steelworker as possible. I wanted to work a shift at the mill, but they wouldn't let me.” De Niro's penchant for authenticity nearly cost him his life during the filming. Shooting combat scenes in Thailand, he and co-star John Savage were almost killed while doing their own stunt work, dropping from a flying helicopter's runners into a river.

Critics were astounded by the intensity of De Niro's tight-lipped character. Thomson wrote: “*The Deer Hunter* would not have existed without De Niro's fierce generation of pain and honor. . .” De Niro was nominated for another

Academy Award and might have won it were it not for overwhelming public sympathy for Peter Finch, who had starred in *Network* and then died before the Oscar voting.

In 1980, De Niro finally won a Best Actor award from the Academy voters for his portrayal of boxer Jake La Motta in Scorsese's *Raging Bull*. Before filming began, he took a year's worth of boxing lessons and spent months at the real Jake La Motta's apartment, absorbing everything he could about the man. After the film's early scenes were shot with a lean, trim De Niro, production stopped while De Niro literally grew into the part of the fighter as an older, obese man. By eating his way across France and Italy, he gained 60 pounds in two months. De Niro explained after the filming: "I just can't fake acting. I know movies are an illusion and the first rule is to fake it, but not for me. I'm too curious. I want to deal with all the facts of the character, thin or fat. . . . Just by having the weight on, it really made me feel a certain way and behave in a certain way. . . . It was a little like going to a foreign land."

The result was an intensely personal performance. "He put on not just weight, but the burden of degradation," noted Thomson. "While in the ring, he was a terrifying spectacle, as credible as any movie boxer has ever been. . . . In the scenes with Cathy Moriarty, and with the 'guys,' there were remarkable insights into sexual insecurity or ambivalence."

## Branching Out

Once established as a star, De Niro refused to settle for sure box-office hits. Continually testing his range, he made a number of unusual role choices, including a romantic comedy with Meryl Streep, *Falling in Love*, which bombed with critics and at the box office. Though he is most closely associated with a gangster persona, De Niro's roles have varied widely. They include a struggling musician in the unsuccessful Scorsese musical *New York, New York* and an incarnation of Lucifer in Alan Parker's black comedy *Angel Heart* (for which De Niro grew long hair and a beard and studied the most evil men in history). He also portrayed the Frankenstein creature in *Mary Shelley's Frankenstein*; an unfunny would-be comedian in *The King of Comedy*, a drug-addicted ex-felon in *Jackie Brown*; a repressed priest in *True Confessions*; and a catatonic patient in *Awakenings*.

De Niro specialized in difficult, complex characters who represented the dark side of human nature. In 1991, he received another Oscar nomination for his role as a loathsome ex-felon in *Cape Fear*. Thomson wrote: "His character was so intricately nasty, so repellent, and so clever, that one wondered if the actor hadn't developed too much devil worship." After appearing as gangster Al Capone in De Palma's *The Untouchables*, De Niro explained: "I prefer the so-called evil because it is more realistic. Good characters or characters who are only positive tend to be unbelievable and boring."

Tedium was unlikely on film sets with De Niro. His intensity was contagious. "When De Niro walks on the set, you can feel his presence, but he never behaves like a movie star, just an actor," said Parker. "And when he acts, his sheer concentration permeates the whole set."

Italian director Sergio Leone cast De Niro as a gangster in his epic *Once Upon a Time in America*. After the filming was completed Leone said: "I don't consider Bob so much an actor as an incarnation of the character he is playing. Until he feels like that he can't go on the set. . . . No one is better than De Niro at being studied and spontaneous at the same time."

Appearing in flops and hits, De Niro remained productive and unpredictable. He was nominated for an Academy Award for his performance as a bounty hunter in the lightweight 1989 hit *Midnight Run*. He returned often to his favorite director Scorsese, playing a mob character in *Goodfellas* and a gambler in *Casino*. He played a gangster in *Heat* and a hit man in *Ronin*. He spoofed his own persona as a mob boss in the comedy *Analyze This* and as a hard-nosed ex-intelligence agent in *Meet the Parents*.

Despite his fame, De Niro has remained extremely protective of his personal life and distrustful of interviewers and photographers. "I liken them to assassins," he once said. In 1976, De Niro married singer-actress Diahnne Abbott. They had a son and a daughter before divorcing. He also had twin sons, born via a surrogate mother, with actress Toukie Smith. De Niro was also romantically linked to model Naomi Campbell, singer Whitney Houston, and actress Uma Thurman. In 1997, he married flight attendant Grace Hightower.

## Tribeca Film Center

Seeking new challenges, De Niro founded the Tribeca Film Center in a renovated Manhattan coffee factory in 1989. On the first two floors he opened a restaurant, the Tribeca Grill, in which he displayed his father's paintings. De Niro eventually became part-owner of several upscale New York restaurants.

From his new headquarters De Niro produced his first film, Neil Jordan's remake of *We're No Angels*, in which he also starred. In 1993, De Niro won critical acclaim for directing and playing opposite Chazz Palminteri in the latter's autobiographical film *A Bronx Tale*. Also that year, he produced a television series *Tribeca*, which was cancelled after seven episodes. In 1999, he produced the movie *Entropy*.

Throughout his career, De Niro has tested his own limits—often going to extreme limits in order to be true to his character. To De Niro, acting has always been a way of expanding horizons. More than 60 film roles in 37 years attest to his willingness to take risks. "Acting is a cheap way to do things that you would not dare to do yourself," he once explained.

## Books

Dougan, Andy, *Untouchable: A Biography of Robert De Niro*, Thunder's Mouth Press, 1996.

Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

## Periodicals

*Entertainment Weekly*, November 1, 1999.

*Esquire*, December 1997.

*Newsweek*, May 17, 1999.

### Online

"The Robert De Niro Page," <http://deniro.jvlnet.com>.

"Robert De Niro," *All Movie Guide*, <http://allmovie.com>.

"Robert De Niro," <http://www.geocities.com/Hollywood/Set/9401/>. □

## Vittorio De Sica

**The films of Vittorio De Sica (1902-1974) are among the most enduring of the Italian post-war period. His career suggests an openness to form and a versatility uncommon among Italian directors.**

De Sica was born in Sora, Italy on July 7, 1902. He attended the Institut Supérieur de Commerce and University of Rome. De Sica began acting on stage as a teen-ager and played his first film role in 1918. In the 1920s his handsome features and talent made him something of a matinee idol. He performed in Tatiana Pavlova's stage company in 1923. De Sica married the Italian actress Giuditta Rissone, with whom he formed his own stage company in the late 1920s. By 1931, De Sica had become a leading film actor. He appeared in a number of films by Mario Camerini, including *Gliuomini che mascalzoni!*, *Daro un milione*, and *Grandi magazzine*.

### Portrayed Comic Heroes

During his lifetime, De Sica acted in over one hundred films in Italy and abroad, using this means to finance his own directorial efforts. He specialized in breezy comic heroes, men of great self-assurance or confidence men (as in Rossellini's *Generale della Rovere*). The influence of his tenure as actor cannot be overestimated in his directorial work, where the expressivity of the actor in carefully written roles was one of his foremost technical implements. In this vein De Sica has continually mentioned the influence on his work of Charlie Chaplin. The tensive continuity between tragic and comic, the deployment of a detailed yet poetic gestural language, and a humanist philosophy without recourse to the politically radical are all elements of De Sica's work that are paralleled in the silent star's films.

### Early Directorial Work

De Sica's directorial debuts, *Rose scarlatte* (1940) and *Maddalena, zero in condotta*, were both attempts to bring theater pieces to the screen with suitable roles for himself. In 1943, with *I bambini ci guardano*, De Sica teamed with Cesare Zavattini, who was to become his major collaborator for the next three decades. Together they began to demonstrate elements of the post-war realist aesthetic which, more than any other director except Visconti and Rossellini, De Sica helped shape and determine. Despite the overt melodrama of the misogynistic story (a young mother destroys her family by deserting them), the filmmaker refused to



narrow the perspective through an overwrought Hollywoodian mise-en-scene, preferring instead a refreshing simplicity of composition and a subdued editing style. Much of the film's original flavor can be traced to the clear, subjective mediation of a child, as promised in the title.

De Sica's intense feeling for children's sensibilities led him to imagine how children viewed the failing adult reconstruction of society after the war. *Sciuscia*, a realistic look at the street and prison life of poor, abandoned children, was the result. It is the story of how the lasting friendship of two homeless boys, who make their living shining shoes for the American GIs, is betrayed by their contact with adults. At the end of the film one boy inadvertently causes the other's death. Although Zavattini insists that his creative role was minimal in this instance, the presence of his poetic imagination is evident in the figure of a beautiful white horse. This horse serves to cement the boys' mutual bond and their hope for a future. Though a miserable failure in Italy, *Sciuscia* marked De Sica's entry into international prominence; the film won a special Oscar in 1947.

### *The Bicycle Thief*

For the balance of the neo-realist period De Sica fought an uphill battle to finance his films through friends and acting salaries. *Ladri di biciclette* (The Bicycle Thief) anchors searching social documentation in metaphor and a non-traditional but highly structured narrative. Workman Ricci's desperate search for his bicycle is an odyssey that enables us to witness a varied collection of characters and

situations among the poor and working class of Rome. Each episode propels the narrative toward a sublimely Chaplinesque but insufficiently socially critical ending in which Ricci is defeated in his search and therefore in his attempts to provide for his family. Reduced to thievery himself, he takes his son's hand and disappears into the crowd. Like De Sica's other neo-realist films, *Ladri di biciclette* gives the impression of technical nonchalance only to the indiscriminate eye, for De Sica planned his work with attention to minute details of characterization, mise-en-scene, and camera technique. During this period he preferred the non-professional actor for his or her ability to accept direction without the mediation of learned acting technique.

The story of Toto the Good in *Miracolo a Milano* remains one of the outstanding stylistic contradictions of the neo-realist period (there are many), yet one which sheds an enormous amount of light on the intentions and future of the De Sica-Zavattini team. The cinematography and setting, markedly neo-realist in this fable about the struggle to found a shanty town for the homeless, is undercut at every moment with unabashed clowning both in performance and in cinematic technique. Moreover, the film moves toward a problematic fairy tale ending in which the poor, no longer able to defend their happy, makeshift village from the voracious appetite of capitalist entrepreneurs, take to the skies on magic broomsticks. (The film has more special effects than anyone would ever associate with neo-realism; could De Sica have left his mark on Steven Spielberg?) Still, Zavattini, who had wanted to make the film for a number of years, and De Sica defend it as the natural burlesque transformation of themes evident in their earlier work together.

By this time De Sica's films were the subject of a good deal of controversy in Italy, and generally the lines were drawn between Catholic and Communist critics. The latter had an especially acute fear (one which surfaced again with Fellini's *La Strada*) that the hard-won traits of neo-realism had begun to backslide into those of the so-called "calligraphic" films of the Fascist era. These were based on an a-historical, formal concern for aesthetic, compositional qualities and the nuances of clever storytelling. However, it was their next film, *Umberto D*, that comes closest to realizing Zavattini's ideas on the absolute responsibility of the camera eye to observe life as it is lived without the traditional compromises of entertaining narratives. The sequence of the film in which the maid wakes up and makes the morning coffee has been praised many times for its day-in-the-life directness and simplicity. *Il Tetto*, about a curious attempt to erect a small house on municipal property, is generally recognized as the last neo-realist film of this original period.

Continually wooed by Hollywood, De Sica finally acquiesced to make *Stazione termini* in 1953, produced by David Selznick and filmed in Rome with Jennifer Jones and Montgomery Clift. Unfortunately, neo-realist representation formed only an insignificant background to this typically American star vehicle. A similar style is employed in *La ciociara*, which was created from a Moravia story about the relationship of a mother and daughter uprooted by the war.

De Sica attempted to reconstruct reality in the studio during the making of this work, making use of a somewhat unsuccessful stylized lighting technique. But as usual, he obtains excellent performances in an engaging dramatic vehicle (Sophia Loren won an Oscar).

The filmmakers returned to comedic vehicles in 1954 in *L'oro di Napoli*. Human comedy emerges from the rich diversity and liveliness of Neapolitan life. Though still within the confines of realism, the film foreshadows the director's entrance into the popular Italian market for sexual satire and farce. The exactitude with which he sculpts his characters and his reluctance to reduce the scenario to a mere bunch of gags demonstrates his intention to fuse comedy and drama, putting De Sica at the top of his class in this respect—among Risi, Comencini, and Monicelli. Often with Zavattini but also with Eduardo De Filippo, Tonino Guerra, and even Neil Simon (*After the Fox*), De Sica turned out about eight such films for the lucrative international market between 1961 and 1968. The best of these are: *Il giudizio universale*, which featured an all-star cast of international comedians; *Ieri, oggi, domani* and *Matrimonio all'Italiana*, both with Loren and Mastroianni; and *Sette volte donna*.

In 1968, De Sica divorced his first wife and married Maria Mercader. He became a French citizen in order to marry Mercader. The couple had two sons.

*Il giardino dei Finzi Contini*, based on a Bassani novel about the incarceration of Italian Jews during the war, shows a strong Viscontian influence in its lavish setting and thematics (the film deals with the dissolution of the bourgeois family). *Una breve vacanza*, an examination of a woman who has managed to break out of the confines of an oppressive marriage during a sanatorium stay, reinstitutes the tense relationship between comedy and tragedy of the earlier films. De Sica's last film, *Il viaggio*, is from a Pirandello novel. De Sica died in Paris on November 13, 1974.

## Books

- Agel, Henri, *Vittorio De Sica*, second edition, Paris, 1964.
- Anthologie du cinema*, vol. 10, Paris, 1979.
- Bazin, Andre, *Qu'est-ce que le cinema*, second edition, Paris, 1975.
- Bolzoni, Francesco, *Quando De Sica era Mister Brown*, Turin, 1984.
- Darreta, John, *Vittorio De Sica: A Guide to References and Resources*, Boston, 1983.
- Ferrara, Giuseppe, *Il nuovo cinema italiano*, Florence, 1957.
- Leprohon, Pierre, *Vittorio De Sica*, Paris, 1966.
- Mercader, Maria, *La mia vita con Vittorio De Sica*, Milan, 1978.

## Periodicals

- Avant-Scene du Cinema* (Paris), October 15, 1978.
- Bianco e Nero* (Rome), Fall 1975.
- Cineforum* (Bergamo), January 1975.
- Cinema Nuovo* (Bari), February 1985.
- Cinematographe* (Paris), January 1979.
- Films and Filming* November 1964; June 1983.
- Films in Review*, May 1951; April 1978.
- Hollywood Quarterly*, Fall 1949.
- New Yorker*, June 29, 1957; July 6, 1957.



*Sight and Sound* June 1951; Winter 1960/61; Summer 1963; Spring 1975. □

## Edwin Drake

**Though he drilled only three oil wells in his lifetime, Edwin Drake (1819-1880) is known as the “Father of the Petroleum Industry” because the technology he devised to drill the first commercial oil well in the United States revolutionized how crude oil was produced and launched the large-scale petroleum industry.**

**E**dwin Laurentine Drake, born on March 11, 1819, in Greenville County, New York, grew up on family farms in New York and Vermont. He left home at age 19, having received a common school education, and wandered the Midwest and East, working at various jobs. In 1850 he settled in New Haven, Connecticut, and became a railway conductor for the New York and New Haven Railroad. Ill health forced his retirement in 1857, but it also opened a new opportunity for him.

The opportunity occurred while Drake was staying in the same hotel as George H. Bissell and Jonathan G. Eveleth, founders of the newly formed Seneca Oil Company. The company was the successor to the Pennsylvania Rock Oil Company, the first oil company in the United States, which had been created to exploit ground-level seepage of oil near Titusville (Pennsylvania). Chemist Benjamin Silliman, Jr. had analyzed oil from the site and determined that, after refining, it could be used as an illuminant, as well as for other purposes. The Seneca Oil Company founders needed someone to inspect the oil springs on their property and make a report. Drake got the job because he had a free pass on the railway. Drake had never been an officer, let alone in the military. Nevertheless, James M. Townsend, one of the investors, used the salutatory title “Colonel” in his correspondence with Drake. The title stuck and Drake became commonly known as Colonel Drake.

### Smelly But Useful Seep Oil

Humans and the gods had used oil for thousands of years before Seneca Oil Company sought to make its production worthwhile. Fred Hapgood wrote in *National Geographic*: “In Greek mythology Medea set her rival on fire with naphtha. The Mesopotamians used asphalt as a building material 5,000 years ago. But as valuable a product as petroleum had already become, gods and mortals alike until the 19th century took oil as the earth gave it to them, from seeps and springs.” The petroleum that surfaced in salt borings also was another source of oil.

An early name for petroleum, “Seneca Oil,” alludes to the trade in oil by Seneca Indians of western New York in the 18th century. After the American Revolution, white settlers discovered Oil Creek in northwestern Pennsylvania and began skimming petroleum from little springs in the



banks and in the bed. They built rings of timbers and baffles from which they collected the trapped oil. The largest seep on Oil Creek produced only about 20 barrels a year, yet the effort was worth it. There was a great demand for oil, which was bottled for medicinal uses, such as for a purge and as a balm. In 1853 Joel D. Angier purchased the first petroleum lease in the United States. This lease gave him the right to collect oil from an Oil Creek seep on the Brewer, Watson and Co. lumber property near Titusville. The lumber company had used the seep oil for lighting and to lubricate machinery.

In *Early Days of Oil*, Paul H. Giddens told how Samuel M. Kier sold his bottled “Petroleum, Rock Oil” “as a cure for all ailments, human or animal.” Although he had sales agents throughout the country, Kier still had more oil from the seeps and salt wells on his father’s Tarentum, Pennsylvania, property than he could sell. Oil had been used for illumination, but in its pure form was smelly and smoky. Kier thought if he could overcome these drawbacks, he would have a widely used product. After consulting with a chemist in 1850, he built a crude one-barrel still in Pittsburgh and began distilling crude oil into “carbon oil,” or kerosene. Because it was a cheaper, safer, better illuminant than other fuels on the market, such as whale oil, carbon oil came into general use in western Pennsylvania and New York City. Its price more than doubled. Kier added a five-barrel still to his operation, which was the first commercial refinery in America. Now he needed a more plentiful, reliable source of oil. It was around then that “crude oil attracted attention and finally stimulated serious experimen-

tation as to its use and theories as to its extraction," noted Samuel T. Pees in *Oil History*.

### Drake's Folly

Not long after Kier began his refinery, Silliman reported that the seep oil sample taken from the former Brewer, Watson and Co. land on Oil Creek had properties that made it valuable. In 1858, Drake, now a stockholder in Seneca Oil Company, was sent back to Titusville as the salaried general agent in charge of operations (for a short time he was company president). His mission was to produce a profitable amount of oil. However, the main seep netted only three or four gallons of oil daily, and other oil springs he had opened up added only a few gallons to the output. So Drake attempted mining for oil. He hired workmen to dig a shaft, but water inundated it and he gave up that idea. Finally he decided to try an idea he had discussed with George H. Bissell, a lawyer who helped to organize and invest in early oil companies, including Seneca Oil. Salt drillers often had to contend with oil that polluted their wells. Bissell reasoned that oil could be extracted using salt well drilling methods.

Drake chose a drilling site on an artificial island between the creek and the lumber company's water race. He then enlisted the help of the lumber company's boss, Jonathon Watson, to build a house for the 6 hp "Long John" stationary, wood-fired engine and boiler that would power the drilling tools and to erect a derrick for hoisting the drilling tools. He hired William "Uncle Billy" A. Smith, a blacksmith and experienced salt well driller, to make the tools and do the drilling. Prepared to drill down 1000 feet, Drake had to reassess things when the hole, which was only 16 feet deep, kept caving in. "It was at this point that Drake conceived the idea of a drive pipe, also called a conductor," wrote Pees. "The drive pipe consisted of joints ten feet long and was made of cast iron. They battered or drove it down to bedrock at thirty-two feet depth (9.75 m). The tools could be safely lowered through the pipe which protected the upper hole."

The conductor proved to be just what Uncle Billy needed to do his job. Now that the steam-powered drilling tools were protected by iron pipe, he was able to drill an average of three feet a day through the bedrock that was mostly shale. Problems persisted, though. "[T]he shale caved in occasionally. The engine caught on fire but was saved and put back in service. [P]eople came to snicker. Drake [ran] out of company money, used his own money and quickly ran out of that," Pees explained. But friends came through with loans, and he kept drilling despite hearing the taunt "Drake's Folly." On August 27, 1859, the drill slipped into a crevice six inches below the 69-foot depth of the drilled hole. Uncle Billy pulled up the tools and headed home. The next day when he went back to the well, he discovered oil floating on the water just a few feet from the derrick floor. Fashioning a scoop from a section of tin eaves trough, he dipped out some of the prized liquid.

Interestingly, the first oil well fire also occurred at the Drake Well, less than two months later. On October 6, Smith was using an open lamp to see how much oil was

stored in the vats when it ignited collected gases. The blaze destroyed the derrick and the driller's house, which were later rebuilt.

### Petroleum Industry Boom

Drake had the good fortune of locating his well in a shallow oil belt, and one with Penn Grade crude that could be refined with the limited technology available at the time. A pitcher pump, like those found at kitchen sinks, brought up the oil in the Drake Well and splashed it into a washtub, before it was transferred to whiskey barrels. The initial production of 10 to 35 barrels a day nearly doubled the world's output of oil. Many new cooperage businesses sprang up around Titusville when the supply of barrels ran out. Within days of Drake's success, Kier was buying the oil and was paying 60 cents per gallon delivered. Another Pittsburgh refiner, W. Mackeown, also made a deal to buy Drake Well oil. By the end of 1859, the two refiners had purchased over \$8800 of oil from the well. Seneca Oil Company had paid \$5000 for the 100 acres of land where it was sited.

"Lighting, in itself, created the great demand for oil that led to the frantic drilling of the pioneer oil wells along Oil Creek and elsewhere. Other uses soon increased the overall demand," pointed out Pees. Lee R. Forker Jr. summed up the significance of "Drake's successful drilling venture" in the *Oil Daily*. The "plentiful and low cost fuel alternative [petroleum products, instead of whale and lard oil] gave a second-stage boost to the country's industrial revolution. This influx to the economy helped propel the United States into a world leadership role. Our ability to produce gasoline in great quantity at a low price played a major role in the launching of the automotive industry. In essence, oil's discovery at the Drake well, with gasoline as the byproduct, provided unprecedented mobility to Americans."

But Drake wasn't to profit from the great oil exploration rush as others used his drilling technique. He hadn't patented his invention, so anyone could use it. Drake himself drilled only two more wells, both on the same island in Oil Creek in 1860. One, at 480 feet, produced 24 barrels of oil daily, the other only 12 barrels daily. Unlike a lot of oil entrepreneurs of the time, he didn't buy leases himself. He did, however, invest in oil speculation. But it was the successful application of his drilling method that turned the speculation market sour. "News of the new technique spread rapidly, creating in its wake, to name only one effect, the abundant supply of cheap, high-quality lubricants that greased the way for the industrial age," explained Hapgood. According to the Drake Well Museum brochure, "By 1862 wells had come in that produced thousands of barrels a day and the price for oil at the well head dropped so low that Drake and his partners went out of business. The original well was shut down, but the boom continued."

Ill and impoverished, Drake returned to Pennsylvania in 1870; the people of Titusville helped him out with a stipend. In 1876 the Pennsylvania legislature voted Drake a pension. That same year the derrick and engine house were dismantled and reassembled at the United States Centennial Exhibition in Philadelphia. Drake died on November 8,

1880 in Bethlehem, Pennsylvania. In 1902 his body was re-interred in a tomb in Titusville's Woodlawn Cemetery. Inscriptions on the tomb's panels extol his contributions to the oil industry. *The Driller*, a bronze sculpture by Charles Henry Niehaus, sits in a small pavilion.

### Books

Giddens, Paul H., *Early Days of Oil*, Princeton University Press, 1948.

### Periodicals

*Earth Science*, Spring 1988.

*National Geographic*, August 1989.

*Oil Daily*, October 9, 1984.

### Online

"Colonel Edwin Laurentine Drake," <http://www.energy.ca.gov/education/scientists/drake> (December 8, 2000).

"Drake Well Museum Brochure," <http://www.drillshop.com/hallfame> (December 8, 2000).

"Edwin L. Drake," <http://www.virtualvermont.com/history/edrake> (December 8, 2000).

Pees, Samuel T., "Drake Chapters," *Oil History*, <http://www.oilhistory.com/drakechapters> (December 8, 2000). □

## Peter Drucker

**Peter Drucker (born 1909) is known as the father of modern management. A prolific writer, business consultant and lecturer, he introduced many management concepts that have been embraced by corporations around the world.**

It's been said that Peter Drucker invented the discipline of management. Before he wrote his first book on the topic, he knew of only two companies in the world with management development programs. Ten years after the book's publication, 3,000 companies were teaching the subject. His management concepts, which were new when presented in the 1940s and 1950s, endure into the 21st century.

Peter Ferdinand Drucker was born November 19, 1909 in Vienna, Austria. His parents, Adolph Bertram Drucker and Caroline Bond Drucker, were well educated. Adolph was an economist and lawyer. Caroline had studied medicine and briefly worked in the field. His parents raised Drucker in an intellectual environment. They regularly hosted dinners in which guests discussed economics, literature, music, mathematics and medicine. This instilled in the young boy a lifelong curiosity.

After secondary school, Drucker moved to Hamburg, Germany and worked as a clerk-trainee for an export firm while enrolled in Hamburg University Law School. The school did not offer night classes, so Drucker learned the topic by reading books in three languages in the evenings. He earned his law degree without ever attending a class.



Drucker then traveled to Frankfurt where he worked as a financial writer. In 1931, he earned his doctorate in public law and international relations from the University of Frankfurt. Drucker soon left Germany to escape the Nazis.

He moved to London where he worked as a securities analyst for an insurance company, then an economist for a small bank. Drucker's focus shifted from economics to people while he was in London. He was attending a seminar by economist John Maynard Keynes when he "suddenly realized that Keynes and all the brilliant economics students in the room were interested in the behavior of commodities while I was interested in the behavior of people," he explained.

Drucker married Doris Schmitz in 1937 and emigrated to the United States shortly thereafter. The couple had three daughters and a son. Drucker became a United States citizen in 1943. He was attracted to the United States because of its focus on the future. He told a writer for *Forbes* magazine that in Europe, "all they talked about was life before 1941. I was surrounded by extinct volcanoes."

Drucker worked as a correspondent for British financial publications before becoming an economics professor at Sarah Lawrence College in Bronxville, New York. Later, he taught at Bennington College, in Vermont. Drucker later said he "teaches to find out what he thinks."

Drucker has said that writing is the foundation of everything he does. In 1937, he published his first book, which he'd written in Europe. *The End of Economic Man: A Study of the New Totalitarianism*, examined the spiritual and so-

cial origins of fascism. In 1940, before the United States had entered World War II, he wrote *The Future of Industrial Man*, in which he presented his social vision for the postwar world.

### Studied General Motors

In 1943, General Motors asked Drucker to study its management practices. His colleagues advised him not to accept the offer because studying corporate management would destroy his academic reputation. Drucker did accept and spent 18 months researching and writing the 1945 book, *Concept of the Corporation*.

Drucker interviewed executives and workers, visited plants, and attended board meetings. While the book focused on General Motors, Drucker went on to discuss the industrial corporation as a social institution and economic policy in the postwar era. He introduced previously unknown concepts such as cooperation between labor and management, decentralization of management, and viewing workers as resources rather than costs.

Drucker claimed that an industrial society allows people to achieve their dreams of personal achievement and equality of opportunity. He referred to decentralization as “a system of local self government,” in which central management tells division managers what to do, but not how to do it. The young executives are given the freedom to make decisions—and mistakes—and learn from the experience.

Top leaders at General Motors disliked the book and discouraged their executives from reading it. Many other American executives criticized *Concept* as a challenge to management authority. One exception was Henry Ford II. When he took over Ford Motor Company from his aging father after World War II, he used Drucker’s ideas to restructure the company.

The Japanese also embraced Drucker’s advice. Japan’s emergence as a major economic power following World War II has, in part, resulted from the implementation of Drucker’s ideas.

### Wrote 30 Books

Drucker went on to become a business consultant and a prolific writer. For more than 50 years, he has counseled countless companies and written more than 30 books, which have been translated into 25 languages. His books generally break down into three areas: social and political studies, such as *The Future of Industrial Man* and *The Age of Discontinuity: Guidelines to Our Changing Society*; management books like *The Practice of Management* and *Management: Tasks, Responsibilities, Practices*; and management advice like *Management for Results* and *The Effective Executive*.

Drucker also wrote countless magazine articles for various business publications. From 1975 to 1995, he penned a monthly column in *The Wall Street Journal*. Many of his essays have been published as collections. He has also written two novels and a personal memoir, *Adventures of a Bystander*. His books reflect his diverse interests and draw

from many of the topics discussed in his childhood home, including history, philosophy and medicine.

The concepts Drucker introduced in the 1940s and 1950s have endured. In 1954, Drucker wrote his first book that taught people how to manage. Titled *The Practice of Management*, it introduced the concept of “management by objectives.” He elaborated on the concept in subsequent books. Management by objectives requires managers to establish goals for their subordinates and devise the means for measuring results. Workers are then left alone to perform as they will and measure their performance. Drucker wrote, “It is not possible to be effective unless one first decides what one wants to accomplish.” He went on to explain that every worker must be given the tools “to appraise himself, rather than be appraised and controlled from the outside.”

Management by objectives has become an accepted business concept and is probably Drucker’s most important contribution. In *The World According to Peter Drucker*, Richard H. Buskirk of Southern Methodist University is quoted as saying: “His emphasis upon the results of managerial actions rather than the supervision of activities was a major contribution for it shifted the entire focus of management thought to productivity-output-and away from work efforts-input.”

### Timeless Advice

Business “gurus” have come and gone during the last 50 years, but Drucker’s message continues to inspire managers. In March 1997, the cover of *Forbes* magazine featured Drucker’s picture and the statement “Still the Youngest Mind.” Drucker was 88 at the time. An interview in the issue outlined Drucker’s enduring message. He said, “I demand in every organization in which I have anything to say that managers start with these questions: What contribution can this institution hold you accountable for? What results should you be responsible for? And then ask, ‘What authority do you then need?’ This is the way to build a performing institution.” After delivering this advice for 50 years, one might expect that most businesses would be implementing Drucker’s model for a well-managed company. But in the interview, Drucker lamented, “I only wish there were more.”

During the 1990s, Drucker wrote about social, political and economic changes of the “postcapitalist” era, which he says are as profound as those of the industrial revolution. In *Managing for the Future: The 1990s and Beyond* (1992), Drucker discussed the emergence of the “knowledge worker”—whose resources include specialized learning or competencies rather than land, labor or other forms of capital.

In his books, lectures and interviews, the emergence of knowledge workers is just one of the demographic changes Drucker warns businesses to prepare for. Others include a decreasing birth rate in developed countries, a shift in population from rural to urban centers, shifts in distribution of disposable income and global competitiveness. Drucker believes these changes will have tremendous implications for business.

Although Drucker foresaw the effects of technology on business and the rise of Japan as an economic power, he does not equate his prognosticating with predicting the future. "I never predict," he told a writer at *Forbes*. "I just look out the window and see what's visible—but not yet seen." In an interview in *Training and Development*, it was said that Drucker "sees what others overlook."

Drucker's career as a teacher, writer and lecturer continued past the age of 90. He was a professor of management at New York University from 1950 to 1972. He has taught at the Claremont Graduate School, Claremont, California, since 1971. Claremont named its graduate center after Drucker in 1987.

The curiosity instilled in Drucker as a child led him to pursue diverse subjects. He has taught humanities, social sciences, religion, philosophy, literature, history, government, management, economics, and statistics. He has an

affinity for Japanese culture. He studies, collects and teaches Japanese art. In an article in *Training and Development*, he claimed that he has "not found a subject yet that is not sparkling with interest." Drucker has earned more than 20 honorary degrees from universities in Europe, Japan and the United States. He has received countless awards, recognizing his contributions to the study of management.

### Books

Beatty, Jack, *The World According to Peter Drucker*, The Free Press, 1998.

*Contemporary Authors*, Gale Group, 2000.

*Gale Encyclopedia of U.S. Economic History*, Gale Group, 1999.

*Newsmakers 1992*, Gale Research, 1992.

### Periodicals

*Forbes*, March 1997, p. 122.

*Training and Development*, September 1998, p. 22. □

# E

## Fred Ebb

**Fred Ebb (born 1932) is the lyricist half of the award-winning songwriting team of Kander and Ebb. Partners since the early 1960s, composer John Kander and lyricist Fred Ebb have collaborated on some of the greatest musical creations ever to grace the American stage including the classic crowd pleasers *Chicago* and *Cabaret*.**

Ebb's long and prolific career has encompassed writing lyrics for the stage, the silver screen, and television, in addition to directing and producing. He has amassed Tony awards on Broadway, Academy Awards for movie work, and Emmys for his work for television. His songs have helped launch careers and have been sung by legends like Judy Garland, Liza Minnelli, Barbra Streisand, Frank Sinatra, Robert Goulet, Gwen Verdon, and Chita Rivera.

The classic Kander and Ebb sound was described by another collaborator and admirer, author David Thompson (*Steel Pier*). The music is "a little sassy and with mustard," wrote Thompson. The duo's signature songs include "Cabaret," "New York, New York," "Maybe This Time," "All That Jazz," and "How Lucky Can You Get." The music is lively and the lyrics are sophisticated, witty, and sometimes barbed. The theatrical works for which Kander and Ebb wrote scores tackle dark and controversial subjects not usually associated with musical theater. Their first hit, *Cabaret*, dealt with anti-Semitism in Nazi-era Berlin; its female lead underwent an abortion. *Chicago* cynically suggested that a cold-blooded killer could get away with any-

thing provided a convincing lawyer was on hand. *Kiss of the Spider Woman* set prison torture and homosexuality to music. "Kander and Ebb combine razzmatazz with a political conscience, and make brazen spirits seem a kind of moral courage," wrote David Richards in *The Washington Post*. Despite the fame that has come with their nearly 50 successful years together, Kander and Ebb remain "the two nicest guys in show business," according to Thompson.

### No Early Hint of Musical Genius

There is little in Ebb's background that would have portended a distinguished lifelong career in music. He was born into a poor family in a New York City tenement on April 8, 1932. He told David Thompson in a 1997 interview for television's "Great Performances" that growing up, "There was no music in my house. Nobody played the radio. Nobody sang. I developed a love of music independently." He fell in love with theater after he saw Al Jolson perform on Broadway in a musical entitled "Hold Onto Your Hats." "I loved the fact that it was live—that it was real, even though it was all illusion," Ebb told Thompson.

Ebb told Barbara Rowes of *People* magazine that as a young boy he was an optimist and a daydreamer. He liked to pretend he was a rich boy living in a grand home on Long Island or that he was movie star Cary Grant, signing autographs for fans. "The point is," he told Rowes, "I didn't want to be me." His mother, Anna Evelyn (Gritz), a woman with a more practical bent, tried to bring the boy down to earth. She "used to tell me I looked at the world through rose-colored eyes," Ebb recalled. When Ebb was fourteen years old, his father, Harry, died. After his death, it was discovered that the senior Ebb's best friend had been embezzling from the family's dry goods business for years. Ebb and his mother were left practically penniless.

Ebb rallied to become valedictorian at DeWitt Clinton High School. When he informed his mother that he wanted to become a writer, she replied "that and a dime would get me on the subway." She convinced him to enroll instead at New York University (NYU) to study accounting. "Accountants never starve," she counseled him. At age 18 he proposed marriage and was accepted, but the young lady broke off the relationship to marry a dentist. Ebb remained a lifelong bachelor.

Ebb attended both NYU and Columbia University, where he changed his major to English literature and earned a Master's degree in 1957. He supported himself by working as a trucker's helper for a hosiery company. He worked a midnight shift authorizing credit in a department store. He also did a stint as a baby shoe bronzer. Upon graduating, Ebb headed West with a portfolio of short stories he hoped to sell to the movies, but he was unable to get steady work. Within a year he returned to New York and took a job selling giftware for his uncle. "From the back I looked exactly like Willy Loman," Ebb recalled in his interview with Rowes. But he yearned to be a songwriter.

"One night," he told Thompson, "I was pouring my heart out to a friend, a lady trumpeter named Patsy Vamos. I was telling her about how much I loved the musical theater and wished to be a part of it. But I didn't have a notion how to do that." Vamos introduced him to a professional songwriter named Phil Springer, who agreed to take Ebb on as a student. Their first song, *Heartbroken*, was recorded by Judy Garland. "It was a rhythm song that suited Judy because it had some real belt notes in it. 'I'm very fond of belt singing as most people know,'" Ebb told Thompson. Garland's recording bombed, but another early Ebb and Springer song, "Santa Baby," became a hit for Eartha Kitt. Over the next several years Ebb wrote for nightclub acts, revues, and for the satirical television show "That Was the Week That Was."

### A Life-Changing Partnership

In the early 1960s music publisher Tommy Valando introduced Ebb to pianist and choreographer John Kander. Both men were smarting from recent failures (Ebb had written lyrics for the Off-Broadway musical *Morning Sun*, a flop, and Kander had composed music for the Broadway play, *A Family Affair*, also a flop). There was an instant rapport between the two. "We came to each other fresh from our failures," Ebb told a Kennedy Center interviewer. "It was a case of instant communication and instant songs." They composed their first song together, "Perfect Strangers," on the spot. Kander told *People* magazine: "A musician is supposed to improvise, but it's almost unheard-of for a lyricist. Yet Fred can improvise in rhyme and meter the way I can at the keyboard." Kander and Ebb's first hit was the song "My Coloring Book," introduced by Kaye Ballard, made popular by Sandy Stewart on "The Perry Como Show" and recorded by Barbra Streisand. Streisand introduced Kander and Ebb's "I Don't Care Much" in 1963.

Kander and Ebb next collaborated with Richard Morris on *Golden Gate*, a play that did not open in San Francisco as planned but did so impress influential director-producer

Harold Prince that he asked the pair to write the songs for the Broadway musical, *Flora the Red Menace*. *Flora*, a satire on bohemians, was set in 1930s Greenwich Village and marked the Broadway debut of seventeen-year-old Liza Minnelli, who would become Ebb's friend and frequent muse. The play opened to fairly tepid reviews and closed after 87 performances, but it netted Minnelli a Tony award for outstanding actress. The day after *Flora* opened in May 1965, Prince met with Kander and Ebb to make plans for their next project, *Cabaret*, a musical adaptation of John Van Druten's play *I Am a Camera*, which in turn was based on Christopher Isherwood's *Berlin Stories*.

### *Cabaret* Brought Fame

*Cabaret*, the work that made Kander and Ebb famous, opened in November 1966 and was a major critical and box office success. *Cabaret* is the story of an American performer living in Berlin between the two world wars and reflects the anti-Semitism and growing political tumult of those times. *Cabaret* had a Broadway run of 1,166 performances and captured the Tony Award as the season's best musical. The original cast recording won a Grammy Award and the 1972 film adaptation won eight Academy Awards. Years later, in a panel discussion involving several of the people who worked with him on *Cabaret*, Ebb said about the play and the nature of the collaborative process: "*Cabaret* is one of the happiest memories I have because [the final product] was mostly what I had in mind, and I think mostly is the best you can do."

Kander and Ebb worked steadily together in the years that followed, producing the musicals *The Happy Time* (Broadway opening, January 1968), *Zorba* (November 1968), *70 Girls 70* (April 1971), *Chicago* (June 1975), *The Act* (October 1977), *Woman of the Year* (March 1981; it earned four Tony Awards, including one for its star, Lauren Bacall, and another for Kander and Ebb), *The Rink* (February 1984), *Kiss of the Spider Woman* (London, October 1992; another Tony Award-winner for its star Chita Rivera and for the songwriting duo), and *Steel Pier* (April 1997). Interspersed with their work on Broadway musicals were several projects for television, including the classics "Goldie and Liza Together" (with Goldie Hawn), "Liza Minnelli Live From Radio City Music Hall," "Ol' Blue Eyes is Back" (with Frank Sinatra), and "Baryshnikov on Broadway." Kander and Ebb also produced songs for movies, including *Funny Lady* and the title track for *New York, New York*.

There were some disappointments for the songwriting team. *Zorba* was a box-office failure, and *70 Girls 70* closed after only 36 performances. *Steel Pier*, a story of love and corruption that took place behind-the-scenes at a 1930s Atlantic City dance marathon, was panned by the critics and closed after two months. Two Kander and Ebb musicals had the distinction of losing the most Tony Awards (11), *Chicago* in 1976 and *Steel Pier* in 1997. *Chicago* unfortunately had to compete with *A Chorus Line*, which dominated the musical categories with nine awards. Ironically, *Steel Pier* saw several of its nominations lose to the Broadway revival of *Chicago*, which, on its second go-around, took home six

awards. Critic David Lefkowitz wrote of the 1995 Broadway revival of *Chicago*: "*Chicago's* value as entertainment now comes chiefly from the way fine dancers and larger-than-life theater personalities can mix outrageous camp and deadpan seriousness, not to mention the way Kander and Ebb's score holds together as a unified—and awesomely zippy—song cycle." Lefkowitz also raved about the 1996 revival of *Cabaret*, calling it "the most wrenching, thrilling musical of the season, a major event, likely to be studied by musical theater directors for years to come."

Kander and Ebb continued working throughout the 1990s. In 1998 they were among six people chosen as Kennedy Center honorees for "the unique and invaluable contribution they have made to the cultural life of our nation," in the words of Kennedy Center Chairman James A. Johnson. On June 5, 2000, Kander and Ebb were presented with the eleventh annual Oscar Hammerstein Award at York Theatre Company's annual fundraiser. Among the York's productions is *Musicals in Mufti*, a mounting of small revivals of "underrated" musicals. Kander and Ebb's *70 Girls 70* was a 1999 revival at the York.

For years Ebb has lived and worked in an apartment overlooking New York's Central Park. He decorates his apartment with memorabilia and German Expressionist paintings and drawings, and he collects record albums as a hobby.

## Books

*Broadway Song and Story: Playwrights/Lyricists/Composers Discuss Their Hits*, edited by Otis L. Guernsey Jr., Dodd, Mead, 1985.

*Contemporary Authors*, Gale, 1978.

*Contemporary Dramatists*, Third ed., St. Martin's Press, 1982.

*Encyclopedia of the Musical Theatre*, Dodd, Mead, 1976.

*Who's Who in the Theatre*, Volume 1, Gale, 1981.

## Periodicals

*Architectural Digest*, November 1995, p. 204-5.

*Backstage*, May 26, 2000, p. 2; November 17, 2000, p.34.

*People*, September 17, 1979, pp. 71-72+.

## Online

"Cabaret." *Total Theater Online: Criticopia Broadway*. <http://www.totaltheater.com/criticopiabroadway> (January 1, 2001).

"CurtainUp's Sneak Peek at the New Kander and Ebb Musical *Steel Pier*." *CurtainUp Main Page*, <http://www.curtainup.com/steelpie.html> (December 17, 2000).

"Fred Ebb," *E Index Biographies of Composers and Lyricists*, <http://nfo.net/CAL/te1.html> (December 17, 2000).

"John Kander-Fred Ebb." *The Kennedy Center Honors*, <http://kennedy-center.org/honors/history/honoree/kander-ebb.html> (December 12, 2000).

"The Music of Kander and Ebb: Razzle Dazzle." *The Class of 1960 by David Thompson*, "Musical Theater A Look at the Work." [http://www.wnet.org/gperf/feature3/html/look\\_look.html](http://www.wnet.org/gperf/feature3/html/look_look.html) (December 12, 2000). □



## Oliver Ellsworth

**Oliver Ellsworth (1745-1807) was the second chief justice of the U.S. Supreme Court. He also served as a senator in the newly formed Congress. Ellsworth is primarily remembered for his contribution to the formation of the Constitution and for drafting the Judiciary Act of 1789, which provided for a strong federal judiciary system and created the U.S. Supreme Court.**

**B**orn in Windsor, Connecticut, on April 29, 1745, Ellsworth was the second son of Captain David Ellsworth, a prosperous farmer, and Jemima (Levitt) Ellsworth. Little is known of Ellsworth's childhood except that he grew up on a farm in Windsor and that his father wanted him to enter the ministry. When Ellsworth reached his teens, he was sent to a boarding school run by Minister Joseph Bellamy. In 1762, at the age of 17, Ellsworth entered Yale University. However, due to some disciplinary problems, he left Yale at the end of his sophomore year at the request of his parents and enrolled in the College of New Jersey, later known as Princeton University. During his time at Princeton, Ellsworth was exposed to the many controversial issues facing the American colonies, including the Stamp Act, which was the British parliament's first attempt at direct taxation of colonies in order to support British



troops stationed in the colonies. It was a time of stirring patriotism and loud debates, and young Ellsworth was caught up in the excitement.

Ellsworth returned to Windsor after graduating in 1766 to pursue his theological studies with another leading minister, John Smalley. A year later he abandoned the ministry to pursue his growing interest in the law. He passed the bar in 1771 at the age of 27. The following year he married sixteen-year-old Abigail Wolcott, the daughter of a wealthy and influential Connecticut family from East Windsor.

Ellsworth's law career got off to a slow start. According to history records, he collected a total of three pounds in legal fees during the first three years of his law practice. Because his father's financial support was apparently linked to his career in the ministry, the young lawyer struggled to provide for his family and repay debts incurred during his college days. To supplement his income, he worked as a farmer and woodcutter. When his presence was required at court in Hartford, Ellsworth, too poor to own a horse, walked the twenty-mile round trip. Considered an honest and reputable man, and no doubt helped by connections developed through his marriage, Ellsworth was elected as a representative of the Connecticut General Assembly in 1773. This began Ellsworth's life-long political career and helped his law practice, which began to flourish.

### The Continental Congress

Relinquishing his seat in the Connecticut General Assembly in 1775, Ellsworth moved to Hartford where his reputation and business grew rapidly. By the late 1770s, he had over one thousand cases on his list, of which he provided successful representation in the large majority. During the days of the American Revolution, Ellsworth held numerous, progressively more important, offices. In 1775 he was appointed to the Connecticut Committee of the Pay Table, a commission of five that was responsible for overseeing state expenditures related to the war with England. Two years later he was appointed state's attorney for Hartford County. In 1779 he began to serve as a member of the Council of Safety, an important body that acted with the governor in the practical control of all military actions. In 1777 he was selected to represent Connecticut as a member of the Continental Congress, a position he held for six years.

A now accomplished and well-respected lawyer, Ellsworth was soon appointed to numerous committees created by the Continental Congress, including the Board of Treasury, which addressed issues regarding international treaties, and the Committee of Appeals, a body that dealt with marine affairs by hearing appeals from the Admiralty courts of various states. The Committee of Appeals was an important step toward the formation of the Supreme Court because it was the first time a federal court was convened. However, its effectiveness and judicial authority were soon tested by the noted case of Gideon Olmstead and the British vessel *Active*. The case came before the Committee of Appeals only two weeks after Ellsworth's appointment to the committee. The matter involved the acquisition of the British ship. A group of men from Connecticut overpowered the British captain and his crew as they sailed toward New

York. As the Connecticut men approached the coastline, the captain of another vessel commandeered the ship and, upon entering the harbor in Philadelphia, claimed the ship and its cargo. The men from Connecticut took the captain, who was from Pennsylvania, to court, insisting that the ship belonged to them. Subsequently a Pennsylvania court ruled in favor of the captain, allotting him three-quarters of the value and giving the Connecticut men one-quarter. Refusing to accept the verdict as fair and just, the Connecticut men turned to the Court of Appeals, which overturned the Pennsylvania court's decision and remitted the prize to the Connecticut men. However, Pennsylvania refused to acknowledge the legitimacy of the Court of Appeal's decision and would not carry out its instructions. The experience helped shape Ellsworth's understanding of the need for a recognized federal judicial authority.

Few details exist regarding Ellsworth's service as a congressional representative. He appeared to have been a hardworking, diligent, and respected member, serving on several important committees. Retiring from the Congress in 1783, Ellsworth returned to Hartford and his private legal practice. He continued to serve on the Governor's Council, a position he held from 1780 to 1785. Declining an appointment as Commissioner of the Treasury offered by the Continental Congress in 1784, the following year he accepted his first judicial appointment as a member of the newly formed Connecticut Supreme Court of Errors. Two years later he was appointed to Connecticut's Superior Court.

### Rewrote the Constitution

In 1787 Ellsworth was chosen along with Roger Sherman and William S. Johnson to represent Connecticut as delegates to the Constitutional Convention. The formation of the Constitution was a particularly difficult and controversial process. First drafted in 1777, the Articles of Confederation were not adopted until 1781. In its original form, it created a strong federal system of government, a proposal that met with much resistance from the individual states who wished to maintain independence. Subsequently the draft that was finally adopted had been so revised that it called for almost no national government, including no president, cabinet, or federal judiciary system. Congress had no authority by which to collect funds other than voluntary gifts from states or individuals. The fact that Congress was allowed to declare war but had no power to supply forces was proof of the ineffectiveness of the ratified draft. The Constitutional Congress convened in hopes of revising the Constitution.

Ellsworth came to the Constitutional Convention as a moderate Federalist. Although he firmly believed in the rights of states to govern themselves, he had come to the conclusion that an effective federal government was a necessity. Sensitive to the desires of the states, he argued for a national government that represented state and federal interests. It is unclear to what extent Ellsworth influenced the outcome of the Convention. However, the Connecticut delegation was responsible for offering the governmental model known as the "Connecticut compromise" that created a bicameral legislature, in which the small states would

have equal representation in the Senate and the House of Representatives would be filled according to state population. Whether he was the originator of this compromise is not known, but he was clearly a strong proponent of the newly written constitution. Ellsworth was also the one to suggest replacing the phrase “national government” with “government of the United States.” He was a member of the five-person Committee on Detail that wrote the first draft of the constitution, and he served on the committee that developed the federal judiciary system.

### Ellsworth as Senator

Upon ratification of the new constitution, Ellsworth was elected as one of the two senators to represent Connecticut in Congress. Once again a member of numerous committees, Ellsworth used his organizational abilities to structure the U.S. Army and the U.S. Post Office and organize the census. He also reported the first set of Senate rules and drafted the measure that admitted Rhode Island and North Carolina into the United States. Ellsworth’s most notable contribution as a senator, however, was the drafting of the Judiciary Act of 1789, also known as the “Ellsworth Act.” The Judiciary Act created a strong federal Supreme Court, which held authority over all state courts. Commissioned with the task of interpreting the U.S. Constitution, the Judiciary Act allowed the Supreme Court to overturn any U.S. law that did not hold up under scrutiny regarding its constitutionality. The law also provided for the number of judges (one chief justice and five associates), 13 district courts, and 3 circuit courts and established the attorney general’s office.

### Appointed Chief Justice

Reelected to the Senate, Ellsworth’s term carried through 1777; however, he relinquished his seat to accept an appointment as the chief justice of the U.S. Supreme Court. Ellsworth was George Washington’s third choice for the position. When John Jay, the first U.S. chief justice, resigned, Washington selected John Rutledge. However, the Senate, whose approval was needed to confirm the appointment, refused to accept Rutledge’s nomination. Subsequently, Washington offered the position to William Cushing, a senior associate judge, who declined the appointment. On March 4, 1796, Washington selected Ellsworth, who took over the responsibilities of the second chief justice of the U.S. Supreme Court four days later. During his short service of three and a half years as chief justice, Ellsworth did not tender a large number of opinions. Those he did write are marked by common sense and do not demonstrate the work of a noteworthy judge. A great lawyer and advocate, Ellsworth proved to be an adequate, but not exceptional, jurist. He did convince his associates to adopt a system of offering *per curiam* decisions, which provided for a majority and minority opinion to be written rather than each justice writing a personal opinion. The system was continued by Ellsworth’s predecessor, the highly regarded John Marshall.

### Final Mission to France

Retiring from the bench in 1799, Ellsworth was appointed by President John Adams as the Envoy Extraordinary and Minister Plenipotentiary to France on February 26, 1799. Tensions were running high with France, with whom the United States was engaged in an undeclared war in the Caribbean. Adams hoped to prevent the outbreak of declared war by sending Ellsworth to negotiate with Napoleon. The decision to send Ellsworth was controversial, as many felt very hostile toward France at the time. Ellsworth accepted the commission without enthusiasm, deeming it necessary to prevent greater evils. Dreading the expedition, he postponed his trip for over six months, not departing for France until November 3, 1799. Harsh weather drove the ship off course, and Ellsworth did not reach Paris until March 2, 1800—an entire four months later. Ellsworth, whose health suffered from the hardships of the journey, negotiated with Napoleon for eight months, concluding in October 1800. The treaty did not meet the expectations or instructions of the U.S. envoy, but Ellsworth, himself disappointed, considered it adequate to prevent war. Still feeling poorly, he spent the winter in England in a futile attempt to recover his health. He finally returned to the United States in March 1801 and retired to his home in Windsor. Although he served on the Governor’s Council after his return, he never regained his health and his service was ineffective. He died at his home in Windsor on November 26, 1807.

### Books

- American National Biography*, Volume 7, edited by John A. Garraty and Mark C. Carnes. Oxford University Press, 1999.
- Biographical Dictionary of the Federal Judiciary*, edited by Harold Chase, Samuel Krislov, Keith O. Boyum, and Jerry N. Clark. Gale Research, 1976.
- Encyclopedia of American Biography*. Second edition, Edited by John A. Garraty and Jerome L. Sternstein, HarperCollins, 1996.
- Oxford Companion to American History*. edited by Thomas H. Johnson, Oxford University Press, 1966.
- The Supreme Court A to Z: A Ready Reference Encyclopedia*. Revised edition. Edited by Elder Witt, CQ’s Encyclopedia of American Government, vol. 3. Congressional Quarterly, Inc., 1994.

### Periodicals

- Scholastic Update*, 117 (November 30, 1984): 10-12.

### Online

- “Oliver Ellsworth,” *Biography Resource Center Online*. Gale Group, 1999. <http://www.galenet.com> (December 12, 2000).
- “Oliver Ellsworth,” *Dictionary of American Biography* Base Set. American Council of Learned Societies, 1928-1936. <http://www.galenet.com> (December 12, 2000). □

## Richard Ely

**Richard Ely (1854-1943) is considered the dean of American economics for his development of political**

**economic theory. As an instructor at several major universities, he became a popular writer and lecturer. His students included Woodrow Wilson, sociologist Albion W. Small, economists John R. Commons and Edward A. Ross, and historian Frederick Jackson Turner.**

**R**ichard Theodore Ely was born on April 13, 1854, in Ripley, New York, the eldest of three children of Ezra Sterling and Harriet Gardner (Mason) Ely. Soon after Ely's birth, his father moved the family to a 90-acre farm near Fredonia, New York, where Ely would spend the next 16 years. The elder Ely was a self-taught engineer and lacked the skills and knowledge to farm successfully, relying too heavily on popular, sometimes erroneous, information he obtained from farm magazines. Although harsh weather and fluctuating market prices provided further hardship to the family, Ely credited his early farm life with instilling in him many valuable qualities. From a young age he had numerous responsibilities in maintaining the farm, including carrying wood, churning butter, picking up rocks out of the fields, and milking the cows.

### Family and Education

Ely's father, a devout Presbyterian who strictly observed the rules of a Christian life, was a powerful influence on his eldest son. Because of his beliefs, he would not grow hops, even though the crop suited his land well, because they were used for brewing beer. He disdained tobacco and other vices, and permitted no work or play on Sunday. Academically minded, Ezra Ely would have preferred an academic career, but his parents' poverty forced him to forego his studies. Still, Ely grew up in a home that honored the importance of learning, where his father read poetry, studied Latin, and maintained one of the largest libraries in the area. His father's deeply serious, sometimes gloomy, nature was countered by his mother's gentle kindness. Although Ely inherited his father's work ethic, he was emotionally closer to his mother, to whom he turned for support and advice. Often in fragile health, Harriet Ely nonetheless possessed abundant energy and vitality. As an amateur artist, she won numerous local prizes and added to the family income by teaching art at the Fredonia Normal School. Ely, who stood only five foot five, made up for his slight stature by inheriting his mother's unending energy. From his father he received his Christian values and his resolve to make those values a reality in the world.

Ely's early education at Fredonia's grammar school and later two years at Fredonia Academy were fairly uneventful. Although he was a serious, hard-working student and graduated with a recommendation from the principal to attend college, Ely was never considered an exceptional student. During the year following his graduation, he taught at a country school and continued to help his father with the farm. In the fall of 1872, Ely enrolled in Dartmouth College, which at the time consisted of a scattering of buildings and a very small library that was only open two hours every week. Dissatisfied with his experience at Dartmouth, the following

year he moved to New York City to live with an aunt and uncle and began attending Columbia College, where he found a more challenging academic environment. He came under the influence of Charles Murray Nairne, who sparked Ely's interest in philosophy. During his senior year, Ely applied for and won the college's Fellowship in Letters, which provided him with a \$500 award to study abroad for three years. After graduating with a B.A. in philosophy from Columbia College, Ely traveled to Germany to pursue his philosophical studies. However, soon after arriving, his attention was forever turned to the field of economics.

### Turned to Economics

After spending the summer of 1877 polishing his skills in the German language, 23-year-old Ely went to Halle to begin his studies. Although he had no more than a vague idea of his course of action, Ely encountered several American students, including Simon N. Patten, who helped him settle in and became a life-long friend. Discovering that the professor he had hoped to study under had retired, Ely began his studies with Rudolph Haym. However, Haym's skeptical approach to philosophy disillusioned Ely. Patten introduced his friend to Johannes Conrad, an expert in the German Historical School of economics. Conrad offered Ely his first taste of historical economics, a school of thought that rejected the traditional approach that economics was based on fixed, unchangeable concepts. Instead, historical economics understood economic behavior as an outcome of fluctuating cultural patterns and government behavior. He left Halle in April 1878 to study with leading historical economist Karl Knies at the University of Heidelberg.

Ely enjoyed his time in Heidelberg immensely. Far from his father's strict lifestyle, Ely discovered that life could be enjoyed through the simple pleasures of nature, such as a walk through the countryside. He also thrived in the multicultural environment of the university and the open learning atmosphere in which professors allowed students to seek new knowledge through research. This was in stark contrast to the dry American professors who required students to merely recite established truths. Ely thrived under his mentor Knies. Although not the most popular professor, the aging Knies offered Ely a theory of economics that allowed him to harmonize his academic mind with his desire for social reform. The goal of economics was, according to Knies, to make life better. Ely earned his Ph.D. in 1879, graduating *summa cum laude*.

### A Position at Johns Hopkins University

After spending one more year abroad, studying at the universities in Geneva and Berlin, Ely returned to New York and began to look for an academic position. Unfortunately, few American colleges offered programs in political economy at the time, and Ely spent a year writing an occasional article for popular magazines and provided for himself by tutoring students in German. Finally, in 1881 he was offered a six-month appointment as an instructor at Johns Hopkins University in Baltimore, Maryland. He was given a salary of \$600 and later was appointed for the remainder of the year for an additional \$500. Although his first year of teaching

produced no great results, his contract was extended for the following academic year of 1882-1883. While vacationing in 1883, he met Anna Morris Anderson. Two years later the couple married. They had four children: Richard Sterling, Josephine Anderson (who died in infancy), John Thomas Anderson, and Anna Mason.

Initially, Ely only drew a handful of students into his classes. When he presented a public lecture series, it was poorly attended. Several of his graduate students complained that Ely was repetitious, ill tempered, and obsessed with the German Historical School of economics. Ely was, in fact, temperamental in nature. According to Benjamin G. Rader in *The Academic Mind and Reform: The Influence of Richard T. Ely in American Life*, "The failure of the public to respond instantly to his mission and of his fellow professors to perceive the righteousness of his cause often led to personal bitterness and an attitude of moral superiority. Frequently he confused criticism of his methods with a personal challenge to his sincerity; such criticism almost always meant a ruptured friendship." Nonetheless, Ely's growing reputation as a controversial reformer began to spark interest among the student body. By the mid-1880s, his classes were filled with 30 to 40 students. To his students, he remained loyal, often encouraging their work and writing numerous glowing letters of recommendation. He was also known to acknowledge his students' contributions to his own writings.

In 1885 Ely was instrumental in the formation of the American Economic Association (AEA), writing its statement of purpose and serving as secretary (1885-1892) and later as president (1900-1901). The AEA was formed as a voice for the new progressive economic theorists who found strong opposition to their views from the classic economists. Committed to the political nature of economics that he believed should be for the good of the people, meant that Ely engaged in social reform. This aggressive pursuit of social change stood in contrast to the traditional distance that the academic community maintained from the outside world. During his time at Johns Hopkins, Ely gained national prominence as a proponent of public ownership of utilities, the labor movement, and state taxation policies. He advocated social reforms such as factory regulation, child labor laws, restrictions on the number of hours in a workday, the formation of labor unions, slum cleanup, and immigration restriction.

Unlike other proponents of the "new" economics, Ely applied his Christian convictions to his economic theory. Having given up his father's Presbyterianism to become an Episcopalian, Ely remained a devout layperson throughout his life. Promoting the social responsibility of the Christian community, Ely helped form the Episcopal Church's Christian Social Union and served as its first secretary. At first Ely hoped for a gradual evolution of the economy toward a cooperative commonwealth, but later he stepped back from this lofty goal. Instead, he began to narrow his focus of reform to specific issues, such as governmental ownership of national monopolies, including public utilities, telephones, railroads, and mineral deposits. He objected to

being labeled a socialist and by 1890 began referring to himself as a progressive conservative.

### Moved to the University of Wisconsin

In 1892 Ely left Johns Hopkins to become the director of the newly formed School of Economics, Political Science, and History at the University of Wisconsin. After two years, Ely was brought before the board of regents on charges by Johns Hopkins colleague Simon Newcombe, who declared Ely unfit to teach because he supported socialist ideas. When the board cleared him and asserted his right to teach free from censorship, it was a celebrated precedent for academic freedom. Spending over three decades at Wisconsin, Ely built the school's economics department into a nationally acclaimed program. He also helped establish the American Association for Labor Legislation in 1906, an organization that later greatly influenced the adoption of the Social Security Act of 1937.

In 1917, Ely helped organize the American Association for Agricultural Legislation. Three years later he founded the Institute for Research in Land Economics and Public Utilities, which incorporated as an independent research institute in 1922. His policies regarding land reform brought bitter opposition, and in 1925 Ely left Wisconsin, accepting an invitation to move his institute to Northwestern University in Evanston, Illinois. There he met Margaret Hale Hahn. In 1931, the 77-year-old Ely (widowed since 1923) married Hahn, his 33-year-old former student. They had two children, William Brewster and Mary Charlotte. While at Northwestern, the institute expanded and began publishing the *Journal of Land and Public Utility Economics*. However, after eight years, Ely grew tired of interference from the university's board of trustees. In 1933 he moved the institute to New York City, where it operated as an independent organization. Eventually he retired to the town of his ancestors, Old Lyme, Connecticut. He died there on October 4, 1943. His ashes were interned at Forest Hill Cemetery, Madison, Wisconsin.

### Writings

Over the course of his academic career, Ely wrote 31 books and published over 100 articles. His *Outlines of Economics* (with Ralph H. Hess, 1893) was used widely in the United States and Japan as a principle classroom text. His other most widely read publications include *French and German Socialism in Modern Times* (1883), *Taxation in American States and Cities* (with J.H. Finley, 1889), *Introduction to Political Economy* (1889), *Monopolies and Trusts* (1900), *Studies in the Evaluation of Industrial Society* (1903), *Foundations of National Prosperity* (1917), *Elements of Land Economics* (1926), *Hard Times-The Way In and the Way Out* (1931), and *Land Economics* (1940). He published his autobiography, titled *Ground under Our Feet*, in 1938. Books that reflected his Christian foundation and his socialist concepts are related in *Recent American Socialism* (1885), *Social Aspects of Christianity* (1889), and *Socialism and Social Reform* (1894). Through his writing, his teaching, and his personal example, Ely influenced a whole generation of economists and political leaders. In so doing, he

initiated reform, generated discussion and controversy, and did his best to fulfill his goal of changing the world for the better.

### Books

- Bowden, Henry Warner. *Dictionary of American Religious Biography*. Second edition, revised and enlarged. Greenwood Press, 1993.
- Dictionary of American Immigration History*, edited by Francesco Cardasco, The Scarecrow Press, 1990.
- Encyclopedia of American Biography*. Second edition. Edited by John A. Garraty and Jerome L. Sternstein, HarperCollins, 1996.
- Garraty, John A., and Mark C. Carnes, *American National Biography, Volume 7*. Oxford University Press, 1999.
- Johnson, Thomas H. *The Oxford Companion to American History*. Oxford University Press, 1966.
- Ohles, John F. *Biographical Dictionary of American Educators, Volume 1*. Greenwood Press, 1978.
- Radar, Benjamin G. *The Academic Mind and Reform: The Influence of Richard T. Ely in American Life*. University of Kentucky Press, 1966.
- Ross, Dorothy. *The Origins of American Social Science*. Cambridge University Press, 1991.

### Online

- "Richard Theodore Ely," *Dictionary of American Biography, Supplement 3: 1941-1945*, American Council of Learned Societies, 1973. The Gale Group. <http://www.galenet.com> (December 15, 2000). □

## Charles Michel de l' Epee

**Charles-Michel de l'Epee (1712-1789) founded the first public school for the hearing-impaired in France. He devoted his life to developing the world's first sign alphabet for the deaf. Epee is also credited with creating a systematic method of teaching the hearing-impaired. His manual alphabet, which he called French Sign Language, was adapted into American Sign Language a few decades after his death.**

Epee was born in the city of Versailles, France, on November 25, 1712. His father was an architect in the employ of France's king, Louis XIV, who built a palatial new capital in the city. As a teen, Epee studied theology, but during this era French Catholics were battling a reform movement called Jansenism, and all priests were expected to sign a condemnation of it before their ordination. Jansenism, which gained ground in the 1640s, was based on teachings of St. Augustine and discouraged taking the sacrament of Holy Communion so frequently. Epee refused to sign the *formulaire* denouncing it, and so the Archbishop of Paris in turn refused to ordain him. Epee decided to study law instead, and was admitted to the Bar. Another bishop later agreed to ordain him, but when this patron died, Epee returned to Paris and lived a life of ease there.



Epee befriended a cleric, Father Vanin, and through him met two twin girls, both of whom had been deaf since birth. Vanin had been tutoring them, and when the fellow cleric died unexpectedly, Epee agreed to take over the job. At the time, there existed few educational opportunities for the hearing impaired. Primitive superstitions were still firmly entrenched in parts of Western Europe. The Greek philosopher Aristotle had written in 355 BCE that the deaf were senseless and incapable of reason, a prejudice that endured for more than a millennium. Only in 1500 did a physician, Girolama Cardano, conduct a study that proved the deaf were capable of reason. Still, throughout much of Europe the deaf were subject to various edicts that forbid them to marry, own property, or in some cases receive the most nominal of educations. Only deaf children from wealthy families were able to read and write. Some even learned to speak through dedicated teachers whose seemingly miraculous methods became closely guarded secrets. There was a small body of work on the subject: John Bulwer published *Philocophus; or, The Deafe and Dumbe Man's Friend* in London in 1648, which advocated education for the deaf by the method of reading lips. His work was reminiscent of studies from Juan Pablo Bonet in Spain, which espoused a method of teaching the deaf to speak by phonetic sounds.

### Groundbreaking Methods

In Paris, the community of hearing-impaired used a common manual language, and Epee began to teach the twins using a form of hand signals that substituted the sounds of alphabet. He quickly achieved measurable suc-

cess. Epee's true breakthrough in deaf education was his assertion that deaf people must learn visually what others acquire by hearing, and his method of teaching laid the foundations for all systematic instruction of the deaf. "Every deaf-mute sent to us already has a language," he wrote. "He is thoroughly in the habit of using it, and understands others who do. With it he expresses his needs, desires, doubts, pains, and so on, and makes no mistakes when others express themselves likewise. We want to instruct him and therefore to teach him French. What is the shortest and easiest method? Isn't it to express ourselves in his language? By adopting his language and making it conform to clear rules, will we not be able to conduct his instruction as we wish?"

Epee soon earned the enmity of another teacher of the deaf in Paris, a Portuguese named Jacob Pereire, who had developed a method for teaching his own deaf son. In 1746 a wealthy French family, the d'Etavignys, hired Pereire to instruct their son. He taught the boy to speak through a method of fingerspelling, called dactylology. The remarkable achievement was even presented to the king of France. Pereire was well compensated by this family and another who hired him, and dismissed Epee's methods when they became known. He took his method with him to the grave when he died in 1780.

### Founded School with Inheritance

Epee took a more democratic view of education for the hearing-impaired. He did not hope to enrich himself by reserving his methods for the deaf and mute of Europe's upper classes, but instead impoverished himself to teach children from all walks of life. He began to take on more pupils, publicizing his success through demonstrations in his home. Before an assembled audience, Epee would dictate a sentence to his students in their sign language, which they then transcribed into written French. In 1755 he founded his school for the deaf in Paris, and funded it with his modest inheritance. Students also learned to speak, drawing upon methods that had already been proven a success.

One particular challenge that Epee and his pupils faced was the complexity of the French language itself. Word endings denoted meaning in French, as did the word order of a sentence. Epee created a series of hand signs for word endings in French, and a vocabulary that drew upon the Latin roots of words. The verb "satisfaire," for example, was signed through two Latin terms, "satis" and "facere," which meant "to do enough." This system evolved into what became known as French Sign Language. Soon, word of Epee's methods had spread throughout France. The Bishop of Bordeaux, hearing about the remarkable students in Paris, sent a Bordeaux boy there who would later succeed Epee after his death. This teacher, the Abbe Roch-Ambroise Sicard, founded the second school for the deaf in Bordeaux around 1786. Other students also came to Paris and took Epee's methods with them to found schools across Europe.

### "Reduced to the Condition of Animals"

Epee was one of the first to assert that the deaf were fully functioning citizens of society, and should be accorded every right granted to the non-hearing impaired. For this he is recognized as single-handedly bringing the deaf community into their own social class. As he wrote in his 1784 book, *La veritable maniere d'instruire les sourds et muets, confirmee par une longue experience* (The True Method of Educating the Deaf, Confirmed by Much Experience), "Religion and humanity inspire me with such a great interest in a truly destitute class of persons who, though similar to ourselves, are reduced, as it were, to the condition of animals so long as no attempts are made to rescue them from the darkness surrounding them, that I consider it an absolute obligation to make every effort to bring about their release from these shadows."

Despite his achievements, some critics asserted that Epee's pupils learned by rote, and did not possess a true understanding of language or an ability to formulate sentences on their own. He strove to answer to "those theologians, rationalistic philosophers, and academicians of various nationalities," Epee wrote, "who held that metaphysical ideas were inexpressible by deaf signs and hence necessarily beyond the understanding of the deaf." With characteristic tenacity, Epee also proved his detractors wrong. One deaf student, Clement de la Pujade, was renowned for his delivery of a five-page discourse in Latin and participation in a discussion on the history of philosophical thought.

### Lasting Achievement

Epee achieved great fame during his lifetime. The Holy Roman Emperor Joseph II visited his school, and Louis XVI supported the institute financially. However, Epee died a virtual pauper in Paris on December 23, 1789. Despite his renown, he had bankrupted himself for his cause. Students reported that he went without heat in his own quarters so that they might have a fire in theirs. Shortly before his death, a delegation of students and representatives of France's newly created National Assembly visited him. The members of the legislative body, created in the wake of the French Revolution that same year, pledged to carry on his work, and Epee's school was formally taken over by the French government in 1791 as the Institution Nationale des Sourds-Muets a Paris. The Assembly also decreed that Epee's name should be inscribed on its list of the "benefactors of mankind." He was buried at church of Saint-Roch in Paris, and a bronze monument was erected over his grave in 1838.

Epee wrote *Institution des sourds-muets par la voie des signes methodiques* ("Educating Deaf-Mutes Using Methodical Signs"), published in 1776, and revised much of it for the aforementioned 1784 work, *La veritable maniere d'instruire les sourds et muets*. He also began a *Dictionnaire general des signes* which was finished by the Abbe Sicard. Sicard carried on Epee's work, and became the link between French Sign Language and American Sign Language. In London in 1815, Sicard met an American minister, Thomas Gallaudet, who was interested in teaching the deaf, and the two returned to Paris. One of Gallaudet's teachers

there, Laurent Clerc, traveled back to Connecticut with him and, in 1817, the pair co-founded the first school for the deaf in the United States. Gallaudet and Clerc combined French Sign Language with other methods to create American Sign Language, which is used by over 500,000 hearing-impaired people in North America.

### Books

*The Catholic Encyclopedia*, Volume XIV, Robert Appleton Company, 1912.

*The Deaf Experience*, edited by Harlan Lane, Harvard University Press, 1984. □

## Auguste Escoffier

**One of the world's first true celebrity chefs, Auguste Escoffier (1846-1935) is credited with helping to raise the status of cooking from a laborer's task to an artist's endeavor. Renowned as "the king of chefs and the chef of kings," Escoffier left a legacy of culinary writings and recipes that are indispensable to modern cooks, and remains perhaps the foremost name in French cuisine.**

Georges Auguste Escoffier, later known simply as Auguste Escoffier, was born on October 28, 1846, in the small village of Villeneuve-Loubet, near Nice, in the Provence region of France. Among the key figures in the boy's life was his father, who worked primarily as a blacksmith yet also cultivated tobacco plants. His grandmother, an enthusiastic cook, was perhaps more responsible than anyone for instilling in the boy an appreciation for the delights of cooking.

Young Escoffier attended the local school until age 12, upon which time his father thought it necessary that the boy learn a trade. In school he had shown a flair for drawing, yet he was encouraged to pursue this art only as a hobby, and to find his career in a more practical vocation. Thus his father took him to Nice, where he would work as an apprentice in his uncle's restaurant, the reputable Le Restaurant Francais. The year was 1859 and Escoffier was to turn 13 years old, when he would begin what was for many a modest career, yet what became for him an illustrious one.

### Apprenticed to a Restaurateur

At Le Restaurant Francais, Escoffier was not coddled as the nephew of the boss. Rather, he experienced a classically disciplined and strenuous apprenticeship. For this strictness of training he would later, in his memoirs, express gratitude. He started as a kitchen boy and commis-saucier (sauce boy), and was initiated into the basic tasks of restaurant upkeep, such as the selection of ingredients and the servicing of customers. During this time Escoffier also attended night school, and had to juggle his studies with the demands of a budding career.



When Escoffier was 19 and had taken on yet more responsibilities in his uncle's restaurant, a patron recognized his skills and offered him work in Paris. This was the owner of Le Petit Moulin Rouge, one of the finest restaurants in Paris, where Escoffier was to become a sous-chef. After three years in this position, he rose to the level of head chef, donning the esteemed chef's hat. A small man, Escoffier was said to have taken to wearing platform shoes in order to better work the restaurant's stoves.

Escoffier remained in Paris, leaving his position briefly for military training, until 1870, when he was called for army duty at the onset of the Franco-Prussian War. Appointed Chef de Cuisine, he applied his talents to the daily fare of the French army. Faced with the challenge of creating meals that would preserve well, Escoffier was one of the first chefs to seriously study the techniques for canning meats, vegetables, and sauces. After the war he returned to Le Petit Moulin Rouge, where he remained head chef until 1878.

Among Escoffier's subsequent endeavors in Paris was his management of the Maison Chevet, a restaurant at the Palais Royal that specialized in banquet dinners, often prepared for officials and dignitaries. Later he managed the kitchens at La Maison Maire, owned by the famed restaurateur Monsieur Paillard. But perhaps Escoffier's most notable achievement during this period was his marriage in 1880 to Delphine Daffis, the daughter of a publisher. Their marriage would last 55 years, and they would bring into the world two sons and a daughter.

In their early years together, the couple spent their summers in Lucerne, Switzerland, where Escoffier managed the kitchens at the Hotel National, and their winters in Monte Carlo, where he served as Director of Cuisine of the Grand Hotel. It was in Lucerne that Escoffier met the Swiss hotelier Cesar Ritz, who would figure prominently in his life, and with whom he would enter into a celebrated partnership. Ritz, who came from a small village in the Swiss Valais, had started his career as a hotel groom and had risen through the ranks, from headwaiter to hotel manager. It was Ritz who hired Escoffier as chef at the Hotel National, and the two would continue to combine their talents throughout their remarkable careers.

### Teamed with Ritz

Among Escoffier and Ritz's first successes was their joint venture at the Savoy Hotel in London, the first modern luxury hotel, where from 1890 to 1898 Escoffier served as Head of Restaurant Services and Ritz took the position of General Manager. When Ritz opened his own hotel in Paris, the ultra-modern Hotel Ritz, Escoffier brought his culinary expertise. But he soon returned to London to make a legend of the posh Carlton Hotel, where patrons included such luminaries as the Prince of Wales. It was here, where Escoffier presided over the kitchens for more than twenty years, that the French chef gained worldwide attention for his superior haute cuisine. It was also at the Carlton that, on the day the hotel opened in 1899, Escoffier unveiled a new dessert, Peach Melba, created and named in honor of the Australian opera singer—and former Savoy Hotel resident—Nellie Melba.

At the Savoy and the Carlton, Escoffier created some of his most famous recipes; Peach Melba was among these, as was Chaud-Froid Jeannette and Cuisses de Nympe Aurore, a frogs' legs dish named after the Prince of Wales. Also during this time the French chef introduced and perfected some of his many innovations to cookery, restaurant service, and kitchen organization. Departing from the style of previous chefs, Escoffier strove to simplify the art of cooking, doing away with excessive garnishes, heavy sauces, and elaborate presentations. As the most prominent French chef of his day, he succeeded the culinary artist Marie Antoine Careme (1784-1833), and he sought to modernize his predecessor's complex approach to cooking, in effect altering the standards of his national cuisine.

Escoffier's preference for simplicity also extended to restaurant menus; here, he reduced the number of courses served, and took credit for introducing, at the Carlton, the first a la carte menu. At large banquet-style meals, Escoffier abandoned a practice called service a la francaise (service in the French style), in which collections of dishes of all kinds were served at table simultaneously; instead, the French chef chose to standardize service a la russe (service in the Russian style), in which each course is presented in the order that it appears on the menu.

In the kitchen, Escoffier's innovations again tended toward simplification. As head chef at the Carlton he faced the challenge of having to prepare superb dishes quickly for the hotel's high-powered clientele, and he found many

inefficiencies in the organization of the standard restaurant kitchen. In Escoffier's day, the restaurant kitchen was composed of separate units in which groups of chefs worked on their own, often duplicating each other's tasks and creating more work than was necessary. Escoffier insisted on unifying and streamlining the restaurant kitchen, so that his staff of about sixty chefs could work together seamlessly and quickly, serving as many as 500 dishes at a typical Sunday dinner at the Carlton.

The working conditions of kitchen laborers also begged improvement, and Escoffier recognized and answered these needs. In the French chef's day, the atmosphere of the kitchen—loud, chaotic, overheated with wood- or coke-fired stoves, and rife with powerful cooking odors—created working conditions that were sometimes intolerable, and chefs often took to drinking while they toiled. Escoffier aimed to curb these excesses, which often compromised the health of kitchen workers; he even hired a doctor to help concoct a comforting and healthful beverage, made with barley, that cooks could drink in place of alcohol. Through these and other improvements, Escoffier helped to raise the esteem of a profession that had once been regarded as lowly and coarse.

### Wrote *Le Guide* and Other Works

The turn of the century brought some changes for Escoffier. His partnership with Ritz came to an end in 1901, when Ritz fell ill with a nervous breakdown. Yet some happier changes came in the following years, when Escoffier began publishing his culinary works, opening a new avenue in his career. His first book, *Le Guide culinaire* (1903), was an exhaustive resource, including about 5,000 recipes and garnish preparations. *Le Guide*, known to English speakers as *The Escoffier Cook Book*, remains an invaluable reference for contemporary cooks. Books published subsequently by Escoffier include *Le Carnet d'epicure* (1911; "Notebook of a Gourmet"), *Le Livre de menus* (1912; "The Book of Menus"), and *Ma cuisine* (1934; "My Cuisine").

An energetic and inexhaustible man, Escoffier took the time to begin new endeavors in addition to his work at the Carlton and his manuscript preparations. In 1904 a German shipping company, Hamburg-Amerika Lines, invited the French chef to plan a restaurant service to be offered to passengers on its luxury liners. Called the Ritz-Carlton Restaurants, the service was unveiled in 1912 amid great fanfare. Yet Escoffier did not concern himself only with the lifestyles of the wealthy and privileged clientele of posh restaurants and cruise ships. A philanthropist at heart, he organized programs to feed the hungry and to give financial assistance to retired chefs.

Passing into old age yet retaining his youthful enthusiasm, Escoffier continued to direct the kitchens of the Carlton Hotel until 1919, the year he turned 73. His plan was to retire with his wife to Monte Carlo, yet not long after arriving in this city he was presented with yet another irresistible business opportunity. An old friend, the widow of his former Petit Moulin Rouge colleague Jean Giroix, invited Escoffier to collaborate with her in the administration of the Hotel de



L'Ermitage. The French chef accepted, eluding retirement, and even went on to help develop another hotel, the Riviera, in Upper Monte Carlo.

The aged chef, whose name had become synonymous with superlative cuisine, in his late years enjoyed worldwide renown. In 1920 the French government recognized Escoffier for his work in elevating the status of French cuisine and culture by making him a Chevalier of the Legion d'Honneur, and again by making him an Officer of the Legion d'Honneur in 1928.

By 1921 Escoffier had finally retired from restaurant life, though he continued to write about his work and experiences. The French chef died in Monte Carlo at age 89, on February 12, 1935, only days after the death of his wife.

Escoffier left behind a legacy still enjoyed by professional chefs, home cooks, and gastronomes in France and abroad. He invented some 10,000 recipes, and culinary institutions around the world continue to teach his methods. In 1966 the French transformed the house in which he was born into a culinary museum; as a result his birthplace of Villeneuve-Loubet, once not even a dot on the map of the

Provence region, is now well marked on the road from Nice to Cannes. These and other tributes serve to honor the master of French cooking, to whom the Kaiser Wilhelm II was said to have once remarked: "I am the emperor of Germany, but you are the emperor of chefs."

### Online

"Auguste Escoffier," <http://members.aol.com/acalendar/October/Escoffier.html> (January 3, 2001).

"Auguste Escoffier, 1846-1935," <http://www.1dei.org/aug.html> (January 3, 2001).

"Escoffier, Auguste," [http://www.comptons.com/encyclopedia/ARTICLES/0050/00616704\\_A.html](http://www.comptons.com/encyclopedia/ARTICLES/0050/00616704_A.html) (January 3, 2001).

"Escoffier, (Georges) Auguste," <http://www.britannica.com/seo/g/georges-auguste-escoffier> (January 3, 2001).

"Escoffier, (Georges) Auguste," <http://encarta.msn.com/find/Concise.asp?ti=05272000> (January 3, 2001).

"Georges-Auguste Escoffier," <http://www.frenchfood.about.com/food/frenchfood/library/weekly/aa022100.htm> (January 3, 2001).

"History: Georges Auguste Escoffier," <http://www.geocities.com/NapaValley/6454/escoffier.html> (January 3, 2001). □

# F

## Carl Faberge

**Best known for the “Faberge Easter Eggs” he designed for the Russian royal family, Carl Faberge (1846-1920) was the jeweler and designer of choice for royalty, dignitaries, and the wealthy around the world, from the late 1800s until the Russian Revolution of 1917.**

Peter Carl Faberge (Karl Gustavovich in Russian) was born on May 30, 1846, in St. Petersburg, Russia. He was the older of two sons of Gustav and Charlotte (Jungstedt) Faberge. His mother was the daughter of a Danish painter, and his father was a jeweler and goldsmith. As noted on the *Imperial Court, Inc.* website, tradition at that time dictated that young Carl, as the older son, would follow in his father’s footsteps and become a jeweler and goldsmith.

Young Faberge began his education at St. Anne’s Gymnasium, the German school in St. Petersburg. When he was 18, his father, wanting him to have excellent training for his career, sent him out to explore the world. As noted on the *Imperial Court, Inc.* website, young Faberge was exposed to wonderful opportunities throughout Europe. He was apprenticed to several respected goldsmiths and jewelers in Frankfurt, Paris and London, as well as Italy.

### Took Over Family Business

In 1870, Faberge returned to St. Petersburg and took over his father’s business. Two years later, he married Augusta Julia Jacobs, the daughter of the manager of the Imperial furniture workshops. They would have four sons:

Eugene, Agathon, Alexander, and Nicholas. All of them would eventually join the family business. In a short amount of time, Faberge was a busy family man with his own business.

In 1872, Faberge became involved with the Imperial Cabinet. According to the *Imperial Court, Inc.* website, “The Imperial Cabinet, also known as the Hermitage, was a Winter Palace for the Russian tsars and housed all of the treasures. Faberge volunteered to help restore and appraise these priceless antiques.”

According to *The Faberge Experience* website, for ten years, as the head of his own business, Faberge produced items similar to what other jewelry makers and goldsmiths were creating. He also continued to volunteer at the Imperial Cabinet, where he helped to catalog, appraise, and repair the treasures of the Russian royal family. In 1882, Agathon, Faberge’s younger brother, joined him in the family business. As noted on the *Imperial Court, Inc.* website, the brothers “were well known for elaborate gold and silver items, but wanted to introduce something new. The two set out to create their own designs. Soon the name Faberge became a fashion statement.”

Later that year, Faberge was invited to participate in the Moscow Pan-Russian Exhibition. He was awarded a gold medal. More importantly however, his works caught the eye of Alexander III, the Tsar of Russia, who was a great patron of the arts. Faberge’s career was about to accelerate.

### Caught Attention of the Tsar

As noted on the *Imperial Court, Inc.* website, Faberge’s creations were singled out from hundreds of other jewelers by the Tsar. Alexander “declared him the re-inventor of Russian jewelry art,” and became his biggest supporter and best customer. Faberge was happy and honored, as Alexan-



der was not an easy man to please. In his book *The Lost Fortune of the Tsars*, William Clarke, wrote "Both Nicholas (the heir to the Russian throne) and his father, Alexander III, encouraged Faberge to turn his genius to the production of further exquisite items for their family and friends—brooches, cigarette cases, necklaces, miniatures of all kinds and, of course, to the creation of the famous Faberge Easter eggs." Faberge also worked with gold, silver, gems, and other materials, and created flower arrangements, figure groups, and animals.

Faberge achieved two significant accomplishments in 1885. As noted by Alexander von Solodkoff, author of *The Art of Carl Faberge*, the first "Faberge Easter Egg" was presented to the Tsarina Marie. Later that year, von Solodkoff added, Faberge "was rewarded with the appointment of jeweler to the Imperial Court, and given the right to have the Imperial Eagle incorporated in the firm's trademark."

### The Faberge Eggs

As noted in *Carl Faberge-Goldsmith to the Imperial Court of Russia*, by A. Kenneth Snowman, "In Russia, Easter, the most important holy festival of the entire calendar, was marked by the traditional exchange of eggs, the symbols of Resurrection, and three kisses." The Faberge eggs became a very important and much-anticipated part of that holiday.

"The Imperial Easter Eggs—exquisite artifacts of jewels and precious metals—are Faberge's finest and most famous achievement," wrote von Solodkoff. He continued,

"Between 1885 and 1916, some 54 of these amazing objects were commissioned by the Tsars Alexander III and Nicholas II as Easter presents for the Tsarinas Marie and Alexandra respectively. Each, together with the cunningly wrapped 'surprise' which was frequently concealed inside, is a masterpiece of elegance, inventiveness, ingenuity, and craftsmanship." (Almost 100 years later, these eggs are valued at millions of dollars.)

As noted on *The Faberge Experience* website, "there is a poignant representation of what is now Russian history in the design of a number of these eggs." Eggs were designed to celebrate the coronation of Tsar Nicholas II, the completion of the Trans Siberian Railway, the birth of the Tsarevitch (male heir to the throne), the 15th Anniversary of the Imperial Couple's coronation, and the "Romanov Tercentenary Egg" which commemorated 300 years of Romanov rule. During times of war, eggs were created to honor the Red Cross and the military. In all, 56 eggs were ordered. However, the present whereabouts of all the eggs is unknown. Maryann Gelula and Kelly Williams reflected in an article for *School Arts*, that the Faberge eggs "are a beautiful symbol of Russian history and culture."

### The House of Faberge

Faberge's fame continued to grow. In 1897, he was appointed the court goldsmith of Sweden and Norway. A few years later, in 1900, three of the imperial Easter eggs were exhibited abroad for the first time, at the World's Fair in Paris. His skill also continued to grow. Von Solodkoff wrote "Faberge described himself as an 'artist-jeweler. He re-introduced color to jewelry—rubies, sapphires, emeralds, semiprecious stones, enamel—and revived the use of rose-cut diamonds. New motifs, such as ice and frost crystals, were devised." Von Solodkoff continued, "The Faberge magic was not restricted to expensive and purely decorative items. Increasingly, from the late 1880s onward, the Faberge workshops produced beautiful things that also had a practical use. A wide variety of otherwise ordinary objects such as penholders, photograph frames, table lighters, ashtrays, cigarette cases, and clocks. Not all were lavish, ornate, or elaborate: but all exhibit that elegance of design, that mastery of materials and techniques, and that perfection of workmanship that make up the Faberge style."

Faberge was also a keen businessman. As noted on the *Imperial Court, Inc.* website, "By the turn of the century his shop became known as the House of Faberge and was an imposing five story granite building. Inside he employed over 500 craftsmen and designers." The Faberges' luxurious apartment was located on the top floor of the building. Branches were later opened in Moscow, Odessa and Kiev.

The official *Faberge* website recounted, "The absolutely new conception of labor organization enabled him to use the existing creative potential in an optimal way. Faberge entrusted independent, highly capable work masters with the execution of manual labor. Most of them were foreigners whom he invited to St. Petersburg where he usually provided them with rent-free workspace." Snowman added, "According to Faberge's eldest son Eugene, men worked overtime almost all the year round,

from 7:00 am to 11:00 pm. The overtime pay was good. On Sundays, work went on from 8:00 am to 1:00 pm, which was counted as a full working day."

This supports what the *Imperial Court, Inc.* website, and other sources assert: Faberge actually made nothing with his own hands. The website continued, "He, in fact, was not a master of his craft, but he was a visionary, a man who conceived ideas for over one hundred thousand objects. Drawings, raw sketches—and his masters and craftsmen would complete his design."

However, the world around Faberge was beginning to change. There was turmoil in Russia, and World War I began. The *Imperial Court, Inc.* website recalled, "Faberge remained loyal to the Imperial Family and was completely devoted to his country." The website added, "He could have made a lot of money during the war, but instead of that he turned his Moscow shop into a factory to produce ammunition. However, a revolution was near, and the glorious days of the Russian royal family were about to end."

### The Russian Revolution

In the fall of 1917, the Russian Revolution broke out. The tsar, Faberge's best customer, was forced to abdicate his throne. The Russian royal family was later executed in the summer of 1918. As noted on the *Imperial Court, Inc.* website, "Faberge himself closed his shop during these dramatic days, as soon as rumors of the murder of the Imperial Family came to his ears." The website added that the world Faberge knew was gone. He was forced to leave Russia, and most of his artists and workmasters also fled.

Faberge first went to Germany, before going to Switzerland in June 1920. The *Imperial Court, Inc.* website recounted that the stress of worrying about his family, plus "the shock of the tragedy that had befallen Russia, the Imperial Family and the House of Faberge" caused him to become seriously ill. On September 24, 1920, at the age of 74, Faberge died in Lausanne, Switzerland. It was the end of a golden era.

### After Faberge's Death

After World War I, the newly-formed Soviet Union desperately needed cash to rebuild a poor and devastated country. The *Imperial Court, Inc.* website recalled that most of the treasures of the Russian royal family were melted down and recycled at the mint, yet Faberge's creations were spared. Eventually in the early 1930s, 14 of the Imperial Easter Eggs were sold to wealthy Americans and Europeans.

After Faberge's death, two of his sons, Alexander and Eugene, tried to revive the family business in Paris in 1924. However, what they produced was a far cry from their father's creations, and they were not successful. In the United States in the 1930s, a businessman named Sam Rubin had been using the name "Faberge" commercially, without the consent of the family. Von Solodkoff concluded, "In 1951, it was finally agreed that the name could be used, but only for toiletries and perfumes."

Interest in Faberge's creations was renewed after a 1977 exhibit in London. Additional successful exhibitions

have since been held in Helsinki, New York, London, and Munich. Faberge's family continued in vain to try and revive the company. In 1989, they selected workmaster, Victor Mayer to continue Faberge's lifework after a 70 year lapse. A new collection was presented in Munich in 1990. In honor of Faberge's 150th birthday, new creations were presented to the public in New York in 1996.

### Reflections on Faberge's Work

"Faberge's work has always aroused delight and fascination. But he has also been regarded as the jeweler of a decadent, autocratic regime, the creator of luxuries that are vain symbols of princely magnificence," wrote von Solodkoff. He added, "Today he is seen in a different light, a light cast by further studies in the fields of history and artistic influence. His place in art history is that of an exceptionally creative artist-jeweler with outstanding entrepreneurial skill."

The *Imperial Court, Inc.* website reflected that Faberge "was the supreme craftsman of his era, perhaps any era. As master designer to the Imperial Russian Court, he fashioned exquisite works of art. Masterpieces so rare and ingenious in their design that his fame spread throughout the world." The website concluded, "Peter Carl Faberge became a legend in his own time."

### Books

- Clarke, William, *The Lost Fortune of the Tsars*, St. Martin's Press, 1994.  
*Oxford Illustrated Encyclopedia of The Arts*, Oxford University Press, 1990.  
 Perry, John Curtis and Constantine Pleshakov, *The Flight of the Romanovs*, Basic Books, 1999.  
 Snowman, A. Kenneth, *Carl Faberge-Goldsmith to the Imperial Court of Russia*, The Viking Press, 1979.  
 von Solodkoff, Alexander, *The Art of Carl Faberge*, Crown Publishers, Inc., 1988.

### Periodicals

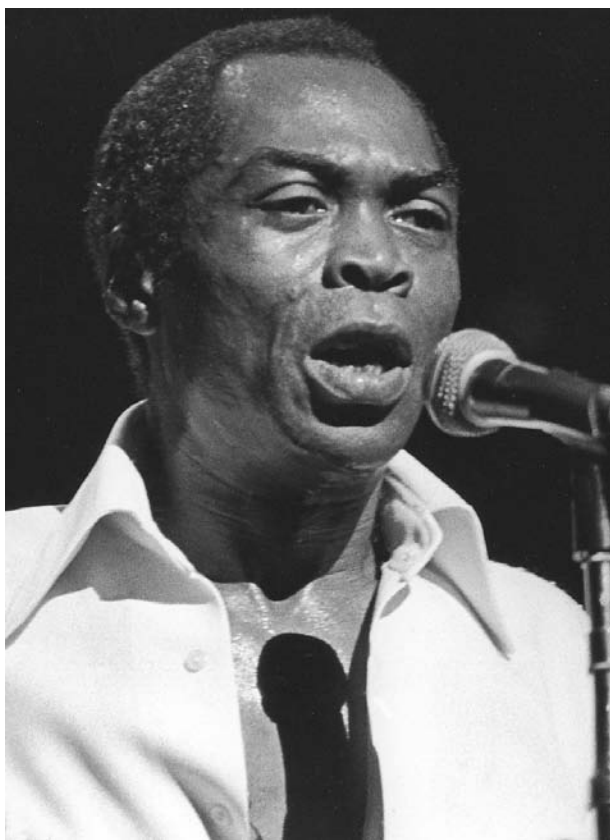
- Biography*, February 2000, pp. 94-97.  
*The Magazine Antiques*, March 1996, p. 446(10).  
*School Arts*, November 1999, p. 44.  
*Time*, May 2, 1983, p. 68.

### Online

- "Faberge—Workmaster Victor Mayer," *The Official Faberge Website*, [www.faberge.de/](http://www.faberge.de/) (December 16, 2000).  
*Faberge Eggs*, <http://www.geocities.com/Paris/Rue.4819.feintro.html> (December 16, 2000).  
 "The Faberge Experience: Art and History," *The Faberge Experience*, <http://users.vnet.net/schulman/Faberge/bio.html> (December 16, 2000).  
 "History of Faberge," *Imperial Court, Inc. website*, <http://www.imperialcourt.com> (December 16, 2000). □

## Fela

**One of Africa's most acclaimed musicians, Nigerian Fela Anikulapo Kuti (1938-1997) wrote and per-**



**formed political protest songs that won him a large following both at home and abroad, to the frequent chagrin of government authorities. His music—dubbed “Afro-Beat”—was an amalgam of American blues and jazz blended with African rhythms, while his pointed lyrics—in pidgin English and African—confronted government corruption, multi-national corporations, and police brutality. In a career that spanned four decades Fela (as he is popularly called) recorded over 50 albums and performed frequently in concert.**

Fela was a flamboyant singer and musician and his concerts—many held at his Lagos nightclub, The Shrine—were lengthy and infectious. Fela belted out his driving songs, gyrating as he performed on saxophone or keyboards, directing his thunderous 27-member band, Egypt 80. John Darnton wrote in the *New York Times* that one of Fela’s most popular songs, ‘Upside Down,’ describes a traveler who finds an organized, well-planned world everywhere except in Africa, where there are villages, but no roads, land, but no food or housing. “These things are the daily lot of all Lagosians,” Darnton noted. “When Fela sings this song, listeners nod their heads solemnly and look into their beers.”

Fela’s musical upbringing spanned three continents. Born in Abeokuta, Nigeria, in 1938, he initially studied

piano and percussion and, as a youth, led a school choir. His father, the Reverend Ransome-Kuti, was a Protestant minister and educator. In the late 1950s Fela moved to London, telling his parents that he intended to study medicine. Instead he attended the Trinity College of Music, where he explored classical music and was exposed to American jazz artists Charlie Parker, John Coltrane, and Miles Davis.

### **Influenced by Black Power Movement**

Fela’s music did not become political until the late 1960s, when he visited the United States and was exposed to the black power movement. Influenced by the teachings of black activist leader Malcolm X, Fela began to realize the implications for Africa of white oppression, colonialism, Pan-Africanism—the unity of African nations—and revolution. His new-found political consciousness inspired him to adopt the middle name Anikulapo—“having control over death”—and change his band’s name from Koola Lobitos to Afrika 70 (later Egypt 80). The young musician’s work would never be the same; as quoted by Jon Pareles in the *New York Times*, Fela said, “The whole concept of my life changed in a political direction.”

Fela returned to Nigeria and began to write politically charged songs that rocked his country. Inspired by Pan-Africanism, he incorporated African instruments into his band, including Konga drums, klips sticks, and the sekere—a percussion instrument. “I’m playing deep African music,” he said at the time, as Pareles noted. “The rhythm, the sounds, the tonality, the chord sequences, the individual effect of each instrument and each section of the band—I’m talking about a whole continent in my music.” Fela’s protest music became very popular among the ranks of Nigeria’s unemployed, oppressed, and politically dissident. These groups remain a large part of his audience.

### **Political Confrontations**

Fela’s music and politics made him a cult figure in Nigeria; he ran for the presidency twice. His openly confrontational messages, however, repeatedly irked government authorities who found reason to jail Fela for a variety of offenses throughout his career. In 1977 official rancor turned violent when the Nigerian military—some say in response to Fela’s album *Zombie*—leveled his imposing Lagos residence after Fela had declared it an independent republic. Before burning down the house—including Fela’s recording equipment and master tapes—soldiers went on a rampage in which Fela’s 82-year-old mother, a prominent women’s rights activist, was hurled from a second-story window. She later died from her injuries. In protest, her son dumped her coffin at the house of then-president General Olusegun Obasanjo.

### **Unconventional Lifestyle**

Although such incidents rallied support for Fela, he was notorious for a lifestyle that alienated many Nigerians; he unabashedly preached the virtues of sex, polygamy, and drugs—in particular the use of marijuana as a creative stimulant. In 1978 Fela shocked his countrymen when he

married his harem of 27 women (whom he later divorced), in protest against the Westernization of African culture. His commune, the Kalakuta Republic—established to protest the military rule of Nigeria—was reportedly itself run like a dictatorship. According to the *Times's* Darnton: “[Fela] ruled over the Kalakuta Republic with an iron hand, settling disputes by holding court and meting out sentences—cane lashings for men and a tin shed ‘jail’ for women in the backyard. To some degree, these trappings of power account for his popularity among authority-conscious Nigerians.” *Spin's* Larry Birnbaum elaborated on Fela's excesses, reporting, “Stories abound of his setting fire to hotel rooms, firing penniless band members on overseas gigs, making interviewers cool their heels for days and then receiving them in his underwear.”

While Fela's politics and lifestyle were controversial, few quibble over the power of his music. In 1986, the human rights organization Amnesty International helped free him from prison, where he had languished due to questionable currency-smuggling charges. Fela and Egypt 80 then made their first tour of the United States, where their audience was limited but growing. He has influenced the work of reggae singer Jimmy Cliff and the Talking Heads' David Byrne. In 1991 he performed an epic gig at New York City's Apollo theater accompanied by 30 support players.

As Fela became better known outside Nigeria he felt that his music increasingly held an international message. He told *People's* Cathy Nolan: “America needs to hear some good sounds from Africa, man. The sanity of the world is going to be generated from Africa through art. Art itself is knowledge of the spiritual world. Art is information from higher forces, by those who are talented. I'm not jiving. I've been living with my art for 23 years. My music has never been a failure.”

Fela died of an AIDS-related illness at his home in Nigeria on August 2, 1997. He was 58 years old.

### Books

Moore, Carlos, *Fela Fela*, Schocken, 1987.

### Periodicals

*Maclean's*, October 13, 1986.

*Nation*, August 13, 1990.

*New York Times*, July 24, 1977; November 7, 1986.

*People*, December 1, 1986.

*Spin*, November 1991. □

## Bob Feller

**An Iowa farm boy who became a star for baseball's Cleveland Indians, Bob Feller (born 1918) threw harder than any pitcher of his generation. Six times, he won 20 or more games in a season, and he set new standards as a strikeout artist. Feller also won medals for his service as a Navy aircraft gunner in World War II.**



Feller won 266 games and lost 162 over his career, spent entirely with Cleveland from 1936 through 1956. He might have won many more games had he not served four years in the Navy during the war. His record of 348 strikeouts in 1946 stood for many years, and he pitched three no-hitters during his career. Players of his time were in awe of his blazing fastball. “If anybody threw that ball harder than Rapid Robert, then the human eye couldn’t follow it,” said pitcher Satchel Paige.

### Teenage Sensation

Bob Feller was born on November 3, 1918 in Van Meter, Iowa. He grew up on a farm with his hard-working parents and his sister Marguerite. “We were far from destitute, even during the Depression,” Feller recalled in an interview. “My father was a very successful farmer, and that was for one reason: he worked, and he was smart.” His mother was a schoolteacher, a nurse, a newspaper correspondent, and a school board member. Their drive to succeed influenced their son who, from an early age, had one overriding desire: to play baseball. His father, who had been a semi-professional pitcher in his younger days, encouraged Feller’s interest in baseball. He built a pitching mound and set up a home plate between the house and the barn. Young Feller spent hours a day throwing pitches to his dad and building up his arm strength. In the winter, father and son would play catch inside the barn.

As a child, Feller always wanted to play baseball with older kids. When he was 12, he helped his father build their

own baseball field on the farm, complete with a grandstand. His father started a team, with his son as the pitcher, and charged 35 cents admission. Feller grew into a strong, strapping teenager, who looked older than his age. Sometimes more than a thousand people came to the farm to see him pitch. By the time he was in high school, major league scouts had heard about his fastball.

At the time, organized baseball's rules prohibited major league clubs from signing players who were still in high school. But Cleveland wanted the young phenomenon so badly that the club secretly signed him to a contract when he was 16. Pitching soon after for an amateur team in Des Moines, Iowa, Feller attracted so much attention that the Detroit Tigers also offered him a contract. Feller then admitted he was already signed. Baseball Commissioner Kenesaw Mountain Landis fined the Indians \$7,500. On the open market, Feller could have commanded an \$100,000 bonus, an unprecedented sum at the time. Instead, he remained with the Indians.

The Indians brought Feller to Cleveland during the 1936 season. In July he pitched in an exhibition game against the St. Louis Cardinals. Feller, who had never pitched a single game in the minor or major leagues, looked raw and nervous. But, using only a fastball, he struck out eight batters in three innings. The Indians immediately put him into their bullpen, even though he was only 17 years old. In his first start, on August 23, he struck out 15 and beat the St. Louis Browns, 4-1.

Because of his blazing fastball, Feller soon earned the nickname "Rapid Robert." In September, he tied the major league record by striking out 17 batters in a game against the Philadelphia Athletics. He was so wild in that game that he allowed nine walks; so poor at holding runners that he allowed nine stolen bases. For the season, Feller struck out 76 batters in 62 innings. After the season ended, Feller went back to Iowa to finish high school.

The amazing teenage pitching sensation was an instant drawing card for the Indians. When he pitched, attendance would rise by about 10,000 fans. In his second season, Feller joined the club after high school was finished in Iowa. He won nine games, lost seven, and struck out 150 batters in 149 innings. In 1938, his first full season with the Cleveland Indians, he won 17 games and led the league in strikeouts with 240. Baseball had never seen someone of such a young age so completely dominate the opposition.

Control problems are common for a hard-throwing young pitcher, but even so Feller was extremely wild in the early days of his career. In 1938, he walked 208 batters in 278 innings. On the last day of the season, Feller struck out 18 Tigers to set a new major league record. By then he had developed an effective curveball to go with his blazing fastball.

In 1939, Feller lead the American League in wins with 24, in complete games with 24, in innings pitched with 297, in walks with 142 and in strikeouts with 246. To start the 1940 season, Feller pitched a no-hitter on Opening Day against the Chicago White Sox. That year he again dominated hitters: 261 strikeouts, 27 wins, 320 innings, 37 starts and 31 complete games—all tops in the American League.

In 1941, Feller again led the league in wins (25), starts, innings, strikeouts and walks. At age 23, he had already posted 107 career wins (against only 54 losses) and 1,233 strikeouts. He already had more than a third of Walter Johnson's then-record career strikeout total. Never in baseball history had a pitcher enjoyed so much success at such an early age. It appeared that Bob Feller was going to completely rewrite the record books.

## Service and Triumphs

On December 7, 1941, Japanese planes attacked Pearl Harbor. That very day, Feller volunteered to join the Navy. "I did not have to go," Feller recalled. "My father was dying of brain cancer, so I was pardoned. But it was a war we had to win." Feller spent the next 45 months on active duty, putting his baseball career on hold. He became an anti-aircraft gunner on the battleship *Alabama*, serving in five campaigns in the North Atlantic and South Pacific theaters and earning eight battle stars.

Feller returned to baseball near the close of the 1945 season, after the end of World War II. He had missed nearly four full seasons at the prime of his career. But he picked up right where he had left off. In 1946, he pitched his second no-hit game, against the Yankees on April 30. Later that season, Feller became the first pitcher to have the speed of his pitches checked with a radar device. He was clocked at 98.6 miles an hour. For that season, he pitched a career-high 377 innings and struck out 348 batters, a new twentieth century record. Feller won 26 games, ten of them shutouts, and completed 36 games—all league highs. The Indians were not a good team that year and, in games Feller did not pitch, won only 42 games and lost 71.

In 1947, Feller again displayed his pre-war dominance, leading the league in wins, strikeouts, innings and starts. But he hurt his arm after slipping on the mound that year, and he was never again as dominant. The following season, Feller won his seventh and final strikeout crown, won 19 games, and helped lead the Indians to a rare appearance in the World Series. In the opening game, Feller locked horns with the Boston Braves' Johnny Sain in a scoreless pitching duel for seven innings. In the bottom of the eighth inning, catcher Phil Masi reached second base. Feller whirled and threw to second base in a great pick-off move, but the umpire called Masi safe on a close, disputed play. Tommy Holmes then brought Masi in to score with a single, and the Indians lost, 1-0. Feller lost game five as well, but the Indians won the series, four games to two.

After Feller turned 30, his strikeout totals declined dramatically. But he remained effective. On July 1, 1951, he pitched another no-hitter, this time against Detroit. That season was the last of six in which he would lead the league in wins. In 1952, however, he won only nine games and lost 13 and struck out only 81 batters.

In 1954, Feller was the fifth starter on an Indians team that won 111 games behind tremendous pitching. Feller won 13 games and lost only three, but he did not pitch in the World Series, in which the Giants swept Cleveland. Feller would win only four more games before retiring in 1956.

## Competitive Fire

One constant in Feller's career was his determination to play and earn victories for his team. He was a workhorse who could be depended upon to keep his team in the game. Besides his three no-hitters, he hurled 12 one-hitters during his career.

Injuries didn't stop him. "I only hurt my arm once, in 1937," he said in an interview. "I slipped on the mound throwing a curve ball at League Park. It hurt my elbow. Mother Nature took care of it. I didn't have to have surgery." He also missed the All-Star Game in 1947 after slipping on the mound and hurting his knee—the injury which put strain on his arm and diminishing his effectiveness.

Personal problems couldn't keep Feller from taking his turn in the pitching rotation. His first wife battled alcoholism and drug addiction, and Feller was unable to help her. But the tragedy didn't distract him from baseball. His second marriage was more stable and enduring. Throughout his life, Feller was a close friend of Ronald Reagan, whom he had first gotten to know when the future president was a sports announcer in Iowa.

Feller was easily elected to the Baseball Hall of Fame in 1962. Later, his hometown of Van Meter, Iowa, built him a museum. At Jacobs Field in Cleveland, there is a large statue of Feller, the most successful pitcher in Indians history. Had he played in New York, his fame no doubt would have been much greater.

Baseball historians often speculate what Feller's career numbers might have looked like had he not lost almost four full seasons to World War II during the prime of his career. In the four seasons before the war and the three seasons after it, Feller won 158 games, an average of 23 per year, and struck out 1,715 batters, an average of 245 a season. If four additional seasons with those averages were added into Feller's career totals, he would have finished with 351 wins—the eighth-best in baseball history—and 3,502 strikeouts, which would be ninth on the all-time list and second only to Walter Johnson among pitchers who retired before 1960.

Despite the impact on his career, Feller never complained about the years lost to the war. He remained as proud of his military service as he was about his baseball career. His celebrity as a teenager and young adult didn't leave him with a swelled head, either. Feller was dependable, unflappable, and a solid, unassuming competitor who didn't draw attention to himself. His terrifying fastball did most of the talking for him.

## Books

Dickey, Glenn, *The History of American League Baseball Since 1901*, Stein and Day, 1980.

## Periodicals

*Publishers Weekly*, February 9, 1990.

## Online

"Baseball Legends," *Total Baseball*, <http://www.totalbaseball.com/player/f/fellb101/fellb101.html>.

"#19 Bob Feller," *Tribe Universe*, <http://www.tribeuniverse.com/Feller.html>.

"Myth Busters," *The Benjamin Rose Institute*, <http://www.benrose.org/myth/feller.asp>. □

# Johannes Fibiger

**Johannes Fibiger (1867-1928) was a Danish bacteriologist and pathologist who made important research contributions to the study of diseases such as diphtheria, tuberculosis, and cancer, as well as important advances in clinical research methodology. He received the 1926 Nobel Prize in Physiology or Medicine for his research on parasites and cancer in rats.**

At that time, Fibiger was believed to be the first person to induce cancer in a laboratory setting. It was later shown that he had not actually caused cancer in his sample of rats. Despite the fact that his award-winning finding was disproved, Fibiger made other important contributions to cancer research, particularly with respect to the role of individual predispositions in cancer development.

## Early Life and Education

Johannes Andreas Grib Fibiger was born on April 23, 1867 in Silkeborg, Denmark. He was the second child born to Christian Fibiger, a local physician, and Elfride Muller, a writer. He was named after his father's brother, who was a clergyman and a poet. When Fibiger was only three years old, his father died of apoplexy and he moved to Copenhagen with his mother and sister. His mother supported her family by writing short stories, journals, and cookbooks. In 1882 she also established the Copenhagen Cooking School, the first of its kind.

Fibiger's mother was preoccupied with supporting her family and spent little time with her children's education. Fibiger was sent to an elementary school run by one of his uncles. He was a diligent student who was interested in insects and botany. He spent all of his holidays with another uncle, the Reverend Johannes Fibiger, who helped raise him and supported his education. At the age of 16 Fibiger passed his matriculation exam and began to study zoology and botany at the University of Copenhagen. He paid for his education by teaching and working at the zoology laboratory at the university.

While Fibiger was studying he lived at home with his mother. His mother's cooking school had flourished and expanded to include a restaurant. A distant cousin, Mathilde Fibiger, also the daughter of a physician, came to work at the school as a teacher and an accountant. When Fibiger was 21 years old, he became engaged to her. She continued to live with his family and friends until Fibiger finished school and they could be married. Fibiger completed his medical degree in 1890. For the next few years he worked





as a physician at various hospitals, including the famous research laboratories of Robert Koch and Emil von Behring in Germany. On August 4, 1894 he finally married Mathilde Fibiger and the couple had two children together.

### Diphtheria Research

Fibiger returned to the University of Copenhagen where he worked as an assistant in a bacteriological laboratory. He also pursued his doctorate with research on diphtheria, a childhood virus that caused its victims to suffocate. During Fibiger's time, diphtheria was a major public health concern throughout Europe. Fibiger made three important contributions to studying the disease. First, he discovered better ways to grow the bacteria in a laboratory setting. Second, he proved that there were two different forms of the bacillus, which was important to understanding how the disease was transmitted. Third, and most importantly, Fibiger produced a serum against the disease.

In 1895 he received his doctoral degree from the University of Copenhagen. Fibiger then went to work as a junior physician at Blegdamshospitalet in Copenhagen where he continued to work on diphtheria. At that time there had been no proof that a serum was effective against diphtheria. Fibiger believed that the lack of proof was a result of how the experiments were conducted and not a result of an ineffective serum. In 1896 Fibiger convinced his superior at the hospital, Professor Sorensen, to conduct a more controlled experiment on the diphtheria serum. Between May 13, 1896 and May 13, 1897 patients admitted to the hospi-

tal received the standard treatment or standard treatment plus the diphtheria serum. They were assigned to either the experimental or the control group depending on the day they arrived at the hospital. After the yearlong experiment, only eight out of 239 patients in the serum group had died, while 30 of the 245 patients in the control group had died. This was strong evidence in favor of the serum.

According to an October 1998 article in the *British Medical Journal*, this "was the first clinical trial in which random allocation was used and emphasized as a pivotal methodological principle. This pioneering improvement in methodology, combined with a large number of patients and rigorous planning, conduct, and reporting, makes the trial a milestone in the history of clinical trials." In this respect, Fibiger was ahead of his time in realizing the importance of random error and bias in clinical experiments. Fibiger established a reputation for himself as a careful scientist who paid attention to detail. However, the methodological improvement of a controlled clinical trial had little immediate impact on the research community. Random assignment in clinical experiments was not fully appreciated until after Fibiger's death. Nonetheless, the International Medical Congress published the results of his study in 1897. The study had an important practical consequence as the demand for the proven diphtheria treatment led to the creation of the Serum Institute.

### Cancer Research

In 1900 Fibiger was hired by the University of Copenhagen to direct the Institute of Pathological Anatomy where he was dedicated to building a successful research program. Fibiger and his colleague, C.O. Jenson, conducted groundbreaking research on tuberculosis in cattle. Contrary to popular opinion, they demonstrated that humans could contract tuberculosis from the milk of infected cattle. Their findings contributed to the passage of stricter government regulation of milk, which, in turn, led to fewer adolescent deaths due to tuberculosis.

Fibiger then went on to study tuberculosis in rats, which led to a discovery that would eventually win him a Nobel Prize. In 1907 Fibiger found stomach tumors in three wild rats that he had dissected. Within the tumors he found a new type of roundworm which he and a colleague called *Spiroptera neoplastica*. Fibiger believed that the worms caused cancer and he sought to reproduce this phenomena in a laboratory setting. Initially he was unsuccessful. However, Fibiger later tested new specimens from a sugar factory infested with mice and cockroaches. From his new sample he found that 75 percent of the mice had the roundworm *Spiroptera neoplastica* and 20 percent of those that had the roundworm also had stomach tumors. Fibiger concluded that the cockroaches were infected with the cancer causing roundworms and they, in turn, infected the mice. Fibiger proceeded to test his idea in the laboratory by feeding infected cockroaches to wild mice and rats that he caught specifically for his research.

Fibiger was able to reproduce what he believed were cancerous stomach tumors in his sample of mice and rats. He was thus believed to be the first person to produce

cancer experimentally in a laboratory, which was considered a major breakthrough in cancer research. He officially announced his discovery to the Royal Danish Academy of Science in 1913 and later published his results in the *Journal of Cancer Research*, which brought him international acclaim. In 1926 he was awarded the Nobel Prize in Physiology and Medicine for his discovery and in 1927 he received the Nordhoff Jung Cancer Prize.

### Research Refuted

Within a few years after publishing his results, Fibiger's study was challenged by other researchers who claimed that the tumors were not caused by worms and that they were not even cancerous. Additionally, Fibiger's methods were criticized because he did not have a control group that was not fed cockroaches. Opponents to Fibiger also could not replicate his results because, at that time, there was not a standard strain of laboratory rats and Fibiger caught his sample of mice and rats in the wild.

Fibiger refuted his opponents' claims until his death. After World War I he left his work in parasitology to pursue the research of two Japanese scientists who painted the ears of rabbits with coal tar to induce cancer. Fibiger conducted similar studies and reported that cancer did not occur with the same frequency either between or within species. He was one of the first cancer researchers to emphasize the importance of individual predisposition in cancer development. Fibiger's final project before his death involved developing a vaccine for cancer using matter from malignant tumors. Fibiger became ill while in Stockholm for the Nobel festivities. He was taken to a hospital and diagnosed with colon cancer. He died of a massive heart attack on January 30, 1928 in Copenhagen.

After his death Fibiger's award-winning research was resoundingly refuted. New research on vitamins that had only just begun after Fibiger's own study would eventually show that the lesions found in Fibiger's rats were most likely the result of a vitamin A deficiency. This discovery did not completely disprove Fibiger's claims. However, in conjunction with the other criticisms of the study, this new research made it unlikely that Fibiger actually did first induce cancer in laboratory animals. Later research suggested that the worms could have been a coincidence rather than a cause because the worms could have been carrying a cancer-causing virus. American pathologist Peyton Rous made this discovery just three years after Fibiger's study, but he had to wait until 1966 before he received the Nobel Prize for discovering cancer-causing viruses.

### Scientific Impact

While some have gone so far as to claim that Fibiger's Nobel Prize was a mistake, others still credit him for important cancer research. The conclusions from his 1907 study were wrong, but the research was nonetheless a contribution to the field. In fact, more recent work on cancer has shown that parasites still might play a role in the cancer process. For example, a parasite similar to that found by Fibiger has been shown to cause cancer in dogs and a different kind of parasite has been linked to stomach cancer.

In a December 9, 1994 article in the *Sunday Telegraph* Robert Matthews summed it up best when he wrote, "Almost 70 years after his death, Fibiger may have been right after all—but for the wrong reasons."

Fibiger may be best known for this one error, but he made significant contributions to the study of diphtheria, tuberculosis, and cancer in his lifetime. He published 79 scientific papers and founded and edited the journal *Acta Pathologica et Microbiologica Scandinavica*. In addition to teaching and research, he served the professional medical community in many roles, including president of the Danish Medical Society, president of the Cancer Committee of the General Association of Danish Physicians, and president of the Northern Association of Pathologists. He served on many academic boards and was the member of many professional organizations, including the Royal Danish Scientific Society. He also received honorary degrees from Louvain and Sorbonne in Paris.

### Books

Secher, Knud, *The Danish Cancer Researcher Johannes Fibiger*, H.K. Lewis and Co., Ltd., 1947.

### Periodicals

*British Medical Journal*, October 31, 1998, p. 1167; October 31, 1998, p. 1243.

*Daily Telegraph*, October 1, 1997, p. 14.

*Lancet*, November 14, 1998, p. 1635.

*Perspectives in Biology and Medicine*, Summer 1997, p. 498.

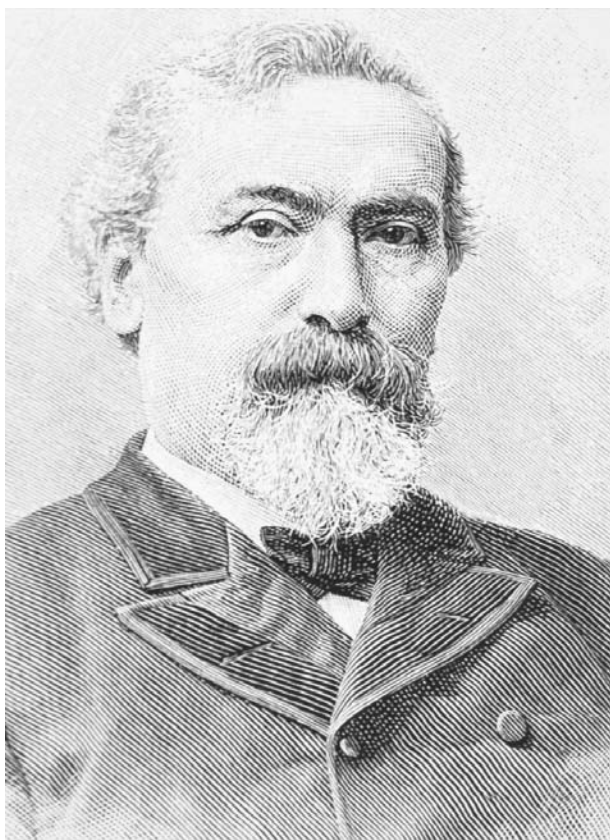
*Time*, October 16, 2000, p. 100. □

## Albert Fink

**German-born railroad engineer Albert Fink (1827-1897), became known as the father of railway economics and statistics through his work with the Baltimore and Ohio Railroad and the Louisville and Nashville Railroad where he published information regarding the real cost of transportation. He standardized freight rates during a time of confusion and brought organization to the railway industry.**

**A**lbert Fink was born on October 27, 1827 in Lauterbach Germany, a town located in the Grand Duchy of Hesse-Darmstadt. He was the son of architect Andres S. Fink and Margaret (Jacob) Fink. The young Fink received his education at the Polytechnic School at Darmstadt, and graduated with honors in engineering and architecture in 1848.

Fink had little sympathy with the German government that emerged after the revolution of 1848 and, in the following year, he emigrated to the United States. That same year he began work in the drafting office of Benjamin H. Latrobe, chief engineer of the Baltimore and Ohio Railroad. His skills as an engineer were soon recognized and he was given responsibility for the design and erection of bridges, stations



and shops for the section of the railroad that ran from Grafton, Virginia to Moundsville, Virginia (now West Virginia)

### **Invented the Fink Truss**

During his time at Baltimore and Ohio, Fink studied bridge construction and applied his engineering skills to his occupation. He designed a bridge truss that ultimately bore his name, the Fink Truss, which was used in the 1852 construction of the bridge that spanned the Monongahela River at Fairmont, Virginia. (now West Virginia). This bridge, with its three spans, each 305 feet long, created the longest iron railroad bridge in existence at this time in the United States.

### **Louisville and Nashville Railroad Challenges**

The successes Fink experienced brought further recognition and he was soon promoted to section engineer and later to division engineer. In spite of his accomplishments at Baltimore and Ohio, he left the company in 1857 when offered the position of construction engineer of the Louisville and Nashville Railroad at Louisville, Kentucky. In this capacity, Fink first oversaw the erection of a freight and passenger station and followed that closely with the challenge of bridging the Green River.

The location identified for the placement of this bridge is approximately 74 miles south of Louisville. The challenge that Fink faced was to design a bridge that would span a

wide gorge at considerable height above the river. In addition to the height, Fink was challenged to build the bridge at an angle to the direction of the stream. At the time of its construction, it became the largest iron bridge in North America with the exception of the Victoria Bridge at Montreal. While facing the design and construction challenges placed before him, Fink also designed and built a new courthouse for Louisville. In 1859 Fink took on the responsibility of the machinery of the Louisville and Nashville Railroad in addition to his bridge assignments and by 1860 he was promoted to chief engineer.

### **The Civil War and its Aftermath**

Much of the property belonging to the Louisville and Nashville Railroad was destroyed during the Civil War and at the conclusion of the war, Fink found himself facing the prospects of reconstruction. Although the property was lost, the company itself was in good condition, much to the credit of Fink who maintained exceptional records. The company settled accounts with the government with little or no trouble, a feat that can not be said of many of its competitors.

By 1865 Fink had become general superintendent of the railroad and began the task of rebuilding. He spent the next decade building business relations with other railroads while rebuilding the Louisville and Nashville Railroad. During this rehabilitation period, Fink designed and completed his greatest work, the bridge that crossed the Ohio River at Louisville. At its completion, this bridge was one mile in length and stood 400 feet above the Indiana channel of the river. It was the longest truss bridge in the world. In 1869 the president of the railroad died and Fink was appointed vice-president and general superintendent.

### **Birth of Railway Economics**

With the disruptions of the Civil War now a thing of the past, Fink focused his attention of the economics of transportation. He began an in-depth analysis of the real cost of transportation and standardized freight rates based upon accounting and statistics. In 1874 he published a report generally referred to as "The Fink Report on Cost of Transportation," which has come to be regarded as the foundation of economics of the American railway industry. The report was referred to as "the fullest investigation into the cost of railroad transportation ever published in our country or language." (*Railway Gazette*, May 30, 1874). While conducting his studies and preparing his report, he did not lose sight of the daily operations of the Louisville and Nashville Railroad and expanded its business as far as Montgomery, Alabama. To accomplish this required considerable financing which he negotiated beyond the confines of American banking and through connections in England. His insight into this financial activity proved successful when, during the 1873 panic, the Louisville and Nashville Railroad was able to maintain loan payments and escape the fate of bankruptcy.

### Called Out of Retirement

With intentions to retire from his very active life, Fink resigned his position in 1875 and planned to pursue railroad problems on a literary level. The plan was short-lived when Fink received an offer from the newly formed Southern Railway and Steamship Association in Atlanta, Georgia, where he served as president during 1879-1880. In the decade between 1870 and 1880, widespread warfare existed among the railroads in America and the association recognized the need for a negotiator whose respect among the railroad leaders was unquestioned. The man they named was Albert Fink and the leaders relied upon his ability to identify, analyze and resolve the existing differences in the industry. He agreed to work with the over two dozen southern railroad companies to help them resolve their many issues. His attempts were successful, resulting in set and stable freight tariffs on which the American public could depend.

### Second Retirement Plan Failed

In 1877, after achieving success with the Southern Railway and Steamship Association, Fink once again set his mind to retirement. His plans, however, were once again foiled when he was approached by the heads of four trunk lines centered in New York City, requesting his help in resolving a rate war that was currently in progress. He took the challenge and established the *Trunk Line Association*. He was named its commissioner and given powers similar to those he held with the Southern Railway and Steamship Association. Again, his diligence to his work proved successful.

### Failing Health and Final Retirement

With the establishment of the Interstate Commerce Act of 1887, a period of government regulation began, requiring less involvement on Fink's behalf. This combined with his failing health led to his retirement in 1889.

Fink had married in Baltimore as a young man. After the death of his first wife, he married a second time to Sarah Hunt on April 14, 1869. After his retirement, he spent most of the rest of his life at his home in Kentucky doing research and study. Fink died in Sing Sing (now Ossining), New York on the Hudson River on April 3, 1897.

### Books

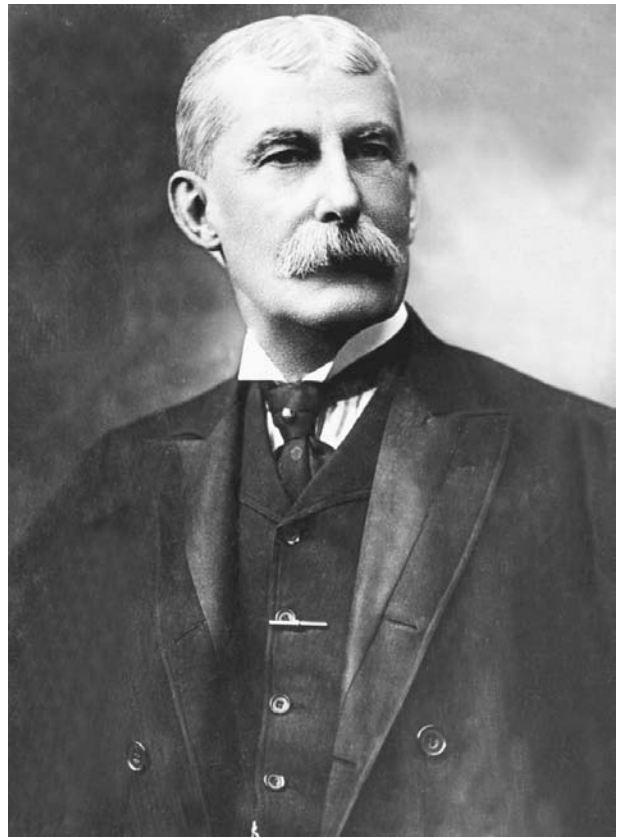
Johnson, Allen and Dumas Malone, *Dictionary of American Biography*, Charles Scribner's Sons, 1959.

Middleton, William D., *Landmarks on the Iron Road, Two Centuries of North American Railroad Engineering*, Indiana University Press, 1999.

*Who Was Who in America*, A. N. Marquis Company, 1963. □

## Henry Flagler

**Henry Flagler (1830-1913) was a self-made millionaire and industrialist who co-founded the Standard Oil Company. He masterminded the plan that trans-**



**formed Standard Oil into the most successful monopoly of the nineteenth century. During the second half of his life, he developed land and built railroads in Florida, establishing agriculture and tourism as the state's leading industries.**

Henry Morrison Flagler was born January 2, 1830 in Hopewell, New York, to Isaac and Elizabeth Flagler. Both parents had been married twice before and Henry had three half sisters and one half brother. Isaac was an itinerant Presbyterian minister who settled in Toledo, Ohio, in 1836. There, he became involved in the temperance movement and advocated racial equality. In 1838, Flagler's parents separated and Elizabeth, Henry and a younger sister moved to Rock Hill, New York.

At the age of 14, Flagler left school and moved to Bellevue, Ohio, near Cleveland, to live with a half-brother, Dan Harkness. The two boys worked at a general store owned by Harkness's uncle. Flagler earned \$5 a month, plus room and board. He proved to be a good salesman and his responsibilities and salary increased.

When he was 23, Flagler married Mary Harkness, a frail, 20-year-old cousin of Dan Harkness. Within six years, Henry was earning enough money to purchase a showy Victorian house in Bellevue. The couple had two daughters, Jennie Louise, born in 1855, and Carrie, born in 1858. Carrie died at the age of 3. Several years later, in 1870, their only son, Henry Harkness Flagler, was born.

Flagler and Dan Harkness remained friends and business associates and, in 1852, they opened a distillery. Flagler also worked as a grain merchant. During the Civil War, he earned large profits selling food and other commodities to the Union army. The business also profited from the sale of seeds and farm implements. Flagler's wheat and wine were sold in Cleveland through a commission agent named John D. Rockefeller, who became a friend.

Flagler became restless with his distillery and grain business and, in 1863, he moved to Saginaw, Michigan, where he invested in the salt industry. However, the salt market collapsed after the Civil War and Flagler lost approximately \$100,000.

### Partners with Rockefeller

The experience in Saginaw was humiliating for Flagler. He returned to Bellevue and worked as a grain merchant to pay off his debt. In the meantime, his friend Rockefeller had gotten into the oil business. He and his partner, Samuel Andrews operated the largest oil refinery in Cleveland. They needed capital to expand. Flagler's cousin, Stephen Harkness, invested in the company with the understanding that Flagler be made a partner.

The new company, Rockefeller, Andrews and Flagler, refined crude oil into kerosene, which was used as an illuminant. Flagler and Rockefeller worked well together and they became very close friends. They lived near each other and shared an office. They walked to and from work together, discussing business along the way. Flagler and Rockefeller developed some innovative business tactics. They packaged their kerosene in leak proof, five-gallon tin cans, which they made themselves. Customers often reused the barrels and they were very popular.

Flagler and Rockefeller's oil company was one of several in Cleveland and among many scattered throughout the country. They conceived a plan to compete against other refineries. They asked the Lake Shore and Michigan Central Railroad for a rate reduction to ship crude oil to their Cleveland refineries. In exchange, the railroad would get large shipments of oil. The railroad consented and agreed to keep the discount a secret. By 1869, Cleveland was the second largest refinery city, behind New York City.

The company's advantage on railroad rates forced other Cleveland refineries out of business. Rockefeller, Andrews and Flagler bought many of their failing competitors. As the company grew, the owners decided to organize it as a stock corporation, a relatively new business structure. They named the company the Standard Oil Company, because they were attempting to stabilize and apply standards to the oil business.

Standard Oil extended its railroad agreements to more railroads and different regions of the country. Flagler was a ruthless negotiator. He played one railroad against another in order to increase concessions. By 1872, Standard was the only refinery in Cleveland. In 1878, it controlled most of the refineries in the country. Standard went on to build and buy oil pipelines and, by 1884, it controlled not only refining, but transportation of crude oil.

Standard was doing more and more business in New York, and Flagler traveled between Cleveland and New York frequently. His wife's health was deteriorating and, by 1876, she was essentially an invalid. Flagler was devoted to her and read to her every night when he returned home from work. New York doctors advised him to take his wife to the Florida panhandle, which, because of its climate, served as a respite for the infirm.

The couple traveled to Jacksonville and St. Augustine. The accommodations were poor, there was no entertainment, and the cities were populated with sick people. With the exception of a few coastal towns, the rest of Florida was essentially an uninhabited wilderness. The Flaglers returned to New York, where his wife's condition deteriorated. She died in 1881.

### Personal Changes

At midlife, Flagler's personal and professional life were changing. Having achieved his goal of transforming Standard Oil into a monopoly, he retained his seat on the board of directors and turned over his day-to-day responsibilities to younger workers. His personal life was changing as well. Two years after being widowed, Flagler married Ida Alice Shourd, his late wife's nurse. Shourd hosted gala parties at the couple's New York estate, Satan's Toe. But she suffered from mental illness and, in 1897, was committed to an asylum, where she remained for the rest of her life.

Flagler suffered additional family tragedies when his oldest daughter died from complications of childbirth in 1899. Flagler's son dropped out of school and failed to follow his father into business, causing a lifelong rift between the two men.

After his first wife's death, Flagler developed a new business interest. He and Shourd had spent time in St. Augustine, Florida. The city had changed since Flagler first visited it. Rather than being filled with sick people, it had become a haven for the wealthy. The state was encouraging development by selling swampland for as little as 50 cents an acre.

Flagler purchased land in St. Augustine from a friend and built the grandest hotel in the world, the Ponce de Leon. The Spanish-influenced hotel made of concrete and native coquina shells was designed with the finest materials. It opened in 1888. Flagler then built a second, less-opulent hotel across the street. Both properties were immediately successful.

### Railroads and Resorts

Flagler spent the rest of his life developing land in Florida. He discovered that the state's poor transportation was deterring development. The railroads running along the state's East Coast were not compatible. Flagler bought and combined the railroads to form the Florida East Coast Railway. He opened up service to Jacksonville, then Daytona. Over the years, he continued to convert old tracks and build new ones, extending service south.

Along the way, Flagler built additional hotels, establishing Florida's east coast cities as tourist destinations. He

encouraged people to farm Florida's land by giving them a break on rail rates to transport their produce. Orange, grapefruit and lemon groves were soon dotting the state. He also established many of the state's newspapers.

In 1893, Flagler bought land on a little known barrier island called Palm Beach. He built the Royal Poinciana, which was the largest resort hotel in the world. It had six floors and 540 rooms. It and a smaller hotel nearby called The Breakers, became gathering places for wealth and fashion during "the season," from December to April 1. After Flagler built a railroad bridge onto the island, wealthy people traveled down in private railcars for parties, golf, tennis, boating, bathing and fishing.

To accommodate the workers who built the hotels, Flagler established a community of tents and shacks called "the Styx" on the island. He generally treated the workers, many of them African-Americans, well, but he didn't want them living near him. So he laid out a city across the lake and built homes, churches and government buildings, creating the city of West Palm Beach.

Flagler continued building his railroad south, laying out the cities of Fort Lauderdale and Miami along the way. He dredged the canal from the ocean into Biscayne Bay, making Miami a deep-sea port. Residents of the new city wanted to name it after Flagler, but he insisted that they call it Miami, an Indian name.

Flagler was generous with his wealth, donating money to build schools, hospitals and churches and to provide relief to farmers after freezes destroyed produce. Most of his donations were made anonymously.

### Third Marriage

In 1901, Flagler married for a third time. However, before doing so he had to obtain a divorce from his second wife, who was still living in a New York asylum. Flagler had no grounds for divorce, so he changed his residency to Florida and influenced the Florida legislature to pass a law naming insanity as grounds for divorce. After completing the divorce proceedings, Flagler married Mary Lily Kenan, a socially prominent North Carolinian, who was 37 years his junior. Flagler built his new wife a large Southern-style marble home called Whitehall in Palm Beach. It was the first of the island's mansions, costing \$3 million.

Mary Lily hosted elaborate parties at Whitehall. Flagler, who married Mary at the age of 71, was losing his hearing and his sight and suffered from a liver ailment. He often slipped away from the affairs through secret doorways installed in the house. As Flagler aged, he became more reclusive, leaving the entertaining to Mary Lily.

In 1903, Flagler began work on his most challenging engineering feat—a railroad from Miami to Key West. The project spanned 50 miles through the Everglades and 106 miles over and between islands. Workers encountered mosquitoes, quicksand lakes and hurricanes during construction. Turnover was high. In order to attract workers, Flagler offered them free rail transportation to Florida. Many left the train in mid-state to work on farms and in groves. Flagler lived to see the Key West railroad open in 1912. He died on

May 20, 1913 in Palm Beach, Florida, following a fall at Whitehall.

Flagler's widow died in 1917 and Whitehall passed to her niece, who sold it. For a while, it served as a hotel. In 1959, Flagler's granddaughter bought the mansion, restored it and opened it as a museum. In 1935, the Key West railroad was destroyed in a hurricane. But Highway 1, which connects the Florida Keys to the mainland utilizes many of the railroad's viaducts, bridges and roadbed. It opened in 1938.

The Rockefellers went on to become one of the most prominent families in the United States. In later years, John Rockefeller acknowledged that Flagler was the "brains" behind Standard Oil. The monopoly Flagler helped create at Standard was broken up by the Supreme Court in 1911. Although Flagler was well known in his lifetime, he was forgotten by history. Even in Florida, Flagler is largely known only as the founder of Palm Beach, which remains a resort community catering to the wealthy. Whitehall is now a museum honoring Flagler's life and Florida history.

### Books

Chandler, David Leon, *Henry Flagler: the Astonishing Life and Times of the Visionary Robber Baron Who Founded Florida*, Macmillan, 1986.

Martin, Sidney Walter, *Florida's Flagler* University of Georgia Press, 1949.

Owen, Jack, *Palm Beach Scandals: An Intimate Guide*, Rainbow Books, 1992.

### Online

"Henry Morrison Flagler," *Dictionary of American Biography* Base Set. American Council of Learned Societies, 1928-1936. Reproduced in *Biography Resource Center*. The Gale Group, 2000, <http://www.galenet.com/servlet/BioRC> (December 20, 2000).

"Henry Morrison Flagler," *Henry Morrison Flagler Museum, Palm Beach, Florida*, <http://www.flagler.org/bio.html> (December 20, 2000). □

## Homer Folks

**In a career that spanned two centuries, Homer Folks (1867-1963) advocated on behalf of many of New York's citizens, creating a health care system that was groundbreaking in its scope and addressing many of the social ills of his day.**

Among the social transformations wrought by the widespread industrialization of the United States during the nineteenth century was the population explosion within the cities and the acceptance of women and children as wage laborers in the mills and factories dotting the northern states. By 1900 child labor had become one of several social ills of concern to social reformers, who sought ways to address the increasingly widespread pov-

erty, illiteracy, crime, and disease among the working classes. Settlement projects such as Jane Addams' Chicago-based Hull House and aid societies of various sorts quickly sprang up in cities around the nation as concerned individuals attempted to address such problems. In his position as an active leader in New York's largest aid society, Homer Folks was an advocate for social reform on a major scale. During his lifetime Folks became a preeminent spokesman for the rights of children, women, and the mentally ill.

Folks was born on February 18, 1867, in Hanover, Michigan, to farmer James Folks and his wife, Esther Woodliff Folks. After his graduation from a rural high school in 1883, Folks was offered the choice of a farm of his own or a college education. The young man chose the latter and enrolled at Albion College in Albion, Michigan. Graduating in 1887 but still undecided between a teaching career or a career in the church, Folks moved to Cambridge, Massachusetts, with the intention of studying at Harvard University for a year in order to make up his mind.

### **Wanted to Help Others**

While a student at Harvard, Folks was inspired by the lectures of Francis G. Peabody and George Herbert Palmer, both of whom encouraged service to the downtrodden members of society. While desirous of being of service to others, Folks also favored being actively involved in society. He wanted to participate in social change rather than simply encourage others to do so, and he determined to seek a career in social service. Offered a job as general superintendent of the Children's Aid Society of Pennsylvania after graduating from Harvard in 1890, he moved to Philadelphia, marrying his college sweetheart, Maud Beard, on December 22, 1891. Together the couple would have three daughters.

Established in 1882, the Children's Aid Society of Pennsylvania was founded on the premise that children whose parents were unable to properly take care of them should be moved to the care of foster parents rather than to a government-run institution. In his first year with the Society Folks had furthered that aim by organizing a child-care training system for potential foster parents. While he stressed the importance of involvement by both state and local governments and pushed for the organization of departments to handle child welfare and related social issues, Folks also encouraged volunteerism on the part of concerned citizens.

In February of 1893 Folks left Philadelphia for New York City, where he had been offered the post of executive secretary of the New York State Charities Aid Association (SCAA). Created by social reformer Louisa Lee Schuyler in 1872 in response to the deplorable conditions she observed in state-run hospitals and almshouses throughout New York City, the SCAA's self-appointed mission was to "bring about such reforms as might be in accordance with the most enlightened views of Christianity, Science, and Philanthropy" by promoting volunteerism and private financial aid.

### **Half Century with SCAA**

With only two brief breaks—the first in 1902-03 to serve as New York City's commissioner of public charities, and the second during World War I—Folks would serve as executive secretary of the SCAA for over fifty years. During his tenure the SCAA made strides on many fronts. Children and families benefited greatly through their efforts, while the quality of life of the mentally ill, the homeless, and the unemployed were also improved. The SCAA was one of the first agencies that provided children with opportunities for "boarding out"—providing foster care. Adoption services were introduced in 1898. In 1925 the SCAA helped draft an illegitimacy bill which standardized procedures for proving paternity.

Folks focused his attention on young people. He advocated the use of preventative measures on behalf of dependant and delinquent children in need of a safe home, maintaining during a speech at the 1894 National Conference of Charities and Correction: "To accomplish the best results in preventative work, the fact must not be overlooked that character and habits in the young are not so dependent upon parentage and heredity as upon daily impressions received." Delinquency among young children was the result of a dysfunctional family, itself the consequence of sickness, one-parent families, and poverty.

### **Became Advocate of Child Welfare**

"Empty hands are the Devil's plaything": this saying reflects the belief of many adults. While eight or more hours of enforced schooling would be the fate of almost every American child by the first half of the twentieth century, such was not always the case. Until the early 1800s, many schools met infrequently, their calendars subservient to weather, the limitations of their school building, and the needs of farm and family. When not in school, children would work in the home or in the fields. With the Industrial Revolution, work in a factory became another option, as children and their parents moved to the cities. The earliest laws to address the education of the young provided for only the basics: to learn reading and writing, receive instruction in rudimentary arithmetic, and attend church.

In line with his belief in preventive child care, Folks realized that lack of a good education would condemn children to lives of poverty. In 1904 he co-founded the National Child Labor Committee and five years later organized the historic White House Conference on Dependent Children. The 1909 conference, which lobbied the government to take action on behalf of the growing number of U.S. children living in poverty, gave rise three years later to the U.S. Children's Bureau. Folks's concerns eventually found their way into the Progressive Party's presidential platform in the 1912 elections. Incumbent president Theodore Roosevelt ran on the establishment of an eight-hour workday, a six-day workweek, and the prohibition of child labor. In co-founding the National Child Labor Committee-Folks served as its chairman from 1935 to 1944, helping to set in motion the organized political effort that would culminate decades later in the Fair Labor Standards Act of 1938 that made child labor illegal.

In Folks's view, health and welfare were interconnected issues, and child welfare workers should address not only the child's well-being but also the economic and psychological stability of the caregivers. The consequence of this view could be seen in Folks's advocacy of improved care for the mentally ill, for improving public health, and for combating tuberculosis, then one of the diseases most threatening to the urban poor. Helping to found the American Association for the Study and Prevention of Infant Mortality in 1909, he served as that organization's president six years later. One of the first social advocates to support the creation of a widows' pension fund, Folks played a prominent role in its introduction in New York State in 1915.

### **Link between Poverty and Juvenile Delinquency**

By the late 1800s New York State had developed a reformatory system which provided room and board for young men running afoul of the law. When steady work could not be found, reformatories were often used as substitute homes by parents who could not afford to properly feed or otherwise care for their children. As Folks explained in 1891's *Proceedings of the National Conference on Charities and Correction*: "The temptations [such institutions] offer to parents and guardians to throw off their most sacred responsibilities [increase] in proportion as the educational and industrial features of these institutions are perfected." As replacement boarding schools, these institutions achieved the opposite effect on young men with no criminal experience, introducing them to what Folks called a "contaminating influence."

After aiding efforts to establish juvenile courts in the state of New York in 1907, Folks helped create the first probation commission in the United States. The commission, which he would chair for the next decade, provided a workable probation framework and attracted skilled men and women into the juvenile probation field. Under his leadership, the SCAA would expand its own involvement in this area; in 1915 that agency helped initiate an investigation of juvenile delinquency in rural parts of New York state.

### **Addressed Public Health Concerns**

Among the concerns of Folks was the increasing death toll caused by tuberculosis. He became an outspoken advocate of both early detection and publicly funded treatment. Also known as consumption, the cause of tuberculosis—a slow, wasting disease that was dubbed "the white plague"—was discovered by Robert Koch in 1882. Affecting the lungs primarily, the TB bacterium was spread by inhalation and contaminated food and drinking water, making the urban poor its most frequent targets. During his 1902-03 appointment as New York City's commissioner of public charities, Folks founded the first municipal tuberculosis hospital in the United States and sponsored the first major study of the disease. In 1904 Folks helped to create the National Association for the Study and Prevention of Tuberculosis, serving as a trustee for many years and as its elected president beginning in 1912.

Returning to his position at the SCAA, Folks organized education, reporting, and treatment campaigns against TB statewide. The SCAA clinics that formed were successful enough to become incorporated with the State Department of Health by 1923. Through the efforts of Folks and others, the TB death rate outside New York City had been cut in half between 1907 and 1928, and by 1946 it had reached an all-time low of 30 deaths per 100,000 residents.

### **Plight of the Mentally Insane**

When Folks arrived in New York City in 1893, the New York State legislature was in the process of passing a bill creating a hospital system for its mentally insane. Thirteen years later, in 1905, aftercare for patients released from this hospital came under discussion. In conjunction with the head of the New York School of Philanthropy, Folks developed a program whereby two students from Manhattan State Hospital would work with these "aftercare" patients, to ensure their safe return to society. This program was eventually expanded into a volunteer effort under the leadership of New York State and led to the formation of volunteer "aftercare committees" in all the state's hospitals.

In an effort to remedy another of his health-related concerns, Folks drafted what became the 1913 Public Health Law, a bill that modernized the New York public health system. Considered a landmark in U.S. health administration, the bill established the first state-run public health council, a small, nonpartisan administrative body with the power to set health standards. Folks became the first vice chairman of the council and held that position until 1955. By the time of his retirement the council had grown into the New York State Public Health Council, considered to be the most progressive health department in the United States.

### **The Climax of an Exemplary Career**

In addition to his activities on behalf of the SCAA, Folks continued to remain active in many aspects of social welfare. Elected president of the National Conference of Social Work in 1911 and again in 1923, he also served as a director of the American Red Cross Civil Assistance department in France during World War I.

In 1930, as the nation suffered from the Great Depression, Folks was appointed secretary of a public health commission created by then-New York Governor Franklin D. Roosevelt to study ways to improve the state's health laws and institutions. A decade later he would chair a similar commission sponsored by Governor Herbert H. Lehman, this time to study ways to curtail the population increase of mental institutions in the state of New York.

By 1940 the seventy-three-year-old Folks had become legendary in his field. Passing up retirement due to U.S. entry into World War II, he remained on the job until late 1946, when he suffered a slight stroke. The following February he also retired from the SCAA. Not one to remain inactive, however, he served as director of the Agricultural Institute from 1959 until the end of his life. Folks died in Riverdale, New York, on February 13, 1963. Among the many commendations he received over his lifetime of social service was the 1940 distinguished service award from the



Roosevelt Memorial Association, which heralded Folks as "a statesman and a man of action, [who] has brought to his own and other lands not destruction and heartbreak but healing and new horizons."

During his long career Folks wrote frequently on the issues about which he cared deeply, and many of his writings are included among conference proceedings. He also authored several books, including 1902's *The Care of Destitute, Neglected, and Delinquent Children*, 1920's *The Human Costs of the War*, and 1958's *Public Health and Welfare: The Citizens' Responsibility*. His papers are archived at the Columbia University School of Social Work; papers written under the auspices of the New York State Charities Aid Association remain in that organization's New York offices. Folks was also a contributor to Columbia University's Oral History Project, which is housed at the Columbia University Library.

### Books

*Dictionary of American Biography*, Supplement 7: 1961-1965, American Council of Learned Societies, 1981.

Folks, Homer, *Care of Destitute, Dependent, and Delinquent Children*, 1902.

Liebowitz, Anna, "Homer Folks: A Study of His Professional Growth in Terms of His Contributions to Social Work and the Milieu in Which He Developed" (master's thesis), New York School of Social Work, 1950.

Trattner, Walter I., *Crusade for the Children: A History of the National Child Labor Committee and Child Labor Reform in America*, Quadrangle Books, 1970.

Trattner, Walter I. *Homer Folks: Pioneer in Social Welfare*, 1968.

### Periodicals

*New York Times*, February 14, 1963.

### Online

*New York State Charities Aid Association Web site*, <http://www.scaany.org>. □



his education at the University of Berlin where he studied medicine. He passed his medical examinations and, in 1925, began a two-year internship in Berlin, passing the state examination in January 1928. Forssmann received his MD degree in 1929 and entered the University Medical Clinic for his clinical training, where he worked under Professor Georg Klemperer while also studying anatomy under Professor Rudolph Fick. He took his surgical instruction in 1929 at the August Victoria Home in Eberswalde, near Berlin.

### A Dramatic Experiment

In 1929, while in surgical residence at Eberswald Surgical Clinic, Forssmann theorized that drugs for cardiac resuscitation could be safely injected into the heart by inserting a catheter into a vein in the elbow and threading it through the body directly into the heart. He was alone in this theory as the physicians of the day believed that entry directly into the heart would be fatal. Forssmann recognized the benefit of such a procedure in measuring intracardiac pressures and injecting opaque materials for X-ray studies. However, he was unable to convince his peers and his work was initially restricted to cadavers.

Determined to prove his theory correct, Forssmann, with the assistance of a fellow resident, inserted a cannula (a long, thin tube used to administer medication) into the antecubital vein at the front of his own elbow. He pushed this catheter approximately two feet and, with the tube in place, proceeded to climb two floors to the X-ray room

## Werner Forssmann

**Few people would go to the extreme of using their own body to prove a point, but that is exactly what Dr. Werner Forssmann (1904-1979) did when he experimented on himself to prove that a catheter could be introduced into a human heart without resulting in damage or death to the patient.**

**W**erner Theodor Otto Forssmann was born in Berlin, Germany on August 29, 1904 to Julius and Emmy (Hindenberg) Forssmann. His father, a barrister, served as a captain in the army during World War I, where he was killed in 1916. Forssmann's education began at the Askanische Gymnasium, a secondary grammar school in Berlin. He was confirmed on March 14, 1919 at the Evangelical Church in Kaiser-Wilhelm-Gedachtniskirche in Berlin. In 1922 Forssmann continued

where he persuaded a radiologist to inject the opaque material used for X-rays into the catheter. A photograph was then taken showing the tip of the catheter in his right auricle. As a result of this successful experiment, Forssmann published a paper in which he reported his technique and discussed its benefits. Although he had proven his theory, Forssmann was fired from his position and his work was rejected. Although the press acclaimed his work, the German medical establishment scorned his efforts and ignored his work for the following decade.

### A Distinguished Career

Forssmann turned to other work, becoming a pulmonary surgeon and urologist. In 1931 he began work with Ferdinand Sauerbruch, a famous German surgeon, where he remained until 1932. Forssmann worked at the Charite in Berlin and the City Hospital at Mainz before moving on to Berlin's Rudolf Virchow Hospital, where he took specialist training in urology under Karl Heusch. He later became chief of the surgical clinic of the City Hospital at Dresden-Friedrichstadt and at the Robert Koch Hospital, Berlin.

Forssmann was captured by the Allies during World War II where he served as a sanitary officer with the rank of surgeon-major. He was released from an American prisoner of war camp in 1945. After the war he moved to Schwarzwald where he entered practice with his wife. In 1950 Forssmann moved to the small town of Bad Kreuznach in the Rhine province where he practiced urology and worked as a general practitioner.

In 1954, Forssmann was awarded the Leibniz Medal of the German Academy of Sciences and was guest of honor at the National University of Cordoba, Argentina. In 1958 he became chief of the surgical division of the Evangelical Hospital at Dusseldorf. He returned to the National University of Cordoba in 1961 to be appointed honorary professor. Maintaining his belief in the benefits of heart catheterization, Forssmann published an article in 1954 in *Langenbecks Archiv fur Klinische Chirurgie* on the historical development and methodology of heart catheterization and its application to lung disease. He also published numerous articles on urological matters in *Zeitschrift fur Urologie*. In 1962 Forssmann became a member of the executive board of the German Surgical Society. He also held membership in the American College of Chest Physicians and was an honorary member of the Swedish Society of Cardiology, the German Society of Urology and the German Child Welfare Association.

### The Nobel Prize

Although the German medical community considered Forssmann's theory and experiment to be nothing more than a "circus stunt," the Americans saw his work in a different light. Within three years of his experiment, two doctors at Columbia University, Andre F. Cournand and Dickinson W. Richards, Jr., studied his experiment and developed ways to use it for both research and diagnosis. They developed ways to inject contrast chemicals into the heart in order to visualize a defect on an X-ray screen. They also used cardiac catheterization to measure heart and blood vessels, deter-

mine the amount of blood an ailing heart can handle per minute, and discover abnormal communications between the pulmonary artery and the aorta.

In 1956 the Nobel Prize for Physiology or Medicine was awarded to Forssmann together with Cournand and Richards. Upon hearing of the announcement, Robert F. Loeb, executive officer of the Department of Medicine at Columbia's College of Physicians and Surgeons credited the work of the three men. "The technique of cardiac catheterization of the heart was discovered by Forssmann in Germany in 1929 and was developed and extended greatly in its application in the laboratories of Professors Cournand and Richards. By means of this and other techniques, the knowledge of the behavior of the heart and circulation in health and disease has been extended immeasurably. As a result, for example, the accuracy of diagnosis has been greatly enhanced and it has made possible the selection of those patients with heart disease who may be expected to be improved by surgery of the heart."

When he learned that he would share the Nobel Prize with Cournand and Richards, Forssmann said, "No one in West Germany has paid any attention to me. The Americans were the ones who recognized my work." He commented in reference to his own experiment in 1929, "the time was not yet ripe for this discovery." And added, "It is a very satisfying feeling to know that my research was right." (*New York Times*, October 19, 1956.)

### Personal Life

In 1933 Forssmann married Dr. Elsbeth Engel, a specialist in urology. They had six children: Klaus (b.1934), Knut (b. 1936), Jorg (b. 1938), Wolf (b. 1939), Bernd (b. 1940), and Renate (b. 1943). Forssmann's share of the Nobel Prize in 1956 was \$38,633. When asked how he would use that prize he responded, "You can imagine that I can find a good use for it with six children." He added that he would start smoking 12-cent instead of 9-cent cigars. Forssmann died in Schopfheim, Germany on June 1, 1979.

### Books

*Encyclopedia Americana International Edition*, Americana Corporation, 1970.

### Online

"Werner Forssmann" (1904-1979) *PTCA 20th Anniversary Project: Bio of Forssmann* <http://www.ptca.org/archive/bios/forssmann.html> (January 18, 2001).

"Werner Theodor Otto Forssmann" *Biography of Werner Theodor Otto Forssmann from Nobel Lectures*, <http://www.nobel.se/medicine/laureates/1956/forssmann-bio.html> (January 18, 2001).

"Forssmann, Werner" *Forssmann, Werner. The Columbia Encyclopedia: Sixth Edition. 2000*, <http://www.bartelby.com/65/fo/Forssman.html> (January 18, 2001).

"Forssmann, Werner" *Electric Library Personal Edition-Documents*, <http://www.elibrary.com/getdoc.cgi?id=18586849x127y39375w0> (January 18, 2001).

"Werner Forssmann" *Werner Forssmann Winner of the 1956 Nobel Prize in Medicine*, <http://www.almaz.com/nobel/medicine/1956b.html> (January 18, 2001). □

## Vicente Fox

**On July 2, 2000 the world's attention was fixed on Mexico when Vicente Fox (born 1942) pulled off the seemingly impossible feat of winning the country's presidency and toppling the Institutional Revolutionary Party (PRI) after more than 70 years in power.**

**I**ronically, the day Fox (full name: Vicente Fox Quesada) won the election happened to be his birthday. He was born July 2, 1942 in Mexico City but was raised on a communal farm in the state of Guanajuato near Leon. His father was a rancher of Irish descent and his mother came from Spain. Fox also spent time in the United States, first in Wisconsin where he attended Campion High School in Prairie du Chien, for one year; then at Harvard University.

In 1964 he was hired by the Coca-Cola Company, after studying business management at Mexico City's Iberoamerican University. Ten years later he was named president of Coca-Cola of Mexico. In 1979 the company sought to promote Fox to head its entire Latin American division. However, the job would have required a move to Miami and he declined the offer. His decision evoked an epiphany for Fox who then decided to quit the Coca-Cola Company altogether and return to his family ranch and boot making business in Guanajuato.

### First Election Victory

After nine years Fox was approached by leaders of the National Action Party (PAN), a conservative group opposed to the ruling Institutional Revolutionary Party (PRI). They asked to run for a seat in the Chamber of Deputies, the Lower House of the Mexican congress. He accepted the challenge and won in the 1988 election. After serving a three-year term he decided to run for governor of the state of Guanajuato in 1991. The election turned out to be a highly controversial one. Fox, the eventual runner-up in a three way race, charged his opponent with fraud.

Over the next few years Fox was politically inactive. Although popular and charismatic, he was not seen as a presidential contender until Article 82 of the Mexican Constitution was revised in 1993. That article had stated that a presidential candidate had to be born in Mexico and be "the child of parents who are Mexican by birth." Because Fox's mother came from Spain the presidency was never a consideration of his until the revision. However the revision was not slated to take effect until the 2000 election, not the upcoming one in 1994.

### Led PAN Opposition

Fox came out of political retirement following PAN's disastrous showing in the 1994 elections. He advocated a more militant approach as a means of reviving PAN, including street marches and coalitions with leftist parties. The strategy proved successful, at least for Fox. In 1995 he campaigned for the governorship of Guanajuato once again, and this time came out the victor with 59.8 percent of

the vote. At the time it was considered the worst defeat for PRI in its history. Fox, however, was not satisfied. In various interviews suggested that PAN needed to shed its conservative image and embrace more moderate social welfare positions. It was the beginning of PAN's move toward the center-right and its attraction to leftists.

In January 1998 Governor Fox announced he was seeking the PAN nomination for the presidency in the 2000 election. It was an unprecedented move in both the early start to his campaign and the brashness of seeking the nomination rather having it handed to him. Fox countered criticism saying that he needed the extra time if he was to oust the PRI and that criticism was mostly from envious rivals. Once again Fox's brash strategy paid off. He was nominated by PAN to run for the presidency of Mexico. His main opponents were PRI-candidate Francisco Labastida Ochoa and Cuauhtemoc Cardenas Solorzano of the left-wing Democratic Revolution Party (DRP).

### Presidential Nominee

In April 2000, just as Fox was beginning to make headway in the pre-election polls, he was interviewed by Sergio Munoz of the *Los Angeles Times*. He named violent crime as Mexico's biggest problem and foresaw an annual seven percent economic growth rate under his administration that included selective privatization. "I believe the free market generates wealth," Fox said, "but the state should intervene, selectively and temporarily, to ensure sustainable development." Regarding NAFTA (the North American Free Trade Agreement between Mexico, Canada, and the United States) Fox declared, "I feel we must go ahead with a new phase. We must begin to talk to Canada and the United States to include the free flow of people under NAFTA. What is needed—and I know it sounds a bit too strong now—is to have the three countries evolving into a common market, an association that, in the long term, will reduce the brutal wage differential among the three countries."

Later that same month Fox was the clear winner in a presidential debate and political pundits were seriously beginning to think he had a chance of pulling off the upset of the century. In May 2000 he delivered a speech in California aimed at both the state's Mexican residents and its leaders. Following a second presidential debate in late May (which had no clear-cut winner) post-debate polls showed Fox and Labastida were in a virtual dead heat.

Throughout his campaign Fox hammered home the message that it was time to get rid of the PRI. He also sought to court the left and his message appealed to a number of leftists despite the presence of a DRP candidate. As the campaign wound down Fox threatened civil action in the form of PAN-sponsored protests if the election were to prove fraudulent—initially citing a less than ten percent margin of victory as the benchmark, though he later amended that figure in a *Newsweek* interview.

Less than two weeks before the election, Fox was accused of accepting illegal campaign funds from corporations in Belgium and the U.S. The accusations proved untrue and Fox filed a defamation lawsuit, though for a few

days he was sidetracked in a struggle to clear his name. In the end Fox was the people's choice, winning 42.5 percent of the vote as opposed to Labastida's 36.1 percent, according to Mexico's Federal Electoral Institute.

### Periodicals

*Financial Times*, January 28, 1998.

*Guardian*, May 30, 1995.

*Houston Chronicle*, September 4, 1993; July 3, 2000.

*Los Angeles Times*, August 30, 1991; September 3, 1994; April 9, 2000; May 9, 2000; July 8, 2000.

*Milwaukee Journal Sentinel*, July 10, 2000.

*Newsweek*, June 26, 2000.

*New York Times*, May 27, 2000; June 29, 2000; July 4, 2000.

*St. Louis Post-Dispatch*, June 9, 1995.

*San Diego Union-Tribune*, April 28, 2000. □

## William Fox

**William Fox (1879-1952), was a creative businessman whose films influenced the lives of millions of people around the world.**

William Fox was born in Tulchva, Hungary on January 1, 1879. His parents, Michael Fox, a machinist, and Anna Fried Fox, brought their son to the United States as an infant. He was educated in New York City schools. On his twenty-first birthday, Fox married Eva Leo; they had two daughters. After working for a few years in the garment industry, Fox started his motion picture career in 1904 by buying a nickelodeon in Brooklyn, New York, for \$1,666.66. Within a few years he had organized a chain of movie theaters and a production company.

### Challenged Edison

One of Fox's first critical decisions was to challenge the monopoly established by Thomas A. Edison and his associates, who sought to control the production, distribution, and exhibition of films on the basis of their possession of existing patents. Their organization, the Motion Picture Patents Company, formed the General Film Company in April 1910 specifically to absorb all licensed film exchanges. By January 1912, fifty-seven of fifty-eight exchanges were bought out, but Fox refused to surrender. His firm, The Greater New York Film Rental Company, initiated a lawsuit against the Patents Company as an unlawful conspiracy in restraint of trade, which had the immediate result of deterring his opponent. Fox had been quick to realize that showing one film many times over throughout the United States (or throughout the world) would produce considerable income on a relatively small investment. In 1913 he organized the Box Office Attractions Company, a film-rental company. Thus, for all practical purposes, Edison's trust had been broken long before the final court decision was made in 1917.

The successful outcome of Fox's legal battle greatly affected the motion picture industry. Free competition



forced improvement in the quality of productions, the star system was established, and Hollywood eventually became the mecca for aspiring actors and actresses. While some companies, including Biograph and Pathe, under the Patents Company aegis, refused to give screen credits, Fox and other producers, among them Carl Laemmle, used credits to attract the best performers, who thereby gained public recognition. Although this attitude was a source of future trouble for the film magnates, it also brought them success. Fox, Laemmle, Adolph Zukor, Jesse L. Lasky, and others gained incredible power. As Fox remarked, the local cinema replaced the corner saloon as a social center. Fox charged as much as twenty cents' admission to his theaters in the early days and introduced such niceties as organ accompaniment, ornate interiors, vaudeville novelties, noiseless projection, and improved service.

### Early Film Productions

Fox produced his first movie in a rented studio at Fort Lee, New Jersey. It was called *Life's Shop Window* and was well received. The Fox Film Corporation was organized in 1915, and the same year Fox produced *Carmen* at Fort Lee with Theda Bara. (Another early star in his stable was Annette Kellerman.) During World War I, Fox served as chairman of the theatrical American Red Cross drive and of the United War Work Campaign Fund drive. Although he was motivated by patriotism and goodwill, these activities also brought valuable publicity to his films and stars.

In 1919 Fox acquired a studio on Tenth Avenue in New York City; he produced dozens of pictures there on a comparatively large scale. Later he moved to Sunset Studios in Hollywood, where he had established a production unit around 1917. Fox showed imagination in selecting stories, film writers, directors, and players. Among others, he hired Frank Borzage, the best of the sentimentalists and proponents of gauzed photography, who directed *Seventh Heaven* (1927) and *Street Angel* (1928). He also employed the brilliant German scriptwriter Carl Mayer and signed up Janet Gaynor, later one of his most successful stars.

In the films he made after World War I, Fox created sentiment with children, wicked men, sensual vamps, and white-haired mothers. *Over the Hill* (1921), *The Custard Cup* (1922), and *The Four Devils* (1928) typified the style of that period. Some critics claimed that Fox spent lavishly on "art" for second-rate productions. A number of his pictures were based on classics, with the obvious intent of achieving popular appeal and increasing profits. His films were a product of their times, but he continually sought new techniques to improve photography, scripts, and acting for the screen. Among his better-known productions were *What Price Glory?* (1927), *Evangeline* (1929), *Cleopatra* (1934), *Les Misérables* (1935), and *A Tale of Two Cities* (1935).

### Talking Pictures

In 1925, a year before any Hollywood studio showed a commercial interest in sound, Fox spent \$60,000 to acquire 90 percent of western hemisphere rights to Tri-Ergon, which included important flywheel patents for talking pictures. The following year he bought Movietone, a sound-on-film process invented by Theodore Case and Earl I. Sponable. Fox Movietone News became famous for its excellent camera work and sound reproduction. For several years Warner Brothers and Fox were the only two studios in the field of sound pictures. By 1930, however, Fox began to claim innumerable infringements on his flywheel patent rights and went to great legal expense to protect his position. Nonetheless, in 1935 the Supreme Court annulled the decisions of all the lower courts that had decided in his favor. Fox had gambled heavily on collecting large sums in damages and, in the midst of a worldwide economic depression, he suddenly found himself financially overextended.

Fox had vast holdings that included the Fox Film Corporation; Loews, Incorporated, which he had bought for about \$44 million; and an interest in Gaumont-British. The total value of his properties was estimated to be about \$300 million. After the 1929 stock market crash almost every Hollywood studio was in financial trouble, and the Fox empire gradually fell apart. In 1930 Fox had sold his controlling interest in the production, distribution, and theater holdings in the United States and abroad for a reported \$18 million. When the Fox Film Corporation merged with Twentieth Century Pictures, another producing organization, in 1935, the new company became known as Twentieth Century-Fox.

### Jail Sentence

For years Fox was in and out of courts in connection with complicated bankruptcy proceedings. On October 20, 1941, he was sentenced to a year and a day in jail (which he served) and \$3,000 for conspiring to obstruct justice and defraud the United States in relation to the bankruptcy. In 1944 he tried to stage a comeback in the film industry, but without apparent success. Four years later he offered a public-service documentary on Sister Elizabeth Kenny's concept of the treatment of poliomyelitis that was shown at Town Hall in New York City.

Fox spent his last years in Woodmere, Long Island. Although he had lost much of his material wealth and faced the disgrace of a jail sentence, no one could detract from his achievements as a creative businessman who produced films that influenced the lives of millions of Americans. He died in New York City on May 8, 1952.

### Books

- Geduld, Harry M., *The Birth of the Talkies*, 1975.
- Jacobs, Lewis, *The Rise of the American Film—A Critical History*, 1939.
- Jarvie, I. C., *Movies and Society*, 1970.
- Lahue, Karlton C., *Bound and Gagged*, 1968.
- Rotha, Paul and Richard Griffith, *The Film Till Now—A Survey of World Cinema*, 1967.
- Sinclair, Upton, *Upton Sinclair Presents William Fox*, 1933.
- Wright, Basil, *The Long View*, 1974.

### Periodicals

- New York Times*, May 9, 1952. □

## Girolamo Fracastoro

**The British medical journal *Lancet* called Girolamo Fracastoro (1478-1553) "the physician who did most to spread knowledge of the origin, clinical details and available treatments of [the sexually-transmitted disease syphilis] throughout a troubled Europe." A true Renaissance man, Fracastoro excelled in the arts and sciences and engaged in a lifelong study of literature, music, geography, geology, philosophy, mathematics, and astronomy, as well as medicine.**

**G**irolamo Fracastoro (pronounced jee-RO-luh-mo Frock-uh-STO-ro), the sixth of seven brothers, was born in 1478 into an old Catholic family from Verona (now in Italy.) His mother, Camilla Mascarelli, reportedly died when Fracastoro was still a child. Many members of the family had careers in law or in civil service.

Fracastoro spent his childhood in his father's villa, Incaffi, which was set on Lake Garda, fifteen miles from Verona. He later inherited his father's handsome estate and went on to enjoy a life of prosperity, though his family was



not of the nobility. Fracastoro received his first schooling from his father, who taught him about literature and philosophy. As an adolescent he attended the University of Padua, where he was entrusted to the watchful eye of Girolamo Della Torre, a physician and family friend. There he studied mathematics, astronomy, and medicine, as well as literature and philosophy. Fracastoro received his medical degree in 1502. He later published works on the philosophy of nature and studied the medicinal properties of plants.

In 1502 Fracastoro became an instructor of logic at the University of Padua, where soon after he also began teaching anatomy. During this period, he was a colleague of the Polish astronomer Nicolas Copernicus (1473-1543), who had enrolled at Padua to study medicine at about the same time.

Fracastoro married Elena de Clavis (or Schiavi) about 1500. The couple produced five children. Three, Giovanni Battista, Paolo, and Giulio, died at an early age, and were commemorated in one of their father's poems. The only children to survive their father were son Paolo Filippo (born in 1517) and daughter Isabella.

### Began Medical Career

In 1508, after the death of his father, Fracastoro left Padua. At that time a threat of war between Venice and the army of Emperor Maximilian I (Holy Roman Emperor) had caused the closing of the University of Padua. Fracastoro's friend, Bartolomeo d'Alviano, the leader of the army of Venice, was appointed to the rank of Duke of Pordenone for

his victorious battles. He invited Fracastoro to live with him and teach at Alviano's short-lived school, the Accademia Firulana.

Fracastoro stayed with Alviano, working as a physician, until Alviano was taken prisoner after his defeat at the battle of Agnadello in 1509. Fracastoro then returned to Verona, where he continued his studies, reorganized his estate, and served as a physician to patients who came to consult with him from all over Italy. His practice, from which he earned a living, extended from the years 1509 to about 1530.

### Wrote Poem on Syphilis

At Verona, Bishop Gian Matteo Gilberti, a man of great culture and a patron to scientists and artists, provided Fracastoro with a house on Lake Garda. Beginning in 1511, Fracastoro alternated his time between his Verona home and his mountain villa at Incaffi. The villa became a center for intellectuals living in the area, who met there to discuss philosophical and scientific issues. Along with his friend, Cardinal Pietro Bembo, Secretary of Briefs to Pope Leo X, he belonged to the prestigious academy of Manutius. Fracastoro was interested in politics but apparently never held public office. He wrote frequently about the liberal arts, the natural sciences, and medicine.

In 1521 Fracastoro wrote the narrative poem that made him famous: *Syphilis Sive de Morbo Gallico* (*Syphilis or the Gallic Disease*). The poem, which contained nearly 1,300 verses and was written in Latin, was dedicated to Pietro Bembo, who praised the poet's artistry when Fracastoro sent the poem for his review. The first two parts of the poem were published in 1525; a third part was added in 1530. The poem was eventually published in more than 100 translations and editions throughout Europe.

*Syphilis Sive de Morbo Gallico* established the use of the term "syphilis" for that sexually transmitted disease. The term was most likely derived from the name of the hero of the poem, the shepherd Sifilo. According to the poem, a mythological tale, the disease was originated and inflicted by the sun god on Sifilo, who had become unfaithful to him. However, in time the god forgave Sifilo and cured him through the use of a leafy tree he had created called guaiacum, from which people learned to extract a medicine that provided the cure. In the poem, the nymph Lipare also advised the shepherd that mercury could be used to cure the disease. The poem was translated from Latin to English by the English poet laureate Nahum Tate in 1686.

### Poem Brought Acclaim

Zanobio referred to Fracastoro's poem as "a magnificent paradigm of formal sixteenth-century virtuosity in refined Latin." Particularly noteworthy, he pointed out, were "Fracastoro's manner, his feeling for human suffering, as exemplified in the episode of the death from syphilis of a young man from Brescia, and in the vivid description of the misfortunes that pervaded Europe, and especially Italy, in the first half of the sixteenth century."

*Syphilis* became one of the most prominent poems of its time. In the poem, Fracastoro referred to syphilis as "the

French disease.” However, it was also called by other names, including “the Neopolitan disease” by those who believed it had been brought to the city of Naples from America by Christopher Columbus’s sailors.

Margaret M. Hudson noted, “Whatever its origin the disease was brought to Naples by the Spanish troops sent to support Alfonso II of Naples against Charles VIII of France in 1494-95. It is generally believed that the disbandment and dispersal of Charles VIII’s army of [soldiers-for-hire] who had themselves been infected by the Neapolitan women, was responsible for the rapid spread of syphilis throughout the continent.” Hudson added that Fracastoro “outlines the incubation period and the symptoms [of syphilis] and correctly reports a decline in the severity of the disease with time.”

### Scientific Contributions Honored by Pope

Another of Fracastoro’s great scholarly contributions was his 1538 volume on astronomy entitled *Homocentricorum Seu de Stellis Liber Unus* (*Homocentricity or the Book of Stars*). It espoused the theory, wrote Hudson, “that the earth and planets rotate around a fixed point in spherical orbits, thus foreshadowing by some years the publication of the far better work of his fellow-student Copernicus.”

In *Homocentricorum* Fracastoro made mention of superimposing lenses, which may be the first suggestion of the use of the telescope; he also observed that comet tails point away from the sun, a phenomenon studied by modern scientists. Fracastoro also discussed the forces of attraction and repulsion between bodies, later examined by the famed English scientist Sir Isaac Newton (1642-1727). In Fracastoro’s honor, later astronomers named a feature on the moon after him. In the realm of geography, Fracastoro was the first to use the term “pole” to refer to the ends of the Earth’s axis and to suggest the use of rectilinear maps (maps with lines.)

In 1545 Pope Paul III nominated Fracastoro, who served as his personal physician, as medical adviser to the Council of Trent, which the physician attended as a guest of the noted Cardinal Madruzzo. The Council of Trent (1545-1563), the longest council ever convened by leaders of the Roman Catholic Church, was called to examine and condemn the doctrines taught by Martin Luther and other Protestant reformers, and to reform discipline within the Roman Catholic Church.

Together with another physician by the name of Balduino, Fracastoro voiced the opinion that the Council should leave Trent because a pestilence was raging there. As a result, in 1547 the Pope transferred the Council to the city of Bologna. In 1546 Fracastoro received a special honor by being appointed canon of Verona, a non-religious patronage position.

### Early Proponent of Germ Theory of Disease

Fracastoro’s 1546 work, *De Contagione et Contagiosis Morbis* (*On Contagion and Contagious Diseases*) developed the older notion that infection results from tiny, self-multiplying bodies that can be spread by direct or indirect contact through infected objects, such as clothing, or can even be passed through the air over long distances. For this work, he has been called by some a pioneer of epidemiology, the branch of medical science that deals with the incidence, distribution, and control of disease in a population.

Hudson explained that “Originality cannot be claimed for *De Contagione* or for [Fracastoro’s] poem on syphilis, nor was it claimed. Both classical and medieval writers had advanced similar seeds of disease [theories] and there had been at least two other poems on syphilis. Fracastoro, however, gave a clearer and more coherent and comprehensive presentation of these concepts.”

How widely Fracastoro’s views on the spread of disease were accepted at the time remains controversial. However, they were undoubtedly overshadowed by the more popular, though erroneous, miasma theory, which held that exhalations from the earth or air caused diseases. It was to be nearly 300 years before French microbiologist Louis Pasteur (1822-1895) determined the role of bacteria in causing diseases and German bacteriologist Robert Koch (1843-1910) defined the procedure for proving that specific diseases are caused by specific organisms.

### Late Career and Death

Fracastoro wrote a Latin dialogue in memory of his friend Andrea Navagero. In the work, entitled *Naugerius, Sive de Poetica Dialogus* (*Navagero, or a Dialogue on the Art of Poetry*, not published until 1555, after Fracastoro’s death), the writer discussed in dialogue form the various literary problems and theories of the time of the Renaissance.

Whether writing of science, medicine, or literature, Fracastoro displayed an incisive intellect. According to Bruno Zanolio, “Philosophical considerations were always inherent in (Fracastoro’s) more purely scientific work. His thought is framed in those philosophies of nature which were developed by various writers of the Italian Renaissance.” Zanolio explained that they were the result of two components, “a diminished interest in theological subjects in general and an increased interest in the study of nature, in which man lives and which is held to be the only subject appropriate to his understanding, which requires certainty.”

Fracastoro remained mentally vital well into old age. He died from a stroke on August 6, 1553, probably at his Incaffi house. His body was then taken to Verona and buried at the Church of Santa Eufemia. There it rested until around 1740, when the remains were exhumed; they have since been lost. A statue honoring Fracastoro was erected in Verona on the Piazza dei Signori.

## Books

- Benet, William Rose, *The Reader's Encyclopedia*, Thomas Y. Crowell Co., 1965.
- Bondanella, Peter, and Julia Conaway Bondanella, *Dictionary of Italian Literature*, Greenwood Press, 1979.
- Cambridge Dictionary of Scientists*, edited by David Millar, Cambridge University Press, 1996.
- Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie, Charles Scribner's Sons, 1972.

## Online

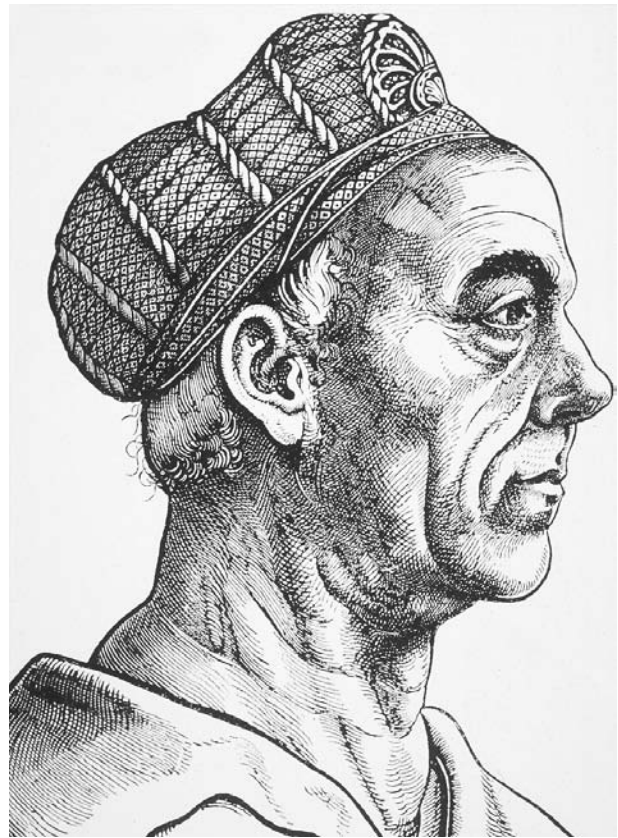
- "Fracastoro and Syphilis: 500 Years On," *Lancet*, <http://www.findarticles.com> (December 14, 2000).
- "Girolamo Fracastoro," *Encyclopedia Britannica*, <http://www.britannica.com> (December 14, 2000).
- "Girolamo Fracastoro," *Infoplease.com*, <http://www.infoplease.com> (December 14, 2000).
- "Girolamo Fracastoro," *Catalog of the Scientific Community*, <http://es.rice.edu/ES/humsoc/Galileo/Catalog/Files/fracstro.html> (December 14, 2000).
- "History of Medicine," *Encyclopedia Britannica*, <http://www.britannica.com> (December 14, 2000).
- "Microbiology," *Encyclopedia Britannica*, <http://www.britannica.com> (December 14, 2000). □

# Jakob Fugger

**Jakob Fugger (1459-1525) was one of Renaissance Europe's wealthiest citizens. His influence in royal circles continued to alter the continent's history for decades after his death. Though he was not the founder of the German mercantile and banking dynasty that bore his name, Fugger enriched it exponentially by entering into lucrative financial contracts with the Holy Roman Empire that gave him landholdings as well as profitable concessions in mining and trade.**

At the time of Fugger's birth on March 6, 1459, his family was already one of the most prominent in Augsburg, Bavaria's leading city before its eclipse by Munich. Fugger's grandfather Hans had relocated from Swabia around 1367; he married well and rose to prominence in the city's weavers' guild. His textile and import business grew in profit, and established connections in Venice. Hans's two sons, Andreas and Jakob I, continued the business until disagreements forced dissolution of the partnership in 1454. Andreas's branch of the family was known as the Fugger vom Reh, or "Fugger of the Doe," because of the deer on their coat of arms. It declined considerably in stature after the business declared bankruptcy in 1499. Jakob I was more prudent with his assets, and this branch was eventually granted its own crest, a shield with a lily on it that earned them the designation "Fugger von der Gilgen."

In 1441, Jakob I married the daughter of the master of the Augsburg Mint. The third of their seven sons was Jakob II. He and another brother, Markus, were expected to enter



the priesthood, but the death of their father in 1469, when Fugger was ten, altered this destiny. His mother took over the business until three other surviving sons came of age. The trading and import firm of Ulrich Fugger and Brothers, as it became known, continued to grow, but when one of the trio died in 1473, the fourteen-year-old Fugger was told to abandon his plans for the priesthood and enter the family firm. He was sent to Venice, where his brothers kept a warehouse and office in the headquarters of the *Fondaco dei Tedeschi* (German Guild), and studied bookkeeping there with a decided zeal. At the time, the practice of double-entry bookkeeping had recently been systematized, and Fugger began looking into the various family enterprises to determine whether or not they were profitable according to this new method of listing assets and liabilities.

## Profited from Tirolean Mines

When he completed his studies around 1485, Fugger was given control of the family business interests in Innsbruck, Austria. The mountain region was booming with the discoveries of large stores of mineral wealth. In 1487 Fugger joined with a businessman from Genoa in a loan made to the rich but profligate Archduke Sigismund of Tirol. It was Fugger's first transaction with the Hapsburg dynasty, whose talent for squandering its vast resources brought both its own demise and the rise of merchant empires like Fugger's. Fugger's firm lent the Archduke 23,000 florins. The collateral for the loan was a temporary mortgage on some profitable silver mines in the region, whose extracts were customarily turned over in their entirety to Sigismund.



Fugger and his brothers made an even larger loan to the Archduke the next year, and continued to receive the extracts for several more years.

The original business of Fugger's firm, which imported raw cotton from Mediterranean ports and carried it to Augsburg and other northern weaving centers by mule, still existed. However, it expanded to include silks, herbs, rare foods, and even jewels; it also controlled much of Europe's pepper market for decades. Under Fugger's savvy management, the firm ventured into copper mining in Hungary, and acquired a fleet of ships that sent their wares to Antwerp and ports in the Netherlands. Fugger's fortunes increased when the troubled Archduke Sigismund gave his dukedom over to another Hapsburg, the Holy Roman Emperor, Maximilian I. But the emperor was also a notoriously poor manager of money, and soon turned to Fugger for help. The first loan was made in 1495 to repay an army that the emperor had hired to fight one of the battles in his protracted conflict with France and Italy. This and other loans were secured with concessions for mining in Silesia, now present-day south Poland and Slovakia. Here Fugger controlled vast stores of copper, and the firm enjoyed a lucrative monopoly on the metal for several years. In its day, Fugger's enterprise—centered around present-day Banská Bystrica—was the world's largest mining operation.

### Became Papal Agent for Germany

With its extensive internal courier service between ports in Italy, Augsburg, and mining districts in Eastern Europe, Fugger's firm was in an ideal position to collect payments due to the church in Rome from Germany and more remote outposts of Christianity. At the time, banking in places like Scandinavia and Poland was barely existent, and sending a financial transaction to Rome could take as long as six months. The Fugger business issued letters of credit that could be carried by papal agents and exchanged from one branch office to another. This also eliminated the dangerous practice of carrying large amounts of coinage.

By 1510, the two other Fugger brothers in partnership had died. Fugger took his four nephews—Hieronymus, Ulrich, Raimund, and Anton—into the firm, which was then renamed Jakob Fugger and Nephews. By this point Fugger was inextricably involved in the finances of the Holy Roman Empire through a number of arrangements with Maximilian, who came to view Fugger's wealth as his own personal treasury. In return, Fugger was granted landholdings, a title of nobility in 1511, and further rights as a count in 1514. A few years later, he was forced to bribe several electors—the princely rulers of various parts of the empire—in order to ensure the succession of Maximilian's grandson, Charles V, to the throne. But with the accession of Charles as Holy Roman Emperor, a deal was struck. The bribes would be repaid to the Fugger firm through an arrangement that diverted revenues due the Spanish crown, also a Hapsburg possession, from three knightly orders in Spain as well as mining ventures in mercury and silver. These were known as the leases of Maestrazgo. A Fugger representative was installed at the Spanish court to oversee the business there.

### The First Office Memo

As the Fugger wealth grew, so did its list of critics. Nurnberg authorities took Fugger to court in the 1520s on charges of operating a monopoly on copper; other sharp words came from German humanist and reformer Ulrich von Hutten, a satirist and supporter of Martin Luther. Fugger was forced to hire an early version of the lobbyist/public-relations director in the form of Konrad Peutlinger, a lawyer, theologian, and humanist. Peutlinger served as chief advisor to Fugger and drafted a number of trade laws for the Holy Roman Empire, which Maximilian then signed. A problem of adherence to Christian doctrine also plagued Fugger's conscience: technically, Christians had been prohibited from charging interest, which was known as the sin of usury. Loans were usually contracted with an additional payment to be made for "trouble, danger, and expense" that circumvented the prohibition on interest; overcharging or allowing a share in profits was another common evasion of the church law. Fugger was one of several merchants of the era who pleaded with Rome to rescind the ban.

Fugger was also a prescient executive. He launched the Fugger Newsletters, considered the first business communications in history. Company correspondents from across Europe wrote of local news and developments that might affect trade and commerce; they chronicled the decline of the Hapsburg fortunes and the abuses of the Spanish Inquisition. Historians view these daily briefs, usually written in Italian—the language of commerce at the time—as the forerunner of the popular press.

### Cynicism Incited Genuine Dissent

In the last five years of his life, Fugger, now known as *der Reiche*, or "the Rich," came to play an increasingly important role in the conflict between church and state that would soon engulf the continent in carnage. The Fugger firm's role as the papal agent in Germany expanded with Pope Leo X's announcement, in 1517, of the sale of indulgences, the proceeds of which would be used to refurbish St. Peter's Cathedral in Rome. Indulgences were pieces of paper absolving the bearer of various sins. Johann Tetzel, a priest known as the Pardoner, began giving sermons in Germany and urged listeners to purchase their salvation and help the church at the same time. A deal was made whereby the Fugger banks, with branches across the Continent, would collect these revenues for a lucrative share. A Fugger agent who accompanied Tetzel held the key to the indulgence chest. When it was full, it was opened by an officer of the company, who then remitted the amount to the Fugger office in Leipzig, where half remained.

Some buyers of these indulgences questioned their validity, and brought them to Martin Luther, a theologian at the University of Wittenberg. He refused to authenticate them, which prompted Tetzel to object. In response, Luther composed his historic "Ninety-Five Theses" and nailed this document of dissent to the door of the Wittenberg cathedral—an act that launched the Protestant Reformation. Luther also voiced objections to Fugger and his banking deals, and mentioned his name specifically in his 1520 tract *An Open Letter to The Christian Nobility of the German Nation*.

*Concerning the Reform of the Christian Estate.* Excommunicated in 1521, Luther was taken in by the elector of Saxony, which caused a split in the Holy Roman Empire. Charles V then declared war on Luther and Protestantism. Fugger lent Charles funds to finance armies in this battle.

### Patron of Augsburg

The great German Renaissance painter, Albrecht Durer, immortalized Fugger in a 1520 portrait that renders Fugger's taciturn personality and firm, businesslike attitude quite decisively. In his lifetime, Fugger was the great patron of Augsburg. He built several edifices in his city, including churches, and founded the Fuggerei, an almshouse originally intended to serve as a retirement home for his aged servants. Fifty cottages, designed to hold two families each, were built outside of Augsburg. The Fuggerei are considered the world's first social settlement, and survived into the twenty-first century.

Fugger died on December 30, 1525, in Augsburg. His worth was estimated at \$75 million, but he left no direct heirs. The company assets were bequeathed to nephew

Anton Fugger, under whom the firm remained profitable for several decades. It played a vital role in financing the Holy Roman Empire's battle against Protestantism, and ventured into trade with Spain's South American holdings as well as the slave trade that ran from Africa to the New World. But the Spanish Empire became one of its largest creditors. When King Phillip II declared Spain bankrupt in 1607, the Fugger firm foundered. It was entirely liquidated by 1640. Three aristocratic branches of the family survive: the Fugger-Kirchbergs of Oberkirchberg, the Fugger-Glotts of Kirchheim, and the Fugger-Babenhausens. Fugger's lavish private chapel in Augsburg remains. Above the crypt his epitaph states (according to his wishes) that the deceased was "second to none in the acquisition of extraordinary wealth."

### Books

Crossen, Cynthia, *The Rich and How They Got That Way*, Crown Business, 2000.

Ehrenberg, Richard, *Capital and Finance in the Age of the Renaissance: A Study of the Fuggers and Their Connections*, translated by H. M. Lucas, A. M. Kelley, 1963. □

# G

## Jerry Garcia

**The rock and roll industry has seen its share of bands and singers. What is remarkable about the Grateful Dead is that the band has been performing since the 1960s and its following endured for several decades. At the head of this long-lived group was singer and guitarist, Jerry Garcia (1942-1995).**

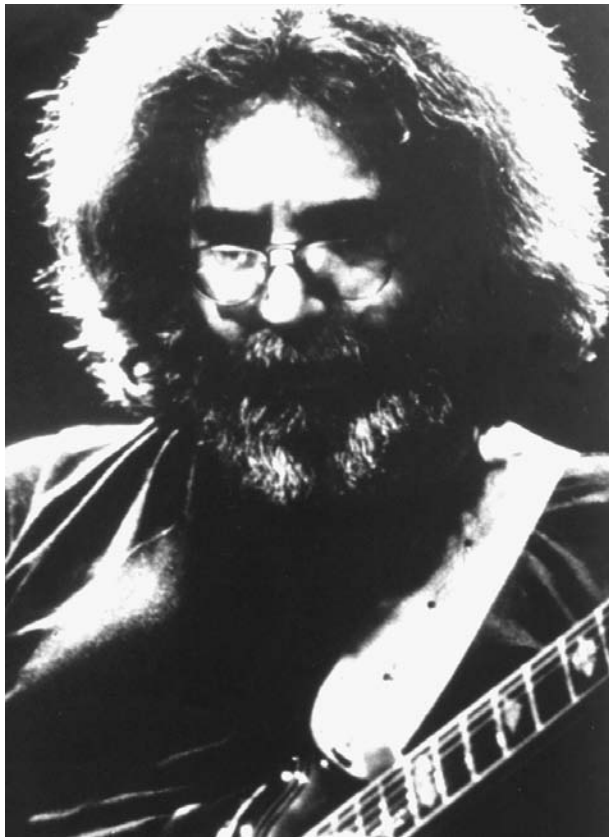
The band has become a benchmark in music history. According to *Rolling Stone*, the Grateful Dead was ranked 29th among the 40 highest-paid entertainers in 1989, with an estimated annual income of \$12.5 million. "[A]fter decades of touring with a consistency and success unmatched by any other band, the Grateful Dead have a relationship with the Deadheads—the fans who follow the band with a near-religious fervor—that is unique in the history of rock and roll," Fred Goodman wrote in *Rolling Stone* in 1989. "On the eve of the release of their 22nd album, *Built to Last*, the Grateful Dead stand as an American dynasty like no other."

Heading that dynasty, Garcia was as much a product as a shaper of his time. On August 1, 1942, in San Francisco, Jerome John Garcia was born to a family of music lovers. His father, Joe Garcia, was a ballroom jazz musician and bartender who came to California from Spain in the 1920s. His mother, Ruth Garcia, was a Swedish-Irish nurse whose family immigrated to San Francisco during the gold rush. In a 1991 interview with James Henke of *Rolling Stone*, Garcia talked about his father. "He played woodwinds, clarinet mainly. He was a jazz musician. He had a big band—like a 40-piece orchestra—in the 1930s. The whole deal, with strings, harpist, vocalist. I remember him playing me to

sleep at night. I just barely remember the sound of it. But I'm named after Jerome Kern, that's how seriously the bug bit my father."

When he was just five years old, Garcia lost his father in an accident. "He was fishing in one of those rivers in California, like the American River," Garcia recalled in the interview with Henke. "We were on vacation, and I was there on the shore. I actually watched him go under. It was horrible. I was just a little kid, and I didn't really understand what was going on, but then, of course, my life changed. It was one of those things that afflicted my childhood. I had all my bad luck back then, when I was young and could deal with it." The other childhood trauma was the loss of a finger on his right hand. "[T]hat happened when I was five too. My brother Tiff and I were chopping wood. And I would pick up the pieces of wood, take my hand away, pick up another piece, and *boom!* It was an accident." The shock, however, came when the bandages were removed and young Garcia realized his finger was truly gone. "But after that, it was okay, because as a kid, if you have a few little things that make you different, it's a good score. So I got a lot of mileage out of having a missing finger when I was a kid."

After his father's death, he lived for a time with his grandparents and then returned to live with his mother, who took over her husband's bar. Located next to the Sailor's Union of the Pacific, the bar was frequented by sailors who traveled around the world. "They went out and sailed to the Far East and the Persian Gulf, the Philippines and all that, and they would come and hang out in the bar all day long and talk to me when I was a kid. It was great fun for me," he told Henke. One sailor, an old sea captain, he remembers distinctly: "he'd tell me these incredible stories. And that was one of the reasons I couldn't stay in school. School was



a little too boring. And these guys also gave me a glimpse into a larger universe that seemed so attractive and fun, and you know, *crazy*."

Ironically, Garcia's first foray into music was boring as well. He took piano lessons for eight years and hated them. "I took lessons on the piano *forever*—my mom made me," he said to Anthony DeCurtis of *Rolling Stone* in 1993. "None of it sank in. I never did learn how to sight-read for the piano—I bluffed my way through. I was attracted to music very early on, but it never occurred to me it was something to do—in the sense that when I grow up I'm going to be a musician." And then Garcia's older brother started tuning in to early rock and roll and rhythm and blues. "When I was 15, I fell madly in love with rock and roll. Chuck Berry was happening big, Elvis Presley—not so much Elvis Presley, but I really liked Gene Vincent, you know, the *other* rock guys, the guys that played guitar good: Eddie Cochran, Buddy Holly, Bo Diddley." At that time, the electric guitar was a new phenomenon and as soon as he heard it, Garcia was hooked. He asked his mother for one for his birthday and started on the road he still travels. "I was just beside myself with joy. I started banging away on it without having the slightest idea of *anything*. I didn't know how to tune it up. . . . I never took any lessons. I don't even think there was anybody teaching around the Bay area. I mean electric guitar was like from *Mars*, you know. You didn't see 'em even."

## The Birth of a Band

Lessons or no lessons, Garcia learned his way around the instrument and immersed himself in the radical music of the day. "Rock and roll wasn't cool, but I *loved* rock and roll," he explained to DeCurtis about his formative years. "I used to have these fantasies about 'I want rock and roll to be like *respectable* music.' I wanted it to be like *art*. . . . I wanted to do something that fit in with the art institute, that kind of self-conscious art—'art' as opposed to 'popular culture.'" Independent and strong-willed, Garcia took to spending time with a rowdy group of San Francisco teenagers. At 17, he joined the U.S. Army and was stationed in San Francisco. Garcia, with idle time on his hands, practiced acoustic guitar in the barracks, learned songs over the radio by ear, and copied finger positions from books.

After nine months, he left the army and took to living in his car, playing music, and absorbing the "scene" of San Francisco in the early 1960s. At about that time, he went to the Art Institute in San Francisco to study painting. "I wasn't playing guitar so much—I'd picked up the five-string banjo in the army," he told Bill Barich of *New Yorker* in 1993. "I listened to records, slowed them down with a finger, and learned the tunings note by note. By then I was getting pretty serious about music—especially about bluegrass." He and a friend toured numerous bluegrass festivals in the Midwest and absorbed the unique sound of the music. Although he made a little money giving lessons, he often lived in his car in a vacant lot in East Palo Alto, California. He began to meet other young musicians, like folk guitarist Bob Weir and blues-harmonica player and organist Ron McKernan. They formed the Mother McCree's Uptown Jug Champions in 1964. Once the Beatles invaded the United States, Garcia's band re-formed as an electric blues band, the Warlocks, in 1965.

At the same time, radical events were taking place in San Francisco. Ken Kesey, who was taking part in government-sponsored LSD tests, began throwing parties called the Acid Tests. It was at these energetic happenings that the Warlocks developed the sound that became known as psychedelic rock. "What the Acid Test really was was formlessness," Garcia explained to *Rolling Stone's* Goodman in 1989. "It's like the study of chaos. It may be that you have to destroy forms or ignore them in order to see other levels of organization. For me, that's what the Acid Test was—that's what it was a metaphor for. If you go into a situation with nothing planned, sometimes wonderful stuff happens. LSD was certainly an important part of that for me." Late in 1965 the band changed its name after Garcia picked "grateful dead" at random from a dictionary. Essentially ignoring the definition included, the band members chose to interpret the new phrase as signifying "cyclical change." In 1966 the band members moved into a house in San Francisco to live communally and performed at well-known music halls. In addition, the Grateful Dead also performed free concerts at Golden Gate Park to contrast the business attitudes that were beginning to pervade rock and roll and threaten their anarchist, hippie lifestyle.

Their first album, *The Grateful Dead*, was released by Warner Brothers in 1967. The band's early experience with

a large studio corporation and extensive touring was not a happy one. "Their first four albums had not sold well, leaving them in debt to their label, Warner Brothers," Barich of *New Yorker* reported. "But they recouped with two straight hits in 1970, *Workingman's Dead*, and *American Beauty*, which were both primarily acoustic and were distinguished by the richness of the songs and the band's clean, crisp playing." The Grateful Dead used their success to leave the label, buy a small house, and begin handling their own business affairs. Barich continued, "In 1972, they tipped off their fans to their new free-form operation by inserting an apparently harmless message in the liner notes of a live album recorded on tour in Europe. 'DEAD FREAKS UNITE!' the message read. 'Who are you? Where are you? How are you? Send us your name and address and we'll keep you informed.' With one gesture, the Dead eliminated the barriers between themselves and their audience, and established a direct flow of communication." At last count, Barich noted, there were 90,000 Deadheads—as their fans are known—on the U.S. mailing list and 20,000 on the European one.

### The Golden Years

Members of the Grateful Dead, Garcia included, survived the turbulent 1960s, the wrath of critics and fans alike—when albums and concerts did not hold up to expectations—drug abuse, the death of some band members, and several decades of changing musical tastes. Yet Garcia's band was still going strong in what he termed their "golden years," the 1990s.

Remarking on the appeal of the Grateful Dead to succeeding generations, Garcia commented to Henke in the 1991 *Rolling Stone* interview that "here we are, we're getting into our fifties, and where are these people who keep coming to our shows coming from? What do they find so fascinating about these middle-aged bastards playing basically the same thing we've always played? I mean, what do seventeen-year-olds find fascinating about this? I can't believe it's just because they're interested in picking up on the 1960s, which they missed. Come on, hey, the 1960s were fun, but shit, it's fun being young, you know; nobody really misses out on that. So what is it about the 1990s in America? There must be a dearth of fun out there in America. Or adventure. Maybe that's it, maybe we're just one of the last adventures in America."

When speaking with Barich of *New Yorker*, Garcia offered another angle from which to understand the band's success: He thinks that the band affords its followers "a tear in reality"—a brief vacation from the mundane," Barich wrote. "The Dead design their shows and their music to be ambiguous and open-ended . . . they intend an evening to be both reactive and interactive. A Deadhead gets to join in on an experiment that may or may not be going anywhere in particular, and such an opportunity is rare in American life." In addition to the limitless possibilities of their music, the Grateful Dead also offer a spiritual release for both band members and fans. Garcia explained to Henke in 1991: "I thought that maybe this idea of transforming principle has something to do with it. Because when we are on stage,

what we really want . . . [is] to be transformed from ordinary players into extraordinary ones, like forces of a larger consciousness. And the audience wants to be transformed from whatever ordinary reality they may be in to something a little wider, something that enlarges them. So maybe it's that notion of transformation, a seat-of-the-pants shamanism, that is something to do with why the Grateful Dead keep pulling them in. Maybe that's what keeps the audience coming back and what keeps fascinating us, too."

Success came at a price, however. In July 1986, Garcia went into a diabetic coma for a day. He has struggled with drugs, alcohol, cigarettes, and weight problems as well. In the early 1990s, the guitarist had trimmed down and began following a better diet and healthier lifestyle. He branched into the clothing business with a line of ties based on his drawings—even though Garcia never wore a tie. Despite valiant efforts to improve his health, too much damage had already been done. On August 9, 1995 Garcia died of heart failure in Forest Knolls, California.

From the creative mind of a San Francisco child who hated school and homework grew one of the most influential bands in decades. Despite his abhorrence of school, Garcia was a scholarly man and perhaps that has been an intrinsic part of his appeal. "I owe a lot of who I am and what I've been and what I've done to the beatniks of the 1950s and to the poetry and art and music that I've come in contact with," he said to Henke in 1991. "I feel like I'm part of a continuous line of a certain thing in American culture, of a root."

### Books

*Current Biography* 1990, H.W. Wilson Co., 1990.

### Periodicals

*Musician*, October 1981.

*New Yorker*, October 11, 1993.

*People*, July 25, 1994.

*Rolling Stone*, November 30, 1989; October 31, 1991; January 21, 1993; September 2, 1993. □

## Isabella Stewart Gardner

**For decades, Bostonians followed newspaper accounts chronicling the globe-trotting exploits and extensive art collecting of one of the city's most iconoclastic characters, Isabella Stewart Gardner (1840-1924). Gardner and her husband amassed over 2,500 works of art, many of them near-priceless treasures. All of them reside inside her former home, a lavish Italianate villa known as the Isabella Stewart Gardner Museum.**

**G**ardner was born on April 14, 1840 in New York City. She was the first daughter of David Stewart, a second-generation Scottish-American, and Adelia



Smith, whose father had owned a tavern and stable at Old Ferry, Brooklyn. The Stewart family fortune came from a mining and iron business in Pennsylvania. However, her father had grown up near Jamaica, Long Island, New York, on a farm which his daughter would come to love during visits to her formidable paternal grandmother, to whom she was compared as a child because of her own headstrong ways. Called “Belle” as a young girl, Gardner spent much of her childhood in the genteel “Old New York” society chronicled in the novels of Edith Wharton and Henry James, both of whom she knew later as an adult. The family lived in a three-story townhouse at 10 University Place, near Washington Square Park. A sister and two brothers followed. She was educated at small private schools in the neighborhood for girls of affluent families.

Gardner’s pleasant youth was marred by the death of her eleven-year-old sister Adelia, who was two years her junior. In the mid-1850s, it was decided that Belle should attend a finishing school in Paris, and her parents came with her. They socialized with other Americans living there, including the Gardners of Boston, one of that city’s most prominent families. A ship-owning clan, the Gardners had two daughters at the same Paris school. When her term was finished, Gardner traveled to Rome, where she enjoyed visiting museums and Roman ruins. She made the most of her time in Europe, acquiring languages with ease as well as an entirely new wardrobe, and returned home a vivacious dance partner. Gardner was not a great beauty: she had red hair, very fair skin, and portraits show her as quite thin at a

time when voluptuousness was in fashion, but she was quick-witted and an engaging conversationalist.

Those charms attracted the attention of 21-year-old John Lowell Gardner, her friend Julia’s older brother, on an 1859 visit to Boston. Known as “Jack,” he dropped out of Harvard College to enter the family business, and was considered one of the city’s most eligible bachelors. After a brief engagement, they were married at Grace Church in New York on April. 10, 1860. They began life as newlyweds in Boston, soon acquiring a home in the prestigious Back Bay neighborhood where the city’s wealthiest families lived. Gardner was snubbed socially, however, because of her Paris-made dresses and New York vivacity, both of which were out of place in a Boston society still ruled by descendants of the Puritan founders.

### Endured Several Tragedies

For almost forty years, Gardner lived at 152 Beacon Street, the Back Bay’s poshest street, in a five-floor French townhouse with a mansard roof and a wine cellar. Other members of the Gardner clan lived nearby. However, two had married Southerners, and the outbreak of the American Civil War brought several stressful years to the family. Gardner, known for her wit, later claimed to have been too young to remember this era. In 1863, the Gardners became parents to a boy, John Lowell Gardner III, on whom they both doted. But “Jackie” died of pneumonia before his second birthday, which devastated his mother. Later that year, her sister-in-law died in childbirth, and Gardner suffered a near-fatal miscarriage herself soon afterward.

Mired in grief for many months, Gardner finally heeded the suggestion of her doctor to sail for Europe. She and her husband departed in the spring of 1867. They traveled as far as Moscow, but spent much of their time in Paris. Returning to Boston in the fall of 1868, Gardner became intensely involved in a number of cultural activities in the city. She also bought her first painting, an Emile Jacques landscape depicting some sheep under a tree, from Boston dealers Doll and Richards in 1873. After an extensive 1874 trip to the Middle East, the Gardners returned to Boston when her husband’s widowed brother, Joseph Gardner, passed away. They became parents to their three orphaned nephews. With the boys engaged in typically rigorous academic training in preparation for Harvard, Gardner took a keen interest in their schoolwork, and quickly came to realize that her own education had been sorely inadequate. She began reading extensively and attending lectures at Harvard by an eminent art historian, Charles Eliot Norton. The two became fast friends. It was Norton who suggested that Gardner take up collecting rare books in earnest. One her first purchases was a set of volumes by Dante Alighieri.

### Became Target of Innuendo

During this era, Gardner emerged as one of Boston’s most exciting figures, known in the society papers as “Mrs. Jack.” She was liked by many of the more progressive, cosmopolitan younger generation, but disdained by much of formal Boston society. Her dresses from Paris were considered too revealing. In one famous quip, a man tried to

insult her by greeting her with the query, "Pray, who undressed you?" to which she replied "Worth," referring to innovative Paris dressmaker. Gardner did not shirk from publicizing such anecdotes herself, and was even known to encourage them at times. Her husband remained bemused by all the skirmishes. She began holding literary salons and concert recitals in her Boston home. In 1880 she and Jack purchased the adjoining house on Beacon Street in order to build a music room. It also gave them more room for a growing collection of art and decorative objects.

The Gardners took a trip around the world in 1883, and added Asian antiquities to their growing store of treasures. They became friends with some well-known personalities of the day, including the American-born London painter James Whistler. Gardner also befriended novelist Henry James, who immortalized her in his 1902 novel *The Wings of the Dove*. The heroine, Millie Theale, wears her trademark pearls in the same style as Gardner, who was known for a stash of precious strands given to her by her husband. Gardner also had a long friendship with Francis Marion Crawford, a promising young novelist of the day. The Boston scandal sheets printed scurrilous hints that she was romantically linked with Crawford, as it did when famed portrait painter John Singer Sargent painted her in 1888. The likeness caused a stir when it was briefly exhibited, for Gardner wore her signature pearls and a rather low-cut black dress. Local gossip joked that Sargent "had painted her all the way down to Crawford's Notch," a reference to a popular mountain resort of the day. This so angered Jack Gardner that he withdrew the work and it was never again exhibited during his lifetime.

### Built Lavish Villa

Gardner was widowed on December 10, 1898. Jack Gardner left her an estate valued at \$3.6 million, which gave her an income of about \$97,000 annually in an era when income tax was nonexistent. His will affirmed the couple's intention to bequeath to Boston a museum of fine arts. Soon after his death she acquired land at Fenway and Worthington Streets. Gardner hired an architect to design a Venetian-style palace that would serve as her home and a part-time museum. She called it Fenway Court, and it was incorporated as the Isabella Stewart Gardner Museum in 1900. The opinionated patron was intensely involved in every detail of its construction. She instructed the elderly Italian artisans who plastered the ceilings and cornice in Italian. The villa contained a private chapel, an elevator, and telephone. Gardner moved into it in late 1901, living in her luxurious fourth-floor quarters, and personally planned and arranged the exhibition galleries herself. On the first three floors, the galleries are surrounded by a central court, which gives the space a good deal of light on sunny days. Some of the pieces are not accompanied by information about the painter or date of origin, since she wished that viewers would contemplate them on their own merit.

The Museum contains a store of treasures from Europe. With the help of Bernard Berenson, whom she and her husband had known since his student days at Harvard in the 1880s, the collection came to include several priceless Old

Masters. Berenson went on to achieve renown as an art critic and scholar. It was he who incited Gardner to start acquiring the paintings of the Italian Renaissance. Few collectors were interested in such works at the time. Gardner was one of the first to begin to seriously collect them. From impoverished monasteries and minor princely families she bought masterpieces and minor works alike. The museum houses Titian's famed *Europa* as well as *The Concert* from Jan Vermeer, one of the masterpieces of Dutch painting. She also acquired a self-portrait of Rembrandt, and that artist's sole seascape.

### Ironclad Charter to Protect Legacy

The Isabella Stewart Gardner Museum opened to the public on February 23, 1903. Despite the elegance and prestige it brought the city, Gardner remained the target of ill will. Visitors stole small objects. Gardner once caught a woman about to snip off a corner of a valuable tapestry with a pair of scissors. She then decided to charge a dollar admission, which was a large sum in the early 1900s. Moreover, the museum was only open four days a month, and for just three months of the year. Critics pointed out that the museum's founding charter gave it status as an educational institution, so customs duties on the artistic treasures brought into the country had been considerably reduced. Gardner was known for evading duties by other means: she had been storing many of her treasures in a Paris warehouse, but fumed at the high cost. She arranged that much of it would be sent to the London home of an American friend, who then brought them back into United States two years later. The crates were listed on forms as containing household goods valued at \$8,000. When a curious inspector pried open one extremely large crate, Piero della Francesca's *Hercules* was discovered, and a scandal erupted. Gardner was forced to pay \$200,000 in fines.

Despite her love of art, Gardner also had a passion for far less rarified entertainments. She was a fan of baseball and loved to attend prizefights. In 1921, she acquired her last Old Master painting, a madonna by Giovanni Bellini. In her early eighties, she suffered a stroke, but recovered quickly. She still enjoyed a chauffeured afternoon drive. On July 17, 1924 Boston was hosting a convention; its decorations and street scenes delighted her. She asked her chauffeur to bring her car out for a second drive that day, but suffered a heart attack and died. Her will specified that her home serve "as a museum for the education and enjoyment of the public forever." It also expressly forbade any changes to be made. Nothing could ever be sold, nor any new works added; window treatments and interior furniture were to remain as she had left them—the rearrangement of so much as one gave the board grounds to instantly dissolve the entire museum. This insured that Gardner's Boston enemies could never disrupt or alter her legacy. Other codicils were more problematic: a 1990 theft revealed that many of the works were uninsured. Vermeer's *Concert*, the Rembrandt seascape, a Edouard Manet, and five from Edgar Degas were still missing a decade later.

## Books

*Dictionary of American Biography*, Base Set. American Council of Learned Societies, 1928-1936.

Shand-Tucci, Douglass. *The Art of Scandal: The Life of Isabella Stewart Gardner*, HarperCollins, 1998.

Tharp, Louise Hall, *Mrs. Jack: A Biography of Isabella Stewart Gardner*, Little, 1965.

## Periodicals

*Economist*, March 24, 1990, p. 99. □

# John Nance Garner

**The thirty-second vice-president of the United States, John Nance “Cactus Jack” Garner (1868-1967) was a wily Texas politician and master of the legislative process. He was also the most powerful man in Congress when he chose to join Franklin Delano Roosevelt on the Democratic ticket for the 1932 presidential election.**

It is one of the most revered of US political traditions, but John Nance Garner actually was born in a log cabin near the town of Detroit, Texas, in the northeastern part of the state, on November 22, 1868. He was the son of a cavalryman under General Joseph Wheeler. Garner entered Vanderbilt University at age 18, but remained there only one semester before returning home. His reasons for leaving Vanderbilt are unknown though it has been speculated that Garner suffered from poor health during his short time there. Upon returning to Texas Garner studied law in the Clarks-ville, Texas office of Captain M. L. Simms; he was admitted to the Texas state bar in 1890. Soon after this he made his first run for elected office, but was defeated for the position of Clarksville city attorney. Afterward he picked up roots and moved to Uvalde where he joined the law firm of Clark and Fuller.

It was in Uvalde where Garner won his first election—judge of Uvalde County—in 1893. Actually Garner had already been county judge for a year by the time he won the 1893 election, having been appointed to fill a vacancy. By then he was not only an up-and-coming lawyer and budding politician, but also a newspaper editor: he had received the Uvalde *Leader* as a fee for his services. In the race for the judgeship his main opponent was Mariette Rheiner, whom he defeated, courted, and finally married on November 25, 1895. Garner served as county judge until 1896. Two years later he was elected to the Texas state legislature, where he served until 1902. In the state legislature Garner supported ranchers’ and livestock growers’ issues; he also served on the appropriation committee. It was as a state representative that Garner earned the sobriquet “Cactus Jack” for his strident though unsuccessful championing of the cactus as the Texas state flower.

## Entered the House of Representatives

The other important, indeed career boosting, event during his tenure in the state legislature came when he was appointed to a committee to help draw up a new federal district in Texas. The result was the new 58th congressional district. Larger in area than many states, it included Uvalde and sent as its first representative to the United States House of Representatives none other than John Nance Garner. In all Garner would serve 15 terms in the House of Representatives, rising to that body’s highest position.

The first decade or so of Garner’s congressional career was quite inauspicious. He entered the House on November 9, 1903, but it wasn’t until January 1905 that he spoke his first word in Congress and not until 1911 that he gave his first speech. Needless to say he introduced very few bills during his 30 years in Congress. What he did do was learn how to master the legislative process. He was a conservative Democrat (opposed to Prohibition, women’s rights, and the KKK) who had the knack for steering others’ bills through the tricky legislative waters. Garner did this by practicing behind-the-scenes crony politics, by which he also managed to have a new federal building and a new post office built in his district. These projects contributed to his primary goal of getting reelected. Eventually Garner acquired enough seniority in his party to be elected the Democratic House whip in 1909. (The whip is a party’s number two leader, responsible for, among other things, rounding up necessary votes). When the Democrats recaptured the White House, under Woodrow Wilson (28th US president, 1913-1921), Garner was an influential man on Capitol Hill. During the war he became the administration’s liaison with the House of Representatives.

## Speaker of the House

By the end of World War I, Garner had his sights set on the House speakership. Following reelection in 1922, after which the Republicans controlled the House of Representatives, Garner became the ranking Democrat on the powerful House Ways and Means Committee. He had many friends on both sides of the aisle, which was as much a testament to his quiet, pragmatic backroom political style as anything else. Garner was one of Congress’s legendary whiskey-drinking poker players in his day. In order to convince recalcitrant colleagues to vote for bills he favored, Garner would invite them to his office to share a drink or two of bourbon and branch water, a method of arm twisting that, in those days of Prohibition, he termed “striking a blow for liberty.” During the 71st Congress (1929-30) he was minority leader and after the 1930 election when the Democrats once again captured the majority of seats in the House, he was named Speaker for the 72nd Congress, beginning in 1931. His policy during these early Depression years endorsed a budget that would be balanced by a national sales tax.

Garner was Speaker of the House of Representatives for only a few months when a new prize was dangled before his eyes—the presidency itself. His conservative views (which had always put him in good standing with the Republicans) now made him the darling of newspaper magnate William



Randolph Hearst, who decided to promote Garner for the Democratic nomination. Garner himself seemed largely indifferent to the proposal, but during the Democratic convention he managed to accumulate enough support, namely the Texas and California delegates, to temporarily slow down the Roosevelt steamroller. The convention was deadlocked after three ballots. When Garner released his 90 delegates just prior to the fourth, and they went over to Roosevelt, Garner found himself in his familiar influential position. Roosevelt, partly in gratitude and partly to neutralize a potential future rival, offered Garner the second slot on the Democratic ticket. To everyone's surprise Garner accepted, albeit somewhat reluctantly. With Franklin Roosevelt's electoral victory on November 8, 1932 Garner became the 32nd vice-president of the United States. Possibly hedging his bet, he was also reelected to Congress that same day though he resigned his congressional seat on March 4, 1933, the day he was sworn in as vice-president.

### Vice-President

Garner was nothing if not a true party loyalist and as such he put aside his conservative views to support FDR's New Deal. In fact by most accounts Garner was the second most important person in the New Deal, which meant he (temporarily) elevated the importance and power of the vice-presidency. Garner's tenure was in contrast to his often quoted description that vice-presidency wasn't "worth a bucket of warm spit." (Being a colorful Texas politician Garner often claimed that the journalists had cleaned up his language.) Garner also said: "A great man may be vice-president but he can't be a great vice-president, because the office in itself is unimportant." This less quoted description begs the question: Why did Garner relinquish the post of Speaker of the House for such an "unimportant office"? The usual answer is that he hoped to use it as a springboard for the Democratic presidential nomination in 1940. However years later Garner admitted the decision to accept the vice-presidential nomination was the "worst damn-fool mistake I ever made. Should have stuck with my old chores as Speaker of the House. I gave up the second most important job in the government for one that didn't amount to a hill of beans."

Despite their differing political views Garner and Roosevelt enjoyed a good relationship (FDR also loved to play poker). The president even referred to Garner as "Mr. Common Sense." Garner still had a lot of influence on Capitol Hill, especially through the Texas congressional delegation. Eight Texans chaired regular committees and two chaired special committees between 1933 and 1937. Garner used these connections to push through quite a bit of New Deal legislation. He also sat in on cabinet meetings and became the first vice-president to travel abroad on official business: He went to Mexico, Japan and the Philippines.

Garner's relationship with Roosevelt began to decline in 1936 and continued to deteriorate throughout their second term. Together they won reelection by trouncing Republican candidates Governor Alf Landon of Kansas and Chicagoan Frank Knox, but it was clear that Garner was already showing an independent streak. His dormant conservatism

gradually came awake as he tried to counsel FDR against the continued deficit spending. He was also disturbed by Roosevelt's popularity and his influence in congressional races. Probably the end of their working relationship came with Roosevelt's now infamous attempt to pack the Supreme Court by increasing the number of justices from 9 to 15. From then on there was hostility behind the civility between Garner and Roosevelt. When the latter suspected Garner of leaking Cabinet discussions the government's serious business took place in private meetings that excluded Garner while the Cabinet meetings were held merely as window dressing. Throughout Roosevelt's second term Garner was the de facto leader of the loyal opposition, that is, the conservative Democrats, which made him a powerful politician in Roosevelt's New Deal coalition.

### Split with Roosevelt

By 1939 Garner had revived his eight-year old dream of running for the presidency with good reason—he assumed he had history on his side. What Garner did not count on was that he did not have FDR on his side. No president had served more than two terms (a precedent set by Washington), but Roosevelt broke with tradition and crushed Garner's hopes. Not that Garner had much chance by 1940. He was nearly 72 years old and the times had passed him by. The previous year he had alienated himself from African Americans and liberals by refusing to endorse a Marian Anderson concert. Later in 1939 he proved no friend to labor by opposing changes in the Wages-Hours Act. For this CIO (Congress of Industrial Organization) leader John L. Lewis branded Garner "a poker-playing, whiskey-drinking, labor-baiting, evil old man."

The 1940 Democratic convention was Garner's political swan song. In the battle for the presidential nomination he was crushed by Roosevelt: 946 votes to 61. He had already made it clear that he would not serve a third term as vice-president (two terms was also the precedent for that position). At any rate Roosevelt, looking for someone to continue the New Deal should he die in office, chose Agriculture Secretary Henry Wallace.

Garner retired to Uvalde and did a nearly unheard of thing: He (or possibly his wife, the story is conflicting) destroyed all of his public and private papers instead of depositing them in either a Texas research library or the Library of Congress itself. This action has left a void in Texas' political history and hindered New Deal scholars as well.

Garner lived in retirement for another 27 years, far outlasting Roosevelt and even his protege, Sam Rayburn. He lived long enough to witness the ascension of another Texan, Lyndon Baines Johnson, on a similar path from Congressional power to the vice-presidency, and then to the presidency. Garner died in Uvalde, Texas on November 7, 1967—just fifteen days shy of his ninety-ninth birthday.

### Books

Barzman, Sol, *Madmen and Geniuses: The Vice-Presidents of the United States*, Follett Publishing Company, 1974.

Dunlap, Leslie W., *Our Vice-Presidents and Second Ladies*, The Scarecrow Press, 1988.

Healy, Diana Dixon, *America's Vice-President: Our First Forty-three Vice-Presidents and How They Got to be Number Two*, Atheneum, 1984.

### Periodicals

*Boston Globe*, August 9, 1992.

*Houston Chronicle*, July 28, 1995.

*Texas Monthly*, November, 1996.

### Online

"Garner, John Nance." *The Handbook of Texas Online*, nd, <http://www.tsha.utexas.edu/handbook/online/articles/view/GG/fga24.html> (December 10, 2000).

"John Nance Garner," nd, <http://www.northeast.isd.tenet.edu/garner/jngbull.htm> (December 10, 2000). □

## Sophie Germain

**The foundational work of Sophie Germain (1778-1831) on Fermat's Last Theorem, a problem unsolved in mathematics into the late 20th century, stood unmatched for over one hundred years. Though published by a mentor of hers, Adrien-Marie Legendre, it is still referred to in textbooks as Germain's Theorem.**

Germain worked alone, which was to her credit, yet contributed in a fundamental way to her limited development as a theorist. Her famed attempt to provide the mystery of Chladni figures with a pure mathematical model was made with no competition or collaboration. The three contests held by the Paris Academie Royale des Sciences from 1811 to 1816, regarding acoustics and elasticity of vibrating plates, never had more than one entry—hers. Each time she offered a new breakthrough: a fundamental hypothesis, an experimentally disprovable claim, and a treatment of curved and planar surfaces. However, even her final prizewinning paper was not published until after her death.

### Taught Herself Mathematics

Marie-Sophie Germain was born April 1, 1776, in Paris to Ambroise-Francois Germain and Marie-Madeleine Gruguelu. Her father served in the States-General and later the Constituent Assembly during the tumultuous Revolutionary period. He was so middle class that nothing is known of his wife but her name. Their eldest and youngest daughters, Marie-Madeleine and Angelique-Ambroise, were destined for marriage with professional men. However, when the fall of the Bastille in 1789 drove the Germain's sensitive middle daughter into hiding in the family library, Marie-Sophie's life path diverged from them all.

From the ages of 13 to 18 Sophie, as she was called to minimize confusion with the other Mariés in her immediate



family, absorbed herself in the study of pure mathematics. Inspired by reading the legend of Archimedes, purportedly slain while in the depths of geometric meditation by a Roman soldier, Germain sought the ultimate retreat from ugly political realities. In order to read Leonhard Euler and Isaac Newton in their professional languages, she taught herself Latin and Greek as well as geometry, algebra, and calculus. Despite her parents' most desperate measures, she always managed to sneak out at night and read by candlelight. Germain never formally attended any school or gained a degree during her entire life, but she was allowed to read lecture notes circulated in the Ecole Polytechnique. She passed in her papers under the pseudonym "Le Blanc."

### Correspondence School

Another tactic Germain used was to strike up correspondences with such successful mathematicians as Carl Gauss and Legendre. She was welcomed as a marvel and used as a muse by the likes of Jean B. Fourier and Augustin-Louis Cauchy, but her contacts did not develop into the sort of long-term apprenticeship that would have compensated for her lack of access to formal education and university-class libraries. Germain did become a celebrity once she dropped her pseudonym, however. She was the first woman not related to a member by marriage to attend Academie des Sciences meetings, and was also invited to sessions at the Institut de France—another first.

Some interpret Gauss' lack of intervention in Germain's education and eventual silence as a personal

rejection of her. Yet this conclusion is not borne out by certain facts indicating Gauss took special notice. In 1810, Gauss was awarded one of his many accolades, a medal from the Institut de France. He refused the monetary component of this award, accepting instead an astronomical clock Germain and the institute's secretary bought for him with part of the prize. Gauss' biographer, G. Waldo Dunnington, reported that this pendulum clock was used by the great man for the rest of his life.

Gauss survived her, expressing at an 1837 celebration that he regretted Germain was not alive to receive an honorary doctorate with the others being feted that day. He alone had lobbied to make her the first such honored female in history. A hint of why Gauss valued her above the men who joined him in the Academie is expressed in a letter he sent to her in 1807, to thank her for intervening on his behalf with the invading French military. A taste for such subjects as mathematics and science is rare enough, he announced, but true intellectual rewards can only be reaped by those who delve into obscurities with a courage that matches their talents.

### No-Man's Land

Germain was such a rarity. She outshone even Joseph-Louis Lagrange by not only showing an interest in prime numbers and considering a few theorems, about which Lagrange had corresponded with Gauss, but already attempting a few proofs. It was this almost reckless attack of the most novel unsolved problems, so typical of her it is considered Germain's weak point by twentieth century historians, that endeared her to Gauss.

Germain's one formal prize, the Institut de France's Gold Medal Prix Extraordinaire of 1816, was awarded to her on her third attempt, despite persistent weaknesses in her arguments. For this unremedied incompleteness, and the fact that she did not attend their public awards ceremony for fear of a scandal, this honor is still not considered fully legitimate. However, the labor and innovation Germain had brought to the subjects she tackled proved of invaluable aid and inspiration to colleagues and other mathematical professionals as late as 1908. In that year, L. E. Dickson, an algebraist, generalized Germain's Theorem to all prime numbers below 1,700, just another small step towards a complete proof of Fermat's Last Theorem.

Germain died childless and unmarried, of untreatable breast cancer on June 27, 1831 in Paris. The responsibility of preparing her writings for posterity was left to a nephew, Armand-Jacques Lherbette, the son of Germain's older sister. Her prescient ideas on the unity of all intellectual disciplines and equal importance of the arts and sciences, as well as her stature as a pioneer in women's history, are amply memorialized in the Ecole Sophie Germain and the rue Germain in Paris. The house on the rue de Savoie in which she spent her last days was also designated a historical landmark.

### Books

- Bucciarelli, Louis L., and Nancy Dworsky. *Sophie Germain: An Essay in the History of the Theory of Elasticity*. D. Reidel Publishing Co., 1980.
- Dictionary of Scientific Biography*. Volume V. Edited by Charles Coulston Gillispie. Charles Scribner's Sons, 1972.
- Dunnington, G. Waldo. *Carl Friedrich Gauss: Titan of Science*. Exposition Press, 1955.
- Mozans, H. J. *Woman in Science*. D. Appleton and Co.
- Ogilvie, Marilyn Bailey. *Women in Science*. MIT Press, 1986.
- Perl, Teri. *Math Equals: Biographies of Women Mathematicians*. Addison-Wesley Publishing, 1978.
- Women in Mathematics*. MIT Press, 1992.
- Women of Mathematics*,. Edited by Louise S. Grinstein and Paul J. Campbell. Greenwood Press, 1987.

### Periodicals

- American Mathematical Monthly*, 92: 1985.
- Archive for History of Exact Science*, 41: 1990-91.
- Association for Women in Mathematics Newsletter*, 6: September-October 1976.
- Century*, 48: 1894.
- Scientific American*, December 1991.

### Online

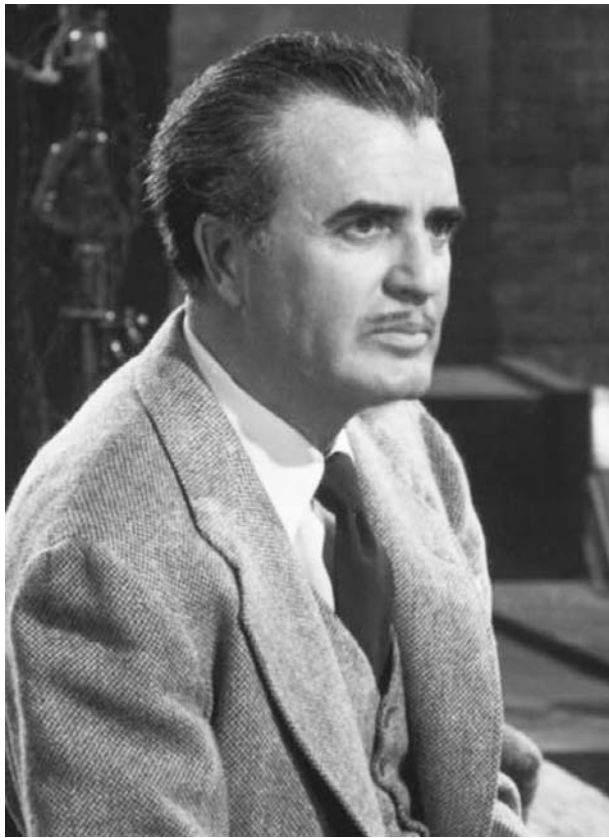
- "Sophie Germain." *MacTutor History of Mathematics Archives*,. (December 1996). <http://www-groups.dcs.st-and.ac.uk/~history/index.html>
- "Sophie Germain." *Biographies of Women Mathematicians*. June 1997. <http://www.scottlan.edu/lriddle/women/chronol.htm> (July 22, 1997).
- "The Ten Largest Known Sophie Germain Primes." *The Largest Known Primes*. 1995-96). <http://www.utm.edu/research/primes/largest.html#Sophie>. □

## Cedric Gibbons

**The production designer Cedric Gibbons (1893-1960), though little-known to many filmgoers, strongly influenced many of Hollywood's greatest films.**

Gibbons was born in New York on March 23, 1893. Already educated in art and architecture, he began his movie career just as the film industry started rolling. He obtained an assistant's job at the Edison Studios and worked there from 1915 to 1918. Gibbons made a major mark on film design at this time when he insisted on the use of three-dimensional scenery rather than painted backdrops.

In 1918 Gibbons left Edison for a position as art director at Goldwyn's in New York. Later he moved with Goldwyn and Company to California. In 1924 came a significant turning point. MGM studio was formed, and Gibbons became its supervising art director. In 1930 Gibbons married the actress Dolores Del Rio. The couple divorced in 1941.



### Strong Influence at MGM

It is not easy to determine which of the films in his very vast filmography can really be completely credited to Gibbons. Any film coming out of MGM would list Gibbons as art director. Gibbons's greatest contributions would go to the "prestige" pictures, such as *Marie Antoinette*, *Ben-Hur*, or *Camille*. He collaborated on many of the other MGM movies and merely approved the rest. Those pictures produced after his heart attack in 1946 would have even less of his touch. But it is misleading to assume Gibbons blindly accepted the ideas of others, taking credit for their creations. Gibbons felt strongly about what was right and wrong for MGM and getting his approval was no easy task. Vincente Minnelli described the Gibbons reign as a "medieval fiefdom, its overlord accustomed to doing things in a certain way." As stifling as this might be to the creativity of other artists and directors at MGM, this attitude served its purpose. MGM films shared a distinctive "look." This was achieved because all employees responsible in any way for the visual appearance of the film—from props to costumes to special effects—had to confer with Gibbons. He maintained MGM's visual continuity and maintained this control through the decades.

Several qualities characterize the MGM picture during the Gibbons era, particularly elegance and glamour in his films from the 1930s. It did not matter if the scene or the moment called for it; the floors would still be highly polished and the chandelier crystal. Luxury and the elaborate were encouraged. A Gibbons-approved set could be as

active as one of the dancers during a production number, littered with booms and turntables.

### Escapist Fantasy

Like the popular British and French interior designers between the wars, Gibbons preferred all-white rooms. The harsh contrast of shapes and shadows that one would find in the German expressionist-influenced studios such as Warner Brothers or Universal would never be found at MGM. Gibbons sets were the height of escapist fantasy, as light and witty as a Cole Porter tune.

Gibbons also preferred to have MGM sets sculptural, perhaps harking back to his days as an artist and architect. This penchant for the three-dimensional might have been part of the reason for Vincente Minelli's animosity towards Gibbons, for Minelli films such as *An American in Paris* require a two-dimension emphasis for artistic effect. Fortunately, in spite of the difficulties, *An American in Paris* managed to gain Gibbons's dictatorial approval (and ironically enough won him an Oscar).

Gibbons retired in 1956 and died on July 26, 1960 in Westwood, California. He had been nominated for 37 Academy Awards in his career and had won 11. In addition, he is credited with designing the original Oscar statuette. This streamlined, planar sculpture is an appropriate homage to Gibbons's *oeuvre* and serves as a reminder of the film industry's more glorious and powerful past.

### Periodicals

*Architectural Digest*, vol. 47, April 1990; vol. 49, April 1992.  
*The Art of Hollywood*, 1979.  
*Arts and Decoration*, January 1921.  
*Cinematographe* February 1982.  
*Collier's*, September 30, 1933.  
*Creative Art*, October 1932.  
*Films in Review*, April 1965. □

## Bob Gibson

**One of the fiercest competitors of any era in baseball, St. Louis Cardinals pitcher Bob Gibson (born 1935) dominated the National League in the 1960s and early 1970s. The hard-throwing Hall of Fame right-hander was at his best when the pressure was most intense, winning seven of his nine World Series starts, eight of them complete games. Gibson was the first pitcher in almost 50 years to finish his career with more than 3,000 strikeouts.**

Batters feared to step up to the plate against the scowling, intimidating Bob Gibson. Like the pitchers of an earlier era, he wasn't afraid to throw inside, sometimes knocking down hitters. Gibson's will to win was unquenchable. He led the Cardinals to three league



championships and two World Series titles. His pitching performance in 1968 is among the very best in baseball history.

### Beat the Odds

Bob Gibson was born and raised in poverty during the years of the Great Depression and World War II. He was the youngest of seven children, and he never knew his father, who died of tuberculosis before he was born. His mother, Victoria, supported her large family by working in a laundry. They lived in an inner-city slum in Omaha, Nebraska.

As a child, Gibson's own health was problematic. He suffered from asthma and hay fever. He had a heart murmur. While very young, he contracted rickets and almost died of pneumonia. Yet he overcame his maladies to become a star athlete at Omaha Technical High School, excelling in track and basketball as well as baseball, where he was primarily a catcher.

Gibson applied to the University of Indiana, but that school turned him down because in those days it had a quota on black athletes. Instead, he went to Creighton University in Omaha on a basketball scholarship. At Creighton, he also played baseball, starring as a shortstop and outfielder.

In 1957, the St. Louis Cardinals gave Gibson a small bonus and signed him to a professional baseball contract. They decided he was best suited to be a pitcher. Yet Gibson was still undecided about which sport to pursue, and he

played one season of basketball with the barnstorming Harlem Globetrotters before casting his lot with baseball.

Gibson spent parts of three seasons in the minor leagues, refining his pitching skills, before earning a spot on the Cardinals roster in 1959. He was unimpressive in his first two seasons, winning six games and losing 11, and was twice sent down to the minors. Thirteen consecutive winning seasons in the major leagues would follow.

### Pitched with Heart

Gibson threw the ball hard, but he had trouble throwing it over the plate with any consistency at the beginning of his career. His walk totals were unacceptably high: 69 free passes in 87 innings in 1960, and a league-high 119 in 211 innings in 1961, his first year as a regular member of the Cardinals' starting rotation. But even while he struggled with his control, his opponents were struggling to get hits off him, and his strikeout totals kept rising. In 1962, when he won 15 games, Gibson struck out 208 batters and allowed only 174 hits in 234 innings. He would strike out more than 200 batters in eight of the next ten seasons.

When he perfected a devastating slider to go with his intimidating fastball, Gibson became a complete pitcher. In 1964, Gibson pitched 287 innings and won 19 games, despite battling arthritis in the elbow of his throwing arm most of the season. St. Louis won the National League pennant, thanks largely to Gibson's great stretch run: he won 9 of his final 11 decisions. The Cardinals edged out two other teams as Gibson won the deciding game on the last day of the season with a gutsy performance in relief.

In the second game of the World Series, Gibson pitched eight strong innings but was pulled for a pinch-hitter with his team trailing, 4-3. Never again would he be removed from a World Series game. The series was tied at two games apiece when Gibson took the mound for Game Five. He dominated for ten innings, striking out 13 and allowing only two runs, and the Cardinals won. Three days later, a weary Gibson gutted out nine more innings in the decisive Game Seven. He allowed three home runs, but the Cardinals hung on for a 7-5 victory and a world championship.

The next season was the first of five in which Gibson would win at least 20 games. He was also establishing his reputation as an intimidator. He believed that the inside part of the plate belonged to him, and batters who would dare to lean in close could expect a fastball up and in.

"Actually, I didn't drill many guys," Gibson told the *Sporting News* long after his career ended. "You thought you might get it." The inside pitch was a key part of Gibson's psychological arsenal. "People don't really understand about pitching inside," he explained. "They think when you throw inside, you are trying to intimidate somebody, you are trying to knock them down, you are trying to hit them. It's none of the above. You pitch inside to make them think inside."

Gibson said that when he did hit a batter, often it was a mistake. But he wouldn't acknowledge it was unintentional. "I wasn't throwing at them and they didn't know it, because they expected me to throw at somebody," he recalled. "So I

never apologized. That's the worst thing in the world to do. You just stand out there like you did it on purpose."

His catcher, Tim McCarver, knew how tough Gibson could be. Often, when McCarver went to the mound to settle him down, Gibson would scowl and wave him away. "The only thing you know about pitching is how hard it is to hit," Gibson once told McCarver as he approached the mound.

Gibson's athleticism helped him be an all-around contributor to his team. He was one of the smoothest-fielding pitchers of any era, jumping on bunts and grounders like a cat. He was awarded the league's Gold Glove as the best fielder at his position for nine consecutive years, from 1965 through 1973. He also was a formidable hitter, batting a respectable .206 for his career and clouting 24 home runs.

### Big Game Pitcher

In 1967, Gibson's leg was fractured by Roberto Clemente's hard line drive. He was out eight weeks, but returned in time to pitch the Cardinals to another league championship, winning the pennant-clinching game against Philadelphia. Back in the World Series, he dominated the Boston Red Sox in his three starts, allowing only three runs, 14 hits and five walks while striking out 26 in 27 innings. He won the opener, 2-1, shut out Boston in Game Four, and was again the winning pitcher in the decisive seventh game. For the second time, he was named the Most Valuable Player of the World Series.

No longer was control a problem for Gibson. In his peak years, he struck out three or four times as many batters as he walked. Recognized as the most dominant pitcher in the game, Gibson in 1968 became almost impossible to score runs against. That season was widely regarded as "the year of the pitcher," with defensive play dominating so much that baseball officials responded after the season by lowering the height of the pitching mound. But even though batting averages were depressed throughout major league baseball, Gibson's performance still was astounding. He completed 28 of his 34 starts, hurled 305 innings, gave up only 198 hits and 62 walks, and struck out a league-high 268 batters. He led the league with 13 shutouts and compiled a microscopic 1.12 earned run average, meaning that opponents averaged barely one run a game against him. He won 22 games and lost nine, but the losses were due mainly to poor run support from the light-hitting Cardinals.

Many baseball experts consider Gibson's 1968 season as the greatest pitching achievement since the pre-1920 "dead ball" era. His 1.12 ERA was the fourth-best all-time and by far the lowest since the 1910s. During one stretch of the season, he gave up only two runs over 95 consecutive innings. "That season was different because of my control," Gibson later told the *Sporting News*. "I really didn't have to think about where I wanted to throw the ball . . . all I had to do was throw it and it got there."

In the World Series, the Cardinals were heavily favored to beat the Detroit Tigers. The Opening Game pitted Gibson against Denny McLain, who had won 31 games for Detroit, the most by any pitcher after 1934. Gibson set a new World Series record by striking out 17 Tigers, shutting out Detroit

on six hits. In Game Four, Gibson again easily beat McLain and even added a home run in the Cards' 10-1 rout.

Gibson now had won seven consecutive World Series games, finishing all of them, and for the third time he took the mound for a decisive Game Seven. This time he faced Mickey Lolich, who also had two complete-game victories in the series. The two battled in a tense scoreless pitching duel through six innings. Then, in the seventh inning, the usually reliable Curt Flood misread a line drive by Jim Northrup and fell down while trying to reverse course. The drive went over his head for a triple and the Tigers won the game, 4-1. Gibson had struck out a record 35 batters in the series, but the Cardinals lost despite his heroic efforts.

It was the last World Series for Gibson, but he continued to be a major star and a big-game pitcher. He won a second Cy Young Award in 1970 when he won 23 games, lost only seven, and struck out 274 batters. The next season, he pitched a no-hitter against Pittsburgh. Battling arthritis and injuries into his late 30s, he continued to be a workhorse on the mound. Finally, his pain-racked body gave way, and in 1975, at age 40, he fell to a 3-10 record and was forced to retire. He finished his career with 56 shutouts. Walter Johnson was the only player of the time able to surpass his 3,117 strikeouts. Gibson was inducted into baseball's Hall of Fame in 1981.

### A Winning Reputation

After his playing career ended, Gibson served as a coach with the New York Mets in 1981 and with the Atlanta Braves from 1982 to 1984. He also spent several seasons as a television broadcaster. For awhile he served as a special advisor to American League President Gene Budig. In 1995 he returned to the Cardinals as a bullpen coach and, starting in 1996, became a special instructor for St. Louis during spring training. He became very active in raising money for charities, and continued to be outspoken about racial barriers in baseball that he claimed kept qualified African Americans like himself from advancing in management ranks.

Gibson even complained that his reputation as a "headhunter"—a pitcher who throws bean balls—was the byproduct of racial prejudice. "I resent the fact that the only thing I get credit for is being a headhunter," he told the *Sporting News* in 1998. "I suspect [it was] because I was one of the first black pitchers that was relatively successful. I pitched just like everybody else, but when I did it, it was three times worse."

Gibson is best remembered as a competitor who used his heart and brains and guts to win. "We were taught from the time we were kids to kill, to take no prisoners—as far as winning," he said in the same interview. "And that doesn't change. We get a little bit older, but you go out to win at all costs."

### Books

Gibson, Bob, and Lonnie Wheeler, *Stranger to the Game: The Autobiography of Bob Gibson*, Viking, 1994.

### Periodicals

*Sporting News*, August 3, 1998.

### Online

"Big Game Bob," *ESPN.com*, <http://espn.go.com/classic/000726bobgibson.html>.

"Bob Gibson," *Encyclopedia Britannica* <http://www.blackhistory.eb.com/micro/233/94/html>.

"Bob Gibson," *Total Baseball*, <http://totalbaseball.com/player/g/gibsb101/gibsb101.html>. □

## Frank Gilbreth

**Frank Gilbreth (1868-1924) is best known for his work with construction workers on the efficiency of motion. He developed many of the concepts and applications that are now part of modern management techniques.**

With his wife and professional partner, Lillian, Gilbreth introduced the application of psychology to industrial management. He also developed intricate studies of motion that he adapted for use by injured soldiers and the physically disabled, as well as laborers. His work established that psychology and education are integral parts of successful management.

Frank Bunker Gilbreth was born in Fairfield, Maine on July 7, 1868, to John and Martha Bunker Gilbreth. The Gilbreth family came from a long line of New Englanders; they all lived in the same farming community, where Gilbreth's father ran a hardware business. His father died when Gilbreth was three, and his mother's passion for education led her to move the family twice in search of the best schools; first to Andover, Massachusetts, and then to Boston. Dissatisfied with the grade school Gilbreth attended, she took him home and tutored him herself. He eventually graduated from English High School in Boston in 1885. Gilbreth passed the entrance exams to the Massachusetts Institute of Technology, but he decided not to attend college and went straight into business.

Gilbreth began his career as a bricklayer's apprentice. An attentive observer, he learned by watching the movements of veteran bricklayers that each one used motion in a different way, some more economically than others. It was here that Gilbreth became committed to his lifelong goal—finding "the one best way" of mastering any task. Gilbreth quickly learned every trade in the contracting business. Before long he was laying stone, estimating costs, working railway construction, and supervising. Gilbreth went to night school to learn mechanical drawing; he advanced to foreman and then to superintendent without the typical three years of apprentice work.

In 1895, at the age of 27, Gilbreth started his own contracting firm. Bricklaying was then being replaced by the use of concrete, and he patented many inventions for the changing construction industry. Among his inventions was



a concrete mixer that supplemented early gravity mixers and concrete conveyors. The slogan of his company was "Speed Work," and its goals were the elimination of waste, the conservation of ability, and the reduction of cost. When Gilbreth applied these ideas to the construction of the Lowell Laboratory, he made newspaper headlines with his short construction time. His projects included dams, canals, houses, factory buildings, industrial facilities, and the entire town of Woodland, Maine; he serviced clients all over the United States and eventually expanded his business to England.

### Focus on Industrial Management

In 1903, in Boston, Gilbreth met Lillian Moller, a teacher with a strong professional drive that matched his. They began a twenty-year partnership with their marriage on October 19, 1904. Lillian Gilbreth was the force behind her husband's career change—from construction to management. Together they became leaders in the new field of scientific industrial management. They wrote books and articles, lectured, and taught—while raising twelve children. He and his wife applied their management techniques to the running of their large household; two of their children would later write humorous accounts of their family life, *Cheaper by the Dozen* and *Belles on Their Toes*.

In 1908, Gilbreth published *Field System*, his first book. The book contained the ideas of the men he employed: he had gathered information by asking his workers to record exactly what they did during the course of the day and what

they would recommend for improvement. Written for laborers, the book was the first of its kind, documenting daily organizational and functional practices in construction. It was also the first in a series of similar books by Gilbreth, in which he would provide specific information on work tasks, even using photographic details to show the positions of a worker's feet during certain tasks.

As he integrated his work on the expediency of motion with his wife's concentration on the psychology of the individual, Gilbreth grew less involved in the construction industry. He and his wife began to join their efforts in pursuit of the link between psychology and management, and together they established the fundamental place of psychology and education in effective management. In 1913 the Gilbreths started the Summer School of Scientific Management, which for four years was attended by academic and industry professionals from around the world. Contacts developed through the school gave Gilbreth an international consulting reputation.

### Innovative Work for the Physically Challenged

The early months of World War I found Gilbreth in Germany, visiting industrial plants, teaching, testing, installing new machines, and establishing laboratories. As injured soldiers began returning to Germany, Gilbreth worked to improve surgical procedures, and he was the first to use motion-picture photography in the operating room for the education of surgeons. He also became an expert in the rehabilitation of injured soldiers. He visited hospitals throughout Europe, watching the motions of the injured soldiers, and developed ways to teach them to manage their daily activities. His paper on this subject, "Motion Study for the Handicapped," was written with his wife and presented at the Tenth Sagamore Sociological Conference in 1917. It included ideas such as a typewriter with all capital letters, eliminating the need for a shift key, which requires two-handed operation. But perhaps the most interesting aspect of Gilbreth's work during this period was the study of the seventeen fundamental motions used to perform physical tasks, such as search, find, select, grasp, and position. He created a visual chart, used to adapt jobs to injured soldiers, that illustrated each fundamental motion, thereby enabling the visual dissection of tasks and the substitution of motions from one task to another.

The increasing intensity of World War I slowed Gilbreth's work abroad, so he concentrated on building a consulting business that catered to the firms he felt most needed his expertise. He shunned companies that treated their employees poorly, believing that bad treatment of the consultant would follow. Gilbreth loathed companies that benefited from his time-saving methods to increase profits only to keep them from their employees, and contracted with companies that promised to increase wages as sales increased, among them Eastman Kodak, U.S. Rubber, and Pierce Arrow. When the United States entered the war, Gilbreth enlisted and received a commission in the Engineers Officers Reserve Corps. He reported to the War College in Washington to prepare educational films for soldier

training, but a heart ailment ended his service shortly thereafter. The Gilbreth family bought a small house in Nantucket, Massachusetts, to facilitate his recovery, but from that time on he would carry heart medication with him at all times.

Gilbreth's consulting business thrived after the war. In 1920, the American Society of Mechanical Engineers instituted its Management Division, something Gilbreth had been working to establish for many years. He was now one of the most widely known American engineers in the United States and Europe, reaping financial rewards and many professional honors. He suggested the first international management congress in history to the American Society of Mechanical Engineers, and it was held in Prague in 1924. He died suddenly of a heart attack shortly afterwards, on June 14, 1924, while traveling from his home in Montclair, New Jersey, to New York City. He was posthumously honored with the Gantt Gold Medal in 1944 from the American Society of Engineers and the American Management Association. The honor was shared and received by his wife.

### Books

- Carey, Ernestine G., and Frank B. Gilbreth, Jr., *Cheaper by the Dozen*, Crowell, 1948, expanded edition, 1963.  
 Carey, Ernestine G., and Frank B. Gilbreth, Jr., *Belles on Their Toes*, Crowell, 1950.  
 Gilbreth, Lillian M., *The Quest of the One Best Way: A Sketch of the Life of Frank Bunker Gilbreth*, Society of Industrial Engineers, 1926.  
 Spriegel, W. R. and C. E. Meyers, editors, *The Writings of the Gilbreths*, Richard D. Irwin, Inc., 1953.  
 Yost, Edna, *Frank and Lillian Gilbreth, Partners for Life*, Rutgers University Press, 1949. □

## King Camp Gillette

**Prior to the beginning of the twentieth century, shaving was a nuisance, and sometimes even dangerous. That changed when King Camp Gillette (1855-1932) founded the Gillette Safety Razor Company in 1901 and began selling his safety razors with disposable blades two years later.**

In his book *The Man and His Wonderful Shaving Device—King C. Gillette*, biographer Russell B. Adams, Jr. noted, "King C. Gillette had thought he might be remembered as one of history's social and economic reformers. Instead, he is recalled as the inventor of the safety razor, with its disposable blade and as the founder of the major American corporation that bears his name." One hundred years later, the Gillette Company and its name are known world-wide, and razors remain a necessary tool for maintaining personal grooming.

### Early Life

King Camp Gillette was born in Fond du Lac, Wisconsin, on January 5, 1855, the son of George Wolcott Gillette





and Fanny Lemira Camp. He was the youngest of three sons, and also had two sisters. Biographer Adams wrote, "His royal first name honored a Judge King who was a friend of George Gillette's."

Adams described Gillette's father as "a sometime postmaster, weekly-newspaper editor, and inventive thinker," and his mother as "serene" but also a "stern disciplinarian, always in control of her household." Adams asserted, "It was probably under her influence that King Gillette developed his lifelong belief in efficiency, and his hatred for wasting time." The Gillette family moved to Chicago, Illinois, and young Gillette was raised and educated there. Adams wrote, "The Gillette boys were encouraged to work with their hands, to figure out how things work and how they might be made to work better."

In October of 1871, a fire devastated the city of Chicago. Gillette's father lost everything, and decided to move his family to New York City. Adams noted that the 17-year-old Gillette stayed in Chicago and clerked for a wholesale hardware company. Two years later, he took a position in New York City. He then moved to a Kansas City, Missouri company, who promoted him to a traveling salesman position when he was 21-years-old.

### Gillette the Salesman

For the next 20 years, Gillette worked in a succession of jobs, and became a prosperous and successful traveling salesman. He enjoyed "tinkering" and tried to invent new products, often without success. Gillette was also an avid

reader and had strong political views. He wanted to see radical changes in the social and economic systems of the United States. In 1890, Gillette married Atlanta Ella Gaines (nicknamed Lantie), who was the daughter of an Ohio oilman. They would have one son, King Gaines Gillette, nicknamed Kingie, but called "Babe" by his father.

Gillette joined the Baltimore Seal Company as the salesman for New England and New York. Not long after, Gillette joined the company, its president, William Painter, invented an improved stopper, a crown bottle cap that would crimp over a bottle top. The stopper became the standard in the bottling industry, and Painter changed the company's name to Crown Cork and Seal Company. Gillette and Painter had a close personal and business relationship, and Adams described them as "kindred inventive spirits." Adams recounted that in 1891, Gillette and Painter had a very important conversation; Painter encouraged him to begin working on a product that would be thrown away after its use, which would keep consumers coming back for more of the product. Adams continued, "Gillette did think about it. Indeed, he confessed later that Painter's words became an obsession with him."

In the 1890s, Gillette was a very busy man. He had a family to care for. He had dreams of a utopian (perfect and ideal) society. He also continued to work on his invention. By the time he first conceived of the idea that would change his life in 1895, Gillette was already well known in radical political circles. Perhaps motivated by his mother who, after 35 years of collecting and testing recipes and household tips, had written the best-selling *White House Cookbook*, Gillette was determined to complete his book of ideas and political views. In 1894, Gillette finished *The Human Drift*, a manifesto of his utopian world. However Gillette's political views and visions would never equal the success of his invention, which was about to become the most important idea in his life.

### The Salesman Became an Inventor

History shows that men have been shaving since ancient times. Cave paintings show that sharp objects were used as razors. Gold and copper razors have been found in Egyptian tombs. In the 1700s, the steel straightedge razor was created in England, yet shaving with this sharp, unprotected blade was a dangerous procedure. Others tried to invent better and safer instruments, but the old straightedge razor remained in use until Gillette's disposable blade in 1901.

As recounted by Adams, "One early spring morning while in the midst of shaving, his face well slathered with warm soap, he [Gillette] had conceived the disposable razor blade." That same day, Adams continued, Gillette rushed to a hardware store and "bought steel ribbon, some pieces of brass, files, and a small vise, and began making a model of his brainchild." Adams added that Gillette then wrote a letter to his wife, who was visiting her family in Ohio and stated, "I have got it; our fortune is made."

Gillette set high goals for himself. Adams wrote that he planned "to build first a better world and then a better razor blade." He struggled to achieve both his goals over the new

few years. On August 11, 1899, Adams noted, "he filed for the first patent on the device he conceived four summers earlier, calling it 'new in the art of razor manufacture and use.'" In the meantime, technical experts told Gillette that it was impossible to produce steel hard, thin, and cheap enough to make disposable blades. Gillette was not dissuaded.

His luck changed in early 1900. Through mutual business associates, Gillette met William Emery Nickerson, a graduate of the Massachusetts Institute of Technology. Adams described Nickerson as a "clever inventor but not much of a businessman" but added that he "was known for taking a small idea and making it reality." Nickerson agreed to work on the project. According to Adams, the two men clashed along the way. They disagreed about what to name the company. The Gillette Safety Razor Company was organized in September of 1901, and Gillette was named president. Adams reflected, "If Gillette was a king, he was without a real kingdom, for his top-lofty title as president of the Gillette Safety Razor company was only in name." The company still did not have a product to sell.

By 1903, Nickerson had developed the necessary design and machinery to produce the razor blades, while Gillette had secured the necessary financial backing. The next dilemma was what to name the product. As noted on the "King Camp Gillette" section of the *Engines of Our Ingenuity* website, Gillette believed "if they called a razor blade a Nickerson, that was too suggestive of nicked skin." In the end, Gillette's name was put on the product. The razor would prove to be an instant success.

### The Gillette Safety Razor Company

By the end of his second year in business, Adams noted, Gillette had produced 90,000 razors and 12,400,000 blades. The disposable razor was a huge success, and sales grew quickly. Gillette became one of the best known men in the world, Adams added, as his photo was printed on billions of blade wrappers. Men who used the product highly recommended it and appreciated what it did. Adams noted that one user wrote, "The razor gives you a clean, smooth shave that makes your face as soft as velvet." Another user wrote that his Gillette razor cut his shaving time from 20 to 5 minutes.

Despite this glowing praise, there was trouble at the top. The two principal owners of the company were John Joyce and Gillette. They frequently clashed. Gillette disagreed with Joyce's proposal to sell overseas rights to the razor. For a time, Adams noted, Gillette resigned as president and went to England. It was perhaps ironic Adams wrote, that "World War I, proved to be a boon for the Gillette Safety Razor Company." By the end of 1917, all recruits were given Gillette shaving equipment, along with their uniforms and weapons. In an article on the *Fortune* magazine website, Christine Chen and Tim Carvell added "During World War I, Gillette supplied 3.5 million razors and 36 million blades to U.S. soldiers, creating a base of customers who kept coming back for refills long after the Treaty of Versailles." Gillette was a wealthy man and the company prospered.

In 1926, to commemorate the company's 25th anniversary, Gillette wrote (as cited on the *Gillette Company* website) of the company's flagship product, the safety razor, "There is no other article for individual use so universally known or widely distributed. In my travels, I have found it in the most northern town in Norway and in the heart of the Sahara Desert."

### The Social Reformer

As noted in the internet article *Gillette, Ideal City Proposal*, "Before perfecting his invention of the safety razor and founding what became a major American industrial and sales enterprise, Gillette authored several books and pamphlets calling for radical changes in the country's economic and social system." After Gillette retired from active participation in his company in 1913, (remaining president until 1931), he shifted his focus to writing books, in which he publicized his views on utopian socialism. In addition to *The Human Drift* (1894), Gillette's books included *The Ballot Box* (1897), *World Corporation* (1910), and *The People's Corporation* (1924). His views were also discussed in two other books, *Gillette's Social Redemption* (1907) and *Gillette's Industrial Solution* (1908), written by Melvin L. Severy.

According to the "King Camp Gillette" section of the *Engines of Our Ingenuity* website, prior to World War I, Gillette envisioned his "World Corporation" in the Arizona Territory, with former U.S. President Teddy Roosevelt serving as its leader. Roosevelt wasn't interested, so he subsequently turned to social reformer and writer Sinclair Lewis and auto maker Henry Ford, to no avail. That essentially ended the vision of a "World Corporation."

Gillette also imagined, Adams recounted, a "Utopian city", a "Metropolis," which would be located near Niagara Falls for maximum efficiency and water supply. The population would live in huge apartment buildings and house millions of people. Mundane day-to-day tasks would be minimal because of the housing set-up. There would be "universal cooperation" Adams noted, and no economic competition.

Although some of Gillette's ideas, such as government-provided work for the unemployed, have been realized, his plans for a "World Corporation" and "Metropolis" did not become a reality. Adams concluded, "The world was more interested in the clean, close, safe shaves that Gillette's razors gave, than in his philosophy, so his curious economic and political notions have been all but forgotten."

### Retirement and Later Years

Gillette had other interests to keep him busy in his later years. He had become wealthy from real estate interests in southern California. Adams added that in the late 1920s, Gillette was an enthusiastic supporter of President Herbert Hoover and his ideas. In April of 1931, Gillette resigned as president of the company that bore his name, citing his age and declining health. A little over a year later, on July 9, 1932, with his wife and son by his side, Gillette died in Los Angeles. He is remembered chiefly for his important invention. Biographer Adams concluded, "The Gillette Com-

pany, beginning with the first safety razor with disposable blades, has been a part of daily life in America and much of the rest of the world for more than three-quarters of a century."

### Books

Adams, Russell B. Jr., *The Man and His Wonderful Shaving Device—King C. Gillette*, Little, Brown and Company, 1978.  
Gale Encyclopedia of U.S. Economic History. Gale Group, 1999.  
World of Invention, Gale Research, 1994.

### Online

"Development of the 'safety' razor," *Razors*, <http://homepage.dtn.ntl.com/paul.linnell/electricity/razors.html> (December 18, 2000).  
*Gillette, Ideal City Proposal*, <http://www.library.cornell.edu/Reps/DOCS/gillette.htm> (December 18, 2000).  
"Gillette at a Glance," *The Gillette Company website*, [www.gillette.com](http://www.gillette.com) (December 18, 2000).  
"King Camp," *Index of Public/FamousGillettes*, <http://www.gillette.net/Public/FamousGillettes/KingCamp.html> (December 18, 2000).  
"No. 738: King Camp Gillette" *Engines of Our Ingenuity*, <http://www.uh.edu/engines/epi738.htm> (December 18, 2000).  
"Products of the Century—Health and Grooming," *Fortune.com*: 11.22.99, <http://www.fortune.com/fortune/1999/11/22/pro7.html> (December 18, 2000) □

## Hannah Glasse

**Hannah (Allgood) Glasse (1708-1770) published *The Art of Cookery, Made Plain and Easy* in 1747. The book, which became the most popular cookbook of the eighteenth century, stands out for its practical advice, common sense recipes, and careful organization. It was written for the common cook to help in the preparation of economical meals. Glasse abandoned the "high polite [style]" of most cookbooks of the time to offer recipes and meal preparation advice to anyone "who can but read."**

Glasse was born in London in 1708, the illegitimate daughter of Isaac and Hannah (Clark) Allgood. Her father was the son of Rev. Major Allgood, who held the position of rector of Simonsburn. Her mother was the daughter of Isaac Clark, a vintner who maintained his business in London. Hannah had at least one sibling, a half-brother named Lancelot Allgood (1711-1782) who served as sheriff and later as a member of Parliament as a representative of Northumberland. He was knighted in 1760. At the age of 16, Hannah secretly married John Glasse, son of a Scotswoman and Irishman, employed as a junior officer in the British army serving on half-pay. The couple had three sons and six daughters. At least four of the children died in infancy, and several of the surviving children later traveled abroad. Little else is known regarding Glasse's life except

that in the fourth edition of *The Art of Cookery, Made Plain and Easy* she identifies herself as "Habit Maker to Her Royal Highness the Princess of Wales, in Tavistock Street, Covent Garden." She may be the "Hannah Glass of St. Paul Co. Garden" listed in a 1754 bankruptcy report published in *Gentleman's Magazine*.

### Popular Cookbook Author

Glasse's first book, published in 1742 in Dublin, was the *Compleat Confectioner*, which appeared in at least seven editions in Dublin and London prior to 1800. Her most famous work, *The Art of Cookery Made Plain and Easy, Which far exceeds any Thing of the Kind ever yet Printed*, was published in 1747 in London, and went through ten editions before Glasse's death in 1770. In the 75 years after her death, *The Art of Cookery Made Plain and Easy* continued to be reissued 16 more times, including one Edinburgh edition (1781) and two American editions (1805 and 1812). The early editions of the book were published anonymously, with the only reference to authorship being "by a lady." Only in the fourth edition did Glasse identify herself with the autograph of H. Glasse printed in facsimile on the beginning page of text and an elaborate advertisement printed in copperplate in a flyleaf opposite the title page presenting her as habit maker to the Princess of Wales. Eight years after her death, in the 1788 edition, Glasse's full name was first listed as the author, as she had by then become commonly associated with the text.

Listing 200 subscribers, mostly women, in 1747, Glasse claimed that her cookbook was intended to be used by servants and presented "in so full and plain a manner, that the most ignorant Person, who can read, will know how to do Cookery well." In a time when men wrote most cookbooks (namely professional cooks and chefs), Glasse's down-to-earth approach aimed at the common cook found a receptive audience. Clearly, based on its popularity, *The Art of Cookery Made Plain and Easy* was well received by many ladies of the house as well as domestic cooks and servants. Nonetheless, not all reviews were positive. Some criticized Glasse for not being practical, economical, or original—the very principles upon which she endeavored to write the book. Others, more used to the formal cookbook writings of professionals, found the language too coarse and lacking evidence of an educated author.

Both those who disregarded the cookbook as unworthy of its notable success and those who found it refreshingly useful could make satisfactory arguments for their differing points of view. On one hand, the recipes often tended to be unscientific in nature and, as Samuel Johnson noted in 1778, no educated person would refer to saltpepper and *sal prunella* as two separate substances. Also, some of the recipes Glasse included were somewhat quaint and decidedly impractical for the common cook. For example, she suggests eels stewed in broth for medicinal use in cases of "weakly and consumptive constitutions." She also provides a recipe for "hysterical water" that requires a quarter pound of dried millipedes and a concoction that she claimed would ward off the London plague of 1665, which required a mixture of 47 different roots, flowers, and seeds. Yet

another recipe, this one for seed cake, required four pounds of butter, four pounds of flour, and 35 eggs to be beaten together for two hours, hardly considered convenient by modern standards.

### Practical Advice

On the other hand, Glasse's recipes were clearly explained and the vast majority were contemporary, economical dishes. She gave clear, sensible directions in such practical matters as choosing fresh ingredients, using foods native to the region, and altering meals according to season. For example, in regard to deciding sufficient roasting time for a pig, she explains the need for considering certain factors. "If just kill'd an Hour; if kill'd the Day before, an Hour and a Quarter," she explains would alter the cooking time; however, she concludes that the best way to judge "is when the Eyes drop out." To test the freshness of an egg, she suggests touching the tip of the tongue to the large end of the egg to feel if it still holds warmth. Glasse also advised that green vegetables should not be overcooked: "All things green should have a little crispness, for if they are over-boiled, they neither have any sweetness or beauty." Although she provided several recipes aimed at medicinal use in a chapter entitled "Directions for the Sick," unlike many cookbook authors of the time, she did not emphasize the topic.

Glasse showed particular disdain for the French methods of cooking in the third chapter, entitled "Read this Chapter, and you will find how Expensive a *French Cook's* Sauce is." "If Gentlemen will have *French Cooks*," she declares, "they must pay for *French Tricks*." Noting a French cook's use of "six Pounds of Butter to fry twelve Eggs," she declares the obvious to her readers, "Every Body knows, that understand Cooking, that Half a Pound is full enough." Unique to her cookbook is an emphasis on creating attractive presentations of meals. Food was to be admired as well as consumed. For example, she considered pickled red cabbage to be of little use as an item on the menu, but recommends its use for garnishing dishes. The traditional proverb "First catch your hare" is commonly attributed to Glasse, but the phrase does not appear in *Art of Cookery made Plain and Easy*; however, she does write "Take your hare when it is cased" (i.e., skinned), which may have suggested the later saying.

The consistent popularity of Glasse's *Art of Cookery made Plain and Easy*, resulting in 26 editions being issued with facsimile reprints still available today, gives testament to the impact of Glasse's cookbook on the common menus of the eighteenth century. Although all of her recipes were probably not original, as some of her critics suggested, her common sense advice, careful organization, and plain language provided a much-used resource in many eighteenth-century kitchens. Glasse covered a wide range of topics, including how to prepare fish, soups, puddings, pies, cakes, pickles, potted hams, and jellies, along with sections on making wine and beer and cooking methods of roasting and boiling. Other topics covered in the 22 chapters include: "To make a Number of pretty little Dishes fit for a Supper, or Side Dish, or little Corner Dishes for a great Table," "For a

Fall Dinner, a Number of good Dishes, which you may make for a Table at any other Time," and "How to Market, and the Seasons of the Year for Butcher's Meat, Poultry, Fish, Herbs, Roots, Etc. and Fruit."

### Other Attributed Works

Although not nearly as popular as her cookbook, Glasse's 1760 publication *The Servant's Directory, or House-keeper's Companion* went through four editions by 1762. Also often attributed to Glasse are four children's books, all published posthumously: *Cato, or Interesting Adventures of a Dog of Sentiment* (1816), *Easy Rhymes for Children from Five to Ten Years of Age* (1825), *The Infant's Friend* (n.d.), and *Little Rhymes for Little Folks* (n.d.). Despite the success of the *Art of Cookery made Plain and Easy*, it is probable that Glasse did not benefit financially from her work. If the *Gentlemen's Magazine* does in fact make reference to Glasse, it appears that she was forced to file bankruptcy in 1754 and in the settlement required to sell the copyrights to her book. If this was the case, Glasse did not receive compensation for any editions issued after 1754. She died in 1770 in Newcastle, Northumberland, England.

### Books

Blain, Virginia, Patricia Clements, and Isobel Grundy, *The Feminist Companion to Literature in English: Women Writers from the Middle Ages to the Present*. Yale University Press, 1990.  
*A Dictionary of British and American Women Writers, 1660-1800*. Edited by Janet Todd, Rowman and Allanheld, 1985.  
*An Encyclopedia of British Women Writers*. edited by Paul and June Schlueter, University Press, 1988.  
 Sage, Lorna, *The Cambridge Guide to Women's Writing in English*. Cambridge University Press, 1999.  
 Stephen, Leslie and Sidney Lee, *The Dictionary of National Biography*. Oxford University Press, 1973. □

## Joseph Glidden

**Joseph Glidden (1813-1906) did not invent barbed wire, but the improvements to the product that he patented in 1874 resulted in the form of barbed wire still widely in use today. His refinements not only better secured the wire's barbs, but also kept it from snapping in extreme weather. Besides gaining him a personal fortune, Glidden's improvements led to the mass production and widespread use of barbed wire and had a major impact on the development of farming and ranching methods on the American Great Plains.**

Joseph Farwell Glidden was born in Charleston, New Hampshire, on January 18, 1813, to David and Polly Hurd Glidden, natives of that state. When Glidden was a child, the family moved to Orleans County, New York, where he lived as a typical farmer's boy. Glidden attended school full time but after reaching adolescence appeared



there only during the winter months, as he was needed at home to help with farming tasks.

During his late teens, Glidden decided he wanted to become a teacher. He received training at Vermont's Middlebury Academy, then attended a seminary at Lima, New York. He was employed as a teacher for only a few years until his interest in farming took him back to Orleans, where he stayed for eight years helping on the family farm. In 1837, Glidden married Clarissa Foster in Clarendon, New York; she and her three children died within several years of the marriage.

Wishing to buy his own farm but lacking the needed funds, Glidden began a journey westward in 1842. With two rather crude threshing machines in tow, he offered his services to farmers along a route from Michigan to Illinois. He also worked at other types of jobs out of farming season. By 1844 Glidden had accumulated enough money to purchase 600 acres of land near the Illinois town of DeKalb. Over time, he increased his land holdings there to 1500 acres, built a house, and began farming and raising cattle. In 1851 Glidden married Lucinda Warner, also of DeKalb.

### **Sought Patent for Barbed Wire Improvements**

In the fall of 1873, Glidden witnessed an event that was to dramatically change his life and lead to the transformation of farming and ranching practices throughout the western United States. In *The Wire That Fenced the West*, Henry D. and Frances T. McCallum described the events of that

autumn day. "At the DeKalb County Fair of 1873, on the outskirts of DeKalb Township, there was shown a curious sample of fencing, hand made by one Henry M. Rose. The sample was wooden rail, as was most fencing of the day. But the rail in this case was equipped with short wire points extending out in sharp projections and the apparatus as a whole was designed to be fastened to existing fences of smooth wire, board, or ordinary rail."

The fence attachment on exhibit in their prairie farm belt town captured the attention of three local DeKalb men, among them Joseph Glidden. Most likely the men had come to the fair purely for recreational purposes. But, in the words of the McCallums, "when by chance they met and stood together examining the crudely spiked strips of wood, each considering how it might fit his personal needs, there was borne in upon the consciousness of each the realization that what he saw gave promise of things to come."

It is not known whether the three men, lumberman Jacob Haish and hardware merchant Isaac Leonard Ellwood, in addition to Glidden, actually discussed the prospects for adapting the improvement to fencing on a wider basis. However, within six months, all three had individually applied to the United States Patent Office for patents on various types of fencing with attached barbs.

### **Early History of Barbed Wire Fencing**

Barbed wire fencing is made up of two pieces of wire twisted together to form a cable with thorn-like bobs at regular intervals. The fencing has been used to protect crops, water supplies, and livestock from being damaged or trampled by free-ranging cattle or other types of animals foraging for food. Barbed wire fencing provided a distinct improvement to the types of fencing materials that had been in use on the Great Plains prior to its development. Because trees were few and far between in some areas, wooden fencing was expensive. Rocks were not commonly found there, as they were in New England, so neither were rock fences feasible for common use. Slow-growing shrubs had been tried for use as fencing, but they often died during the region's occasional droughts or blew away in high winds. Stronger than plain wire fencing, which often snapped in the cold weather or was pushed over by animals, barbed wire emerged as the best choice for fencing material.

Attempts at producing barbed wire fencing had been made beginning in 1867, but none had produced a satisfactory material for restraining livestock. As a farmer, Glidden had been beset with worries about how to best protect his crops from damage. According to the McCallums, "The need for providing some sort of barricade to keep out stray animals was one of the gnawing problems of his everyday existence and he could see that an armoured fence attachment might help in remedying the situation."

### **Demand Grew for Glidden's Barbed Wire**

After finishing his farm work, Glidden spent many evenings of the weeks following the DeKalb County Fair experimenting with ways to make spikes like those he had seen in Rose's exhibit. While Rose had envisioned putting the fencing on farm animals to protect them, Glidden decided

that the barbs would be most effective if they were attached to the materials used to build the fences themselves. In a short time, he figured out how to make barbs and twist them directly onto the smooth wire used for fencing that most farmers were familiar with.

Most historians of the period agree that Glidden's wife, Lucinda, helped him in some way to develop his improvements to Rose's design, although the details of her involvement are not clear. The process was aided by the mechanism of a coffee grinder taken off the kitchen wall and through the use of equipment from the barnyard. In any event, Glidden figured out a way to twist a second wire around the first smooth wire to hold barbs in place and prevent them from slipping. This new design helped to keep wire from snapping during the frigid winters on the American Great Plains.

Once Glidden had perfected his design, the farmer had some neighbors come by to look at his invention. Soon, he was taking small orders from other farmers in the area. The demand for his barbed wire grew so strong that he was forced to hire additional help.

### Developed Manufacturing Method

On October 27, 1873, Glidden applied to the U.S. Patent Office for a patent on his invention of a specific method for attaching barbs to wire. Within two months, Jacob Haish also submitted a patent application to the office. When Haish learned that Glidden had done so earlier, he made a legal challenge to Glidden's priority. For the next year, proceedings to decide the matter took place in the courts. Finally, on October 20, 1874, a decision was issued in favor of Glidden, who was granted U.S. Patent #157,124.

The following year Glidden developed a machine for producing barbed wire in large quantities. He asked his friend and fellow DeKalb citizen, Isaac Leonard Elwood, to invest \$265 and go into partnership with him to manufacture barbed wire locally. Elwood agreed and together they formed the Barb Fence Company. The product immediately became successful and profits began to roll in. One year later Glidden sold his half-interest in the firm to the Washburn and Moen Manufacturing Company of Worcester, Massachusetts. He received more than \$60,000 and royalties for the life of the patent. The company soon expanded and increased its mechanization. By 1880 the firm's annual production had reached 80 million pounds of barbed wire.

### Developed Business Interests

After Glidden sold his shares in the Barb Fence Company, he maintained no more involvement in the barbed wire industry except the collection of his royalties, which continued until 1901. Glidden amassed a large fortune, appearing occasionally in various courtrooms to testify as a witness in barbed wire litigation proceedings.

In 1881 Glidden and businessman H. B. Sanborn bought 125,000 acres of land in Texas, to which another 125,000 acres of Texas Public School land later were added. They fenced it with Glidden wire and stocked it with

1,500 head of cattle. Sanborn, who was convinced that the best way to sell barbed wire in the West was to provide Texas cattlemen with a large-scale demonstration of ranch fencing, headed the project. Glidden stayed in the background.

During the latter part of his life, Glidden's business interests included part ownership of DeKalb National Bank, where he served as vice president from its beginnings until 1883. He also owned the DeKalb Roller Grist Mill and served as builder and proprietor of the Glidden Hotel. In 1852 he served a one-year term as sheriff of DeKalb County.

In 1899 Glidden donated a 64-acre tract of land for the construction of a public school called the Normal School at DeKalb. He broke ground on the site of his former farmhouse where practical barbed-wire fencing had originated. Glidden died on October 9, 1906 in DeKalb, Illinois. He was survived by his wife, Lucinda, and his daughter, Mrs. W. H. Bush of Chicago.

### Impact of Glidden Barbed Wire

Glidden is remembered for his role in encouraging the widespread use of barbed wire, which has been called "the force that tamed the West." The National Archives and Records Administration's Teaching with Documents series developed a lesson plan on Glidden's Patent Application for Barbed Wire. According to the series' text, "Barbed wire not only simplified the work of the rancher and farmer, but it significantly affected political, social, and economic practices throughout the region. Vast and undefined prairies and plains yielded to range management, farming, and ultimately, widespread settlement. As the use of barbed wire increased, wide-open spaces became less wide, less open, and less spacious, and the days of the free roaming cowboy were numbered."

When barbed wire first came into use, cattlemen strongly opposed the development. They sometimes engaged in fence cutting to allow their herds to roam free and graze at no expense. But over time most cattlemen saw the advantage of barbed wire fencing. The fencing led to the raising of livestock in more controlled conditions, which in turn led to the development of breeds larger and stronger than the lanky free-range-fed variety that were once so common. As a result, by 1890, nearly the entire western United States range was fenced.

Glidden's design for barbed wire, known as "the winner," is still the most familiar style of barbed wire and remains in wide use to protect construction sites and storage yards. The U.S. government used it to protect buildings and equipment during the Spanish-American War and the two world wars. Barbed wire continues to divide property all over the western United States.

### Books

- Cambridge Dictionary of American Biography*, edited by John S. Bowman, Cambridge University Press, 1995.
- Dictionary of American Biography*, edited by Allen Johnson and Dumas Malone, Charles Scribner's Sons, 1957.
- Johnson, Thomas H., *Oxford Companion to American History*, Oxford University Press, 1966.

McCallum, Henry D. and Frances T., *The Wire That Fenced the West*, University of Oklahoma Press, 1965.  
*Webster's American Biographies*, edited by Charles Van Doren, Merriam-Webster Inc., 1984.  
*World of Invention*, Gale Research, 1994.

### Online

"Wire," *Compton's Encyclopedia Online* v.3.0, <http://www.comptons.com/encyclopedia> (December 17, 2000).  
 "Glidden, Joseph Farwell," *Encyclopedia Britannica*, <http://www.britannica.com> (December 17, 2000).  
 "Glidden's Patent for Barbed Wire," *National Archives and Records Administration, Teaching With Documents, Vol. 2.*, <http://nara.gov/education/teaching/glidden/wire.html> (December 17, 2000). □

## Peter Carl Goldmark

**Peter Carl Goldmark (1906-1977), a Hungarian-born physicist and engineer who later became a U.S. citizen, is best known for his invention of the long-playing record, commonly known as the LP. It revolutionized the recorded music industry and dominated sales for 40 years. Spending most of his career as an engineer at CBS, he also contributed to the development of color television, photocopying, audio cassettes, and the video cassette recorder.**

Goldmark was born in Budapest, Hungary, on December 2, 1906, the eldest child of Sandor (Alexander) Goldmark, a businessman, and Emma Steiner. His great-uncle, the chemist Joseph Goldmark, discovered red phosphorus, used in making matches, and invented percussion caps for rifles, first used in the U.S. Civil War. Another great-uncle, Karl Goldmark, is considered to be one of Hungary's greatest composers. As a boy, Goldmark received training in piano and cello. From an early age he developed a respect for both science and music. According to his autobiography *Maverick Inventor: My Turbulent Years at CBS*, Goldmark remembers living on the Danube River in Budapest in 1919, during the Hungarian civil war. As a string quartet performed in their home, rebels who were cruising on the Danube shot into the open windows, as a warning to close the windows. Goldmark's mother directed the quartet to continue and remained in her seat. A second shot hit the ceiling and, much to the amazement of young Goldmark, the quartet continued to play. Only when the music ended did Goldmark's mother close the window.

When Goldmark was eight years old, his parents divorced. After his mother remarried, he moved with her to Vienna. Intrigued with electrical science, Goldmark created a laboratory in the family's bathroom and succeeded in building a radio telegraph receiver. He had a particular interest in motion pictures and slide projection. His attempt to build a device to reproduce movies resulted in a fire when the nitrate film overheated. After beginning his post-

secondary studies at the University of Berlin, he transferred to the University of Vienna in 1925, where he studied under nuclear physicist Heinrich Mache. During his time in Vienna, he patented his first invention, called a "knietaster," a mechanism that activated a car horn with knee pressure, thus allowing the driver to keep both hands on the steering wheel. He also continued to experiment from the family bathroom. In 1926 he and a friend purchased a do-it-yourself television kit with a postage stamp size screen; the first televised image he saw was a flickering image of a dancer being broadcast in London by the newly formed British Broadcasting Company. Working from his bathroom, Goldmark was able to increase the size of the image, resulting in another patent. He received his Ph.D. from the Physical Institute at the University of Vienna in 1931, submitting the dissertation "A New Method for Determining the Velocity of Ions," which Mache presented to the Academy of Science in Vienna.

### Joined CBS

Upon graduation Goldmark moved to England to work for Pye Radio, Ltd. in Cambridge as a television engineer. After serving for two years as the director of the television department, he moved to New York in 1933 to become a consultant to numerous television and radio companies. In 1936 he accepted a position as chief engineer at Columbia Broadcasting System (CBS), charged with developing a television department for CBS. In the same year he married Muriel Gainsborough, but the marriage was short-lived and the couple later divorced. The following year Goldmark became a U.S. citizen. He married Frances Charlotte Trainer on January 12, 1940; they had four children, Frances Massey, Peter Carl Jr., Christopher, and Andrew. The marriage ended in divorce in 1954. Goldmark then married his secretary Diane Davis, with whom he had two children, Jonathan and Susan.

While on a postponed honeymoon with his second wife in Montreal in the spring of 1940, Goldmark attended a showing of the Technicolor film *Gone With the Wind*. He was mesmerized by the color images and quickly became enthralled with the idea of bringing color images to television. Upon his return to the United States, he set about to create a prototype color television. The result, which Goldmark called the "field sequential system," made its demonstration debut in New York on August 29, 1940, projecting colored images of flowers, red boat sails in a sunset, and a girl chasing a ball. On December 2, 1940, the system aired the first live color television images on CBS's experimental channel. Images were filmed using a rapidly spinning three-color disk and viewed using a similar disk. Because the system could not be adapted to work on existing black and white televisions, the Federal Communications Board felt it was too impractical for final approval.

### Worked with U.S. Army

During World War II, Goldmark abandoned the development of color television to work at Harvard University's Radio Research Laboratory. His most important contribution during this time was the invention of the "jammer," a

device the size of a shoebox, which housed electronic circuits that confused enemy radar. Allied pilots carried jammers on bombing runs over Germany; they were also used in the Allied invasion of Africa. In 1944, Goldmark joined the U.S. Navy's Office of Scientific Research and Development, where he aided in the development of what became known as an "electronic spook navy" device that transmitted a series of radio signals designed to create distractions on enemy radar. It was used during the Allied invasion of Normandy on D-Day.

### Got Approval for Color Television

At the end of the war, Goldmark returned to CBS to become the director of engineering research and development in 1944. He continued to make improvements to his field sequential system and finally received federal approval. However, his system was quickly replaced on the commercial market by Radio Corporation of America (RCA)'s development of electronic color television, which used electrons fired at red, blue, and green phosphorescent spots on the screen. Because it was compatible with existing televisions, RCA's system became the industry standard. Nonetheless, because of its smaller, lighter camera and easier handling, Goldmark's color system was widely used in closed-circuit television, especially for instructional purposes in industry, medical facilities, and educational institutions.

### Invented the LP

Goldmark's most important invention, like his development of color television, grew out of his everyday life experiences. In the fall of 1945, he and his wife were being entertained at a friend's home. After dinner, the host played a 78-rpm record of Vladimir Horowitz playing Brahms' "Second Piano Concerto." Bothered by the thinness of sound, scratches, and clicks, Goldmark was especially annoyed at the short playing time. To complete the concerto took six records, which meant consistent interruptions of the music. Intent on lengthening the playing time and improving the overall quality of the recording, Goldmark set out on a quest that resulted in the development of the long playing record, which became universally known as the LP. Goldmark slowed the revolution speed from 78 rpm to 33 1/3 rpm and increased the grooves to 300 hairline grooves per inch. He exchanged the steel needle with a sapphire stylus and decreased the weight by refashioning the tone arm and employing vinyl rather than shellac for making the records. He also made improvements to the microphone to produce a clearer, cleaner sound. Playing time was increased to approximately 20 minutes-long enough to complete an average classical music movement. He demonstrated his new product in 1948; the first LP featured a secretary at CBS playing piano, an engineer on violin, and Goldmark playing the cello. Put on the market by CBS on June 21, 1948, the LP was not an immediate success. Five years later, it was in the market to stay with the successful recording of the popular musical *South Pacific*. By 1972, LP sales constituted one third of CBS's revenue; it remained the industry standard until being replaced by the compact disc.

### More Electronic Innovations

In 1950 Goldmark was promoted to vice-president of CBS and continued experimenting in electronic innovation. Involved with numerous research projects, his most technologically advanced invention was a system called the Linotron, an ultra high-speed photo composing system. Always attune to graphic quality, Goldmark's Linotron could electronically produce page-by-page composition 1,000 characters per second and maintain a high level of graphic integrity. Based on his previous work with color television, Goldmark developed a rotating-drum line scanner that was used by the National Aeronautics and Space Administration to transmit incredibly clear, detailed color pictures of the moon by the Lunar Orbiter. Goldmark's attempt to market a record player for cars never caught on, but the idea of taking recorded music into the automobile remained. By the late 1950s, he was working with the 3M Company to develop a tape cassette system for home and car use. The resulting work by his team led to a series of patents that eventually evolved into the audiocassette.

### Created Precursor to VCR

Having been promoted to president of CBS Laboratories in 1958, Goldmark moved his laboratory offices from New York to Stamford, Connecticut. Before retiring from CBS in 1971 to form his own company, Goldmark Communications Corporation, he offered one more important development to electronic communications: electronic video recording (EVR). Believing that communications should work for the good of education, Goldmark felt that the ability to project recorded images on television at a reasonable cost would be vastly beneficial to educational projects, especially in rural areas where resources were limited. Created in 1958, two decades later, EVR developed into the video cassette recorder. Goldmark never garnered the wholehearted support of the CBS executives in the development of EVR because they feared that it would eventually lead to competition in the viewing market.

### Humanitarian Efforts

When Goldmark left CBS to form his own company, his attention turned from experimentation to humanitarian efforts. He served as the head of the Antipoverty Office in Stamford and as a visiting professor for medical electronics at the University of Pennsylvania Medical School, where his color imaging technology had long been in use. Goldmark spent more and more of his time advocating for increased educational opportunities and improved quality of life. Believing that the congested living conditions of the city were causing many social woes, he began promoting the New Rural Society. According to his social plan, electronic communications could provide services, opportunities, and employment beyond the city, thus allowing more citizens to live in rural areas. Having contributed to numerous important electronic inventions, Goldmark's life ended in an automobile accident in Rye, New York, on December 7, 1977, less than a week after his 71st birthday. Among the numerous honors bestowed on him during his lifetime, President Jimmy Carter awarded Goldmark the National Medal of



Science in 1977. Goldmark recorded his many experiences, especially his time at CBS, in his autobiography, *Maverick Inventor: My Turbulent Years at CBS* (1973).

### Books

*American Men and Women of Science*. 13th edition. Edited by Jacques Cattell, R. R. Bowker Company, 1976.

*McGraw-Hill Modern Scientists and Engineers*. edited by Jay E. Greene, McGraw-Hill, 1980.

*National Cyclopedia of American Biography. Volume 60*. James T. White and Company, 1981.

*World of Invention*. 2nd edition, edited by Kimberley A. McGrath, Gale Research, 1999.

### Online

"Peter Carl Goldmark." In *Dictionary of American Biography, Supplement 10: 1976-1980*. Charles Scribner's Sons, 1995. Available at <http://www.galenet.com> (February 28, 2001).

"Peter Carl Goldmark," *Contemporary Authors Online*. The Gale Group, 1999. Available at <http://www.galenet.com> (February 28, 2001).

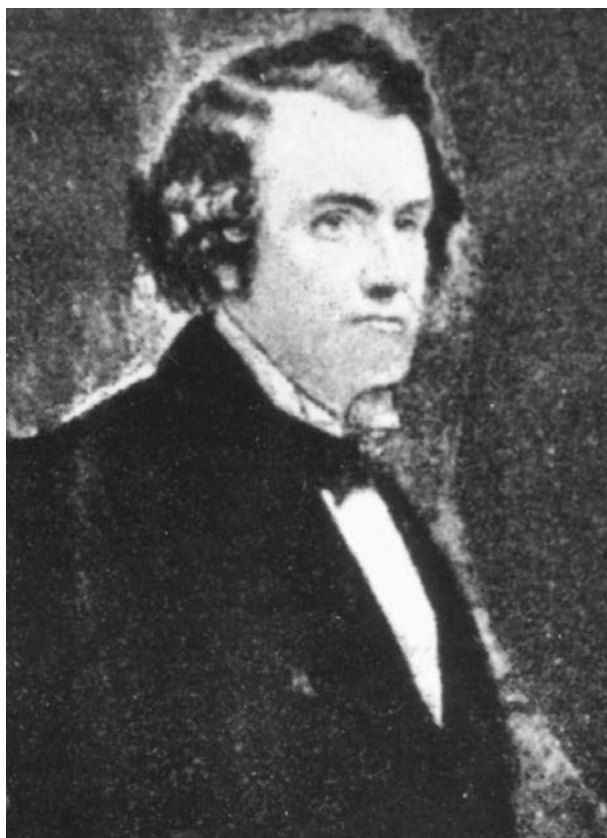
"Peter Carl Goldmark." *Notable Twentieth-Century Scientists*. Gale Research, 1995. Available at <http://www.galenet.com> (February 28, 2001). □

## John Gorrie

**John Gorrie (1803-1855) was granted the first U.S. patent for mechanical refrigeration. As a physician in Florida during the outbreak of the malaria epidemic, Gorrie set about on his mission to create artificial cooling as a matter of medical urgency to cure his patients of a disease he believed was caused by extreme heat and humidity.**

Gorrie was born on October 3, 1802 (or 1803). Whereas most accounts list his birthplace as Charleston, South Carolina, and his heritage that of Scotch-Irish, others speculate that Gorrie, who had an olive complexion and dark hair and eyes, was born in Charlestown, a city on the island of Nevis in the West Indies. According to this possible scenario, Gorrie's mother, whose identity is unknown, fled from Spain to the West Indies, where she gave birth to Gorrie out of wedlock. When Gorrie was between 12 and 18 months old, he and his mother moved to Charleston, South Carolina with Captain Gorrie, a Scots officer who was serving in the Spanish navy. Gorrie and his mother remained in Charleston after Captain Gorrie returned to sea. However, they continued to receive support from the Captain until Gorrie graduated from college.

Little light is shed on Gorrie's early life by his college records, which lists his hometown as Columbia, South Carolina. However, no records exist that place Gorrie, his mother, or Captain Gorrie at any of the locations of Charleston, South Carolina; Charlestown, West Indies; or Columbia, South Carolina. By some accounts he apprenticed for a



year with a Columbia apothecary in 1824. In 1825 he enrolled in the College of Physicians and Surgeons of the Western District of the State of New York at Fairfield, in Herkimer County. Although the school was only open for a few decades, it had a significant impact on the development of science in the United States. Asa Gray, who became the leading American botanist, was serving as an assistant in the chemical department during the time Gorrie attended the college and later remembered Gorrie as a promising student. In 1827, Gorrie earned his medical degree, submitting his thesis on neuralgia.

### Life in Apalachicola

Upon graduating, Gorrie opened his first medical practice in Abbeville, South Carolina, before moving with his mother to Sneads, Florida in 1831. Within two years his mother died, and in 1833, he moved to Apalachicola, Florida. A growing, bustling Gulf Coast city, Apalachicola was at that time the third largest port on the eastern seaboard, serving as a primary location for the export of cotton. Gorrie supplemented his income from his medical practice by taking on a variety of civic duties. He began serving as assistant postmaster in 1834, and before the end of the year, he was named postmaster. He held this position from November 24, 1834 to July 18, 1838, for which he received \$121.50 a year. In 1835 the U.S. Supreme Court granted the Apalachicola Land Company a clear title to the area. During this time, the city grid plans were designed in a style similar to the city of Philadelphia, Pennsylvania. In the same year Gorrie became a notary public and was elected to the

Apalachicola City Council after which he was appointed chairperson and city treasurer. He subsequently held the office of vice intendant and, on January 21, 1837, was elected intendant (mayor) of Apalachicola. During this period of development, Gorrie was a strong advocate for land development, especially such public health-related issues as swamp draining and weed clearance.

Gorrie's activities spread further into community service and business. After serving on the founding committee of the Masonic Lodge in 1835, Gorrie was appointed secretary pro-tem on December 28, 1835 and later served as treasurer. He was a partner in the Mansion House Hotel, built in 1836, of which he owned a one-fifth interest. He was president of the Apalachicola branch of the Bank of Pensacola (1836), a founding member of the Marine Insurance Bank of Apalachicola (1837), and director of the Apalachicola Mutual Insurance Company (1840). Gorrie was also a charter member in the establishment of Apalachicola's Trinity Episcopal Church; however, he was not an overtly religious man and did not purchase a pew as was the custom of the day for the most devout and wealthy.

### Developed Artificial Cooling

In 1837 Gorrie became the attending physician for the Marine Hospital Service of the U.S. Treasury Department, a position he held until 1844. On May 8, 1838, Gorrie married Caroline Frances Myrick Beman, a widowed mother with a young daughter. Beman was a native of Columbia, South Carolina, and the proprietress of the Florida Hotel in Apalachicola; they had two children. Shortly after their marriage, Gorrie and his new wife left Apalachicola and did not return until 1840. In 1841 Gorrie became Justice of the Peace. In the same year, the malaria and yellow fever epidemic came to Apalachicola, and Gorrie turned his full attention to finding a cure for the diseases. He resigned from all his civic responsibilities and substantially decreased the number of patients he saw to spend more time studying the possible cause and cure for the deadly illnesses, which thrived in the subtropic climate.

At the onset, malaria brought violent shakes and chills, followed by high fever and terrible sweats. Sometimes deadly, malaria could recur in victims who survived. In cases of yellow fever, however, victims of the disease either lived or died—as it did not recur. Yellow fever came in waves and killed anywhere between 12 to 70 percent of those infected. It began with high fever, shivering, unbearable thirst, terrible headaches, and severe pain in the back and legs. After about 24 hours, the victims would become jaundiced, turning yellow in color. In the final stages of the disease, victims vomited blood (called “black vomit” or vomito negro), their temperature would fall so low that they felt cool to the touch, and their pulse rate slowed. Death usually followed within hours. People were so terrified of malaria and yellow fever that the bodies of those who died would be quickly burned, the area quarantined, and yellow flags hung. Other preventative measures included hanging gauze over the patients beds, wearing handkerchiefs soaked in vinegar over the mouth, drenching bed linens in cam-

phor, burning sulfur or gunpowder outside the house, and wearing garlic in shoes.

The term malaria means “bad air” in Italian. Mosquitoes were later found to be the source of its transmission. At the time it was mistakenly believed that the rapid decomposition of vegetation in the hot, humid air of the low-lying subtropical areas created a poisonous gas in which the disease developed. Gorrie theorized that the swiftly decaying organic matter created poisonous oil. As a result of this belief, Gorrie developed a two-fold attack. First, he encouraged the population to make all efforts possible to eliminate the decay by filling in wet, low-lying areas and draining elevated wetlands. Second, and more significantly, he began to develop a way to control his patients' body temperatures by controlling the temperature and humidity levels of the hospital rooms.

At that time, ice was a rare commodity in the warm climate of the South. Cut from the northern lakes during winter, ice was stored in underground icehouses, packed in sawdust, and transported via ship around Florida to the Gulf Coast shore. Hardly a convenient or practical method of cooling, Gorrie started work on a method of artificial cooling. His research led to the invention of an ice-making machine. Developed between 1838 and 1845, Gorrie created a machine that compressed air in a chamber. The air was then released to expand rapidly, causing it to absorb the heat from water that surrounded the chamber. The compressed air drew enough heat away from the water to bring the water temperature down below freezing, thus creating ice.

By 1845 Gorrie had completely abandoned his medical practice to concentrate on his invention. In the same year he finalized the design of his ice machine. In 1848 he commissioned the Cincinnati Iron Works, located in Cincinnati, Ohio, to build a working model. By October 1848, the model was completed and Gorrie began demonstrating its ability. On February 27, 1848, he filed for a U.S. patent, which was granted on May 6, 1851 as U.S. Patent No. 8080, “Improved process for the artificial production of ice.” He also received a British patent, issued as London Patent No. 13,124 on August 22, 1850.

### Financial Failings

While developing his invention, Gorrie began publishing articles on malaria, cooling systems, and ice production. As early as 1840 he wrote a series of articles entitled “Equilibrium of Temperature as a Cure of Pulmonary Consumption,” which appeared in the *New York Lancet*. During April 1844, he submitted 11 articles on malaria to the *Apalachicola Commercial Advertiser*. His article, “On the Quantity of Heat Evolved from Atmospheric Air by Mechanical Compression,” appeared in the *American Journal of Science* in 1850. On two occasions, in 1854 and 1855, the *New Orleans Medical and Surgical Journal* published a series of articles written by Gorrie. Finally, in 1854 he produced a pamphlet to promote his ice machine entitled *Dr. John Gorrie's Apparatus for the Artificial Production of Ice in Tropical Climates*.

Despite the significance of the development of a means of artificial cooling, Gorrie never profited from his invention. Newspapers in the North denounced his claims and ridiculed his efforts. Fearing lost profits, the northern ice suppliers, who monopolized the ice market, lobbied strongly against Gorrie. Additionally, because Gorrie's ice-making machine was an imperfect prototype, it sometimes did not operate correctly. For whatever reason, perhaps a combination of factors, Gorrie could not find financial backing for his invention. Unfortunately his own financial situation became quite precarious after being sued by a London debt collector for unpaid interest amounting to over \$6,500. He made an unsuccessful trip across the South in search of financial backing for the commercial production of ice. With no financial support for his invention, Gorrie was forced to sell half of his interest in the ice machine to a businessman from New Orleans. However, the investor died suddenly before providing Gorrie with any funds. The frustrating situation took an emotional toll on Gorrie, who suffered a nervous breakdown from which he never recovered. He died at the age of 54, on June 16, 1855. He is buried in Gorrie Square in Apalachicola, Florida.

Gorrie's personal papers were destroyed in 1860 in the midst of the U.S. Civil War. In 1914 the state of Florida recognized his contribution by erecting Gorrie's statue in the U.S. Capitol's Statuary Hall. Florida also established the John Gorrie State Museum in Apalachicola. Although unsuccessful in his attempts to create large-scale production of ice, Gorrie's work paved the way for further development. Much of modern refrigeration and ice production is still largely based on the basic principle employed by Gorrie.

### Books

*American National Biography*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.

*Concise Dictionary of American Biography*. Fourth edition. New York: Charles Scribner's Sons, 1990.

Schapsmeier, Edward L. and Frederick H. *Encyclopedia of American Agricultural History*. Greenwood Press, 1975.

*World of Invention*. 2nd edition. Edited by Kimberley A. McGrath, Gale Research, 1999.

### Online

"John Gorrie," *Apalachicola Area Historical Society, Inc.* <http://www.phys.ufl.edu/~ihas/fridge.html> (February 3, 2001).

"Gorrie, John." *Merriam-Webster's Biographical Dictionary*. Merriam-Webster, Inc., 1995. <http://www.galenet.com> (February 3, 2001).

"John Gorrie." *Dictionary of American Biography*. Base set. American Council of Learned Societies, 1928-1936. <http://www.galenet.com> (February 3, 2001). □

## Otto Graham

**Otto Graham (born 1921) was one of professional football's greatest quarterbacks and most accurate passers. In every one of his ten seasons with the**



**Cleveland Browns, he led his team to the league championship game.**

"Otto was my greatest player," said legendary Cleveland coach Paul Brown. "He had the finest peripheral vision I had ever seen, and that is a big factor in a quarterback. He was a tremendous playmaker. He had unusual eye-and-hand coordination, and he was bigger and faster than you thought."

### All-around Talent

Otto Graham was a huge baby, weighing 14 pounds and 12 ounces when he was born on December 6, 1921 in Evanston, Illinois. He was one of four sons of two schoolteachers who both loved music and encouraged their children to play instruments. Young Otto became proficient in violin, cornet, piano, and French horn. At Waukegan High School, he became Illinois French horn state champion and played in a brass sextet that won the national championship. That same year, at age 16, he was the state's basketball scoring champion and named to the All-State basketball squad. The next year, 1938, Graham was named to the All-State football squad.

Graham's athletic versatility flowered at Northwestern University, which he entered on a full basketball scholarship. Nicknamed "Automatic Otto," Graham became the basketball team captain and was the second-leading scorer in the Big Ten. Selected to the collegiate All-Star team, he

was named most valuable player when the All-Stars beat the National Basketball League champion Washington Bears in an exhibition game. Graham also played baseball and compiled Northwestern's third-highest batting average.

But it was on the gridiron that Graham really excelled at Northwestern. Invited to spring football practice as a freshman, Graham threw three touchdown passes and ran for three others in the annual intramural scrimmage game. In his college days, he set new single-season and career passing marks for the Big Ten. In one game against Michigan, he connected on 20 of 29 passes for 295 yards. Graham became one of only a few college players to be named an All-American in both football and basketball. He finished third in the Heisman Trophy voting for the best college football player of 1943.

Entering the Navy, Graham married Beverly Collinge during preflight training for the V-5 carrier program. They would soon start a family of three children. In the service, Graham became cadet regional commander and also played football for Paul "Bear" Bryant, who went on to enjoy a legendary college coaching career. In the Navy, Graham learned how to quarterback in the new "T" formation, where the quarterback stood directly behind the center.

After World War II ended, Graham played one season with the National Basketball League's Rochester Royals as part of a league championship squad. He retired from basketball after that single pro season in favor of football. Cleveland's Paul Brown had trained his sights on Graham ever since 1941, when he had been coaching Ohio State University and Graham beat him by throwing off-balance while running for a touchdown. As the war wound down, Brown decided to form a new team, and Graham was his first pick. Brown signed him to a contract while Graham was still in the Navy, paying him a \$1,000 bonus and \$250 a month until the war was over so he wouldn't be tempted to sign elsewhere. Sure enough, Graham was drafted by the Detroit Lions but instead signed with Cleveland to play in the newly formed All America Football Conference.

Emerging from the war with a solid core of collegiate players who had been in the service, the Browns became a juggernaut. In their first season, the Browns won the AAFC championship, making Graham the first player to be on two world championship teams in different sports in the same year. After that season Brown tore up Graham's initial two-year contract and raised his pay to \$12,000 a year.

### An Innovative Team

Brown quickly became football's most innovative coach, and Graham was his ideal quarterback, a deadly accurate passer and a creative playmaker. Together, Brown and Graham shifted the emphasis in football from running to passing. But Graham was forced to submerge his ego to Brown's. Brown became the first coach to call plays regularly for his quarterback, instituting the rotating messenger guard system to bring plays from the sideline to the huddle.

At the time, it was widely reported that Graham chafed at the arrangement. But in an interview in *Sports Illustrated* in 1998, Graham said he hadn't been unhappy. "[O]n the

Browns there was room for only one ego, and it wasn't mine," he told interviewer Paul Zimmerman. "I never criticized the coach. He was the admiral, the general, the CEO." Under Brown and Graham, the Browns dominated the league in the four seasons that the AAFC existed, winning four championships with a total of 52 wins, four losses and three ties. Graham, who was cool under pressure and remarkably consistent, was named AAFC Most Valuable Player three of those four seasons, in 1947, 1948 and 1949, leading the league in passing yardage each year.

"What I loved was that we were a passing team in an era of the run," Graham recalled. "I could throw hard if I had to, I could lay it up, I could drill the sideline pass. God-given ability. The rest was practice, practice, practice." Though he threw with a modified sidearm technique, Graham was uncannily accurate on long passes.

### A Classy Competitor

In 1950, the National Football League absorbed the Browns and two other teams from the AAFC, the Baltimore Colts and San Francisco 49ers. In their first game in the NFL, the Browns were paired up against the defending champions, the Philadelphia Eagles. The idea behind the schedule was to teach the upstarts a lesson. But the Browns had a different plan. "When we went into that game, I can assure you that no team in the entire history of the sport was as well prepared mentally as we were," Graham said in an interview after his retirement. Graham's first pass in the new league went for a touchdown, and the Browns stunned the Eagles with a 35-10 victory. Years later, Graham said: "It was the highlight of my whole career."

Graham went on to win the MVP award in his new league. The Browns won the divisional title and faced the Los Angeles Rams in the league championship game. Graham led the team on four touchdown drives, but the Browns were a point short in the closing minutes. After fumbling a ball, Graham thought he had lost the game, but Brown told him there would be one last chance. He was right. With the clock running down, Graham took the Browns into field goal territory and they pulled out the championship game, 30-28.

In the six seasons he played in the NFL, Graham's team won the divisional title each year. Graham cemented his reputation as a modest, classy, uncomplaining star who was nonetheless fiercely competitive in clutch situations. "If there was one game on the line that you had to win, I would pick Otto Graham," said New Orleans Saints general manager Jim Finks. Graham was the instrument for Brown's ceaseless offensive innovations that helped define modern football, such as the sideline pass and the draw play. He was also an excellent runner who could scramble out of trouble.

Nothing could keep Graham out of a game—not even an injury. After one game in which Graham was knocked out by an opponent's forearm to the mouth, Brown invented the facemask on the spot by having his equipment manager weld a metal bar onto Graham's helmet. One day, Graham started against the San Francisco 49ers with a heavily taped injured knee. On the first series of plays he threw a

touchdown pass. The 49ers coach had so much respect for Graham that he had told his players not to hit him hard.

"We had the greatest coach in the game and an esprit de corps you find very seldom on a football team today," recalled Graham in a 1999 interview. "It didn't matter who got the credit, who made the headlines, who scored." Yet Graham sometimes complained about Brown's obsessive need to control even the personal lives of his athletes. "I was a clean-cut kid," Graham told sportswriter Mickey Herskowitz. "I didn't drink, I didn't smoke. When they came around to check my room I resented it. They knew I was in there."

In 1954, Graham led the league in passing yardage for the third consecutive season and won another MVP award. In the championship game against the Lions, Graham threw three touchdown passes and ran for three others, and the Browns won, 56-10. Graham wanted to retire after that season, but Brown coaxed him back for a final year, giving him \$25,000 to make him the highest-paid player in the game at the time. But Graham said later that the money wasn't important: "I'd have played for the fun of it, and a lot of guys felt that way then." In 1955, the Browns again won the league title game, with Graham throwing two TD passes and running in two other scores. Graham was again named the league MVP but made good on his pledge to retire.

In ten professional seasons Graham's team had been in a league title game ten times, winning seven of them. Graham was his league's most valuable player in six of those ten seasons. He led his league in passing yardage six times, and in touchdowns three times. For his career, he racked up 174 touchdowns and 23,584 yards passing, completing 55.8 percent of his passes. Until the 1980s he remained the top-rated professional passer of all time. In games he quarterbacked, the Browns won 114 games, lost 20 and tied four.

"Paul Brown was just light-years ahead of everybody," Graham told Herskowitz. "I'm grateful I got to play under him. I learned a lot about football, about organization, about life. There were times when I hated his guts. I could have killed him. Other times I felt something close to love."

### Coaching Like His Mentor

With his playing days over, Brown turned enthusiastically to coaching, where he adopted many of Brown's techniques, though with much less success. "I found myself doing and saying the same things that used to make me so mad at him," Graham told Herskowitz.

Beginning in 1958, Graham coached the Collegiate All-Stars for many years in their annual game against the defending NFL champions. Twice he led the college team to victory, in 1958 over the Detroit Lions and in 1963 over the Green Bay Packers. In 1959, Graham became athletic director and football coach for the United States Coast Guard Academy. Under his tutelage, the Coast Guard had an undefeated season in 1963 and appeared in the Tangerine Bowl.

After being inducted into the Pro Football Hall of Fame in 1965, Graham became head coach of the Washington

Redskins for the 1966 season. He coached the Redskins for three years with mixed success. His squads set league passing marks, thanks to quarterback Sonny Jurgenson, but in 1969 Graham was let go in favor of the legendary Vince Lombardi.

Graham returned to the Coast Guard Academy for 16 more seasons as athletic director before his retirement in 1985. In 1994 he was named to the NFL's 75th anniversary team. In 1996 Graham received Northwestern University's Lifetime Achievement Award.

In an interview with NFL.com in 2000, Graham expressed one regret, that he had given up music for football: "I would trade every trophy, every honor I've ever had, to have just continued playing the piano."

### Books

Herskowitz, Mickey, *The Quarterbacks*, William Morrow, 1990.  
Korch, Rick, *The Truly Great: The 200 Best Pro Football Players of All Time*, Taylor Publishing, 1993.  
Rosenthal, Harold, *Fifty Faces of Football*, Atheneum, 1981.

### Periodicals

*Sports Illustrated*, August 17, 1998.

### Online

"Graham was the ultimate winner," *NFL.Com*, <http://www.nfl.com/news/Wherenow/graham.html>.  
"Graham: the Browns' first star," *NFL.Com*, <http://www.nfl.com/news/hof/40s/graham.html>  
"Otto Graham," [www.ottograham.net](http://www.ottograham.net)  
"Otto Graham," *Notable Northwestern Alumni, University Archives*, <http://www.library.nwu.edu/archives/exhibits/alumni/graham.html>. □

## John Graunt

**John Graunt (1620-1674) is considered by many historians to have founded the science of demography, the statistical study of human populations. He analyzed the vital statistics of the citizens of London and wrote a book regarding those figures that greatly influenced the demographers of his day and those in the centuries that followed. Graunt was honored for his work by being made a charter member of England's Royal Society, which was composed of prominent scientists.**

John Graunt was born in London, England, on April 24, 1620, to Henry Graunt, a storekeeper in Hampshire, and his wife, Mary. The eldest of seven or eight children, Graunt attended school until adolescence. At age sixteen he became an apprentice to his father, who was employed as a draper (a dealer in clothing and dry goods). In February 1641, Graunt married Mary Scott, with whom he had one son and three daughters.

As his career prospered, Graunt held several different positions in the Freedom of the Drapers' Company. He also became involved in politics and served in various jobs for the city of London, including a term as a member of London's common council. By the age of 30 Graunt had attained such influence that he was able to procure the professorship of music at Gresham College for his friend, Sir William Petty. Petty, a physician, later invented the horse-propelled military tank and was appointed surveyor general of Ireland. Like Graunt, Petty also engaged in early demographic work.

### Book Based on Mortality Records

Despite his lack of formal education, Graunt became interested in mortality statistics. He got the idea to write the book that was to make him famous from having thought a great deal about the Bills of Mortality (lists of the dead) that had been published in England beginning in the late sixteenth century. His book was titled *Natural and Political Observations mentioned in a following index, and made upon the Bills of Mortality With reference to the Government, Religion, Trade, Growth, Ayre, diseases, and the several Changes of the said City*. The Bills of Mortality were the vital statistics about the citizens of London collected over a 70-year period. In his book, hereinafter referred to as *Observations*, Graunt explained that the accounts were kept as the number of deaths rose from the plague, a catastrophic illness whose germs were carried by fleas that lived as parasites on rats. In the year 1625 alone, one-fourth of England's population died, many from the plague.

According to Graunt, the recording of the London statistics "first began in the year 1592, being a time of great Mortality; and after some disuse, were resumed again in the year 1603, after the great Plague then happening likewise. These bills were Printed and Published, not only every week on Thursday, but also a general [account] of the whole Year was given in, upon the Thursday before Christmas Day. Graunt studied the statistics compiled in the Bills of Mortality, along with christening records from churches and data from an area of rural England. A practical man, he decided that these carefully collected facts could be analyzed and the results put into book form. On February 5, 1662, Graunt's newly-printed 90-page work, *Observations*, was distributed to the members in attendance at a meeting of England's Royal Society.

### Critique of Graunt's Data Analysis

Graunt had grouped together similar facts from the 70 years of records displayed in the Bills, and noted the comparisons of findings for different population groups. From his studies he drew a number of interesting and important conclusions. Graunt modestly described his own work as "to have reduced several great confused volumes [of Bills of Mortality] into a few [easy to understand] Tables, and abridged such Observations as naturally flowed from them, into a few succinct Paragraphs, without any long series of [wordy] Deductions."

In an article on Graunt in the *Dictionary of Scientific Biography*, Frank N. Egerton, III pointed out that Graunt's

deduction of various characteristics of populations from the data he analyzed, "indicate a good understanding of the kinds of questions that are significant for demography." But pointing out some deficiencies in Graunt's work, Egerton also wrote, "Usually [Graunt] explained his steps in solving problems, but he seldom included the actual calculations; and sometimes he omitted important information. Furthermore, his indirect approach sometimes went beyond the reliable use of his data, and the accuracy of some of his answers was difficult to evaluate."

Egerton nevertheless commended Graunt for realizing the shortcomings of his data, and pointed out that Graunt sometimes "set an excellent example by seeking verification of his estimates by different indirect methods." In addition, Egerton observed, Graunt "introduced the use of statistical samples [though he] did not pursue this subject far enough to determine the sizes of samples or means of selection needed for insuring accuracy. [Graunt] also realized that demographic procedures could be used to make projections concerning both past and future populations."

In a 1996 article in the British medical journal *Lancet*, Kenneth J. Rothman pointed out some of Graunt's major achievements as a pioneer demographer: Graunt was the first to publish the fact that more boys than girls are born but that the mortality rate is greater for males, resulting in the population's being almost evenly divided between males and females. Graunt reported the first time-trends for many diseases; he offered the first well reasoned estimate of London's population; he used evidence from medical records to refute the idea that plague spreads by contagion and that it occurs early during the reign of a new king; he showed that doctors have twice as many female as male patients, but that males die earlier than females; he produced early hard evidence about the frequencies of various causes of death.

### Work Had Wide Influence

The invention that some historians have called Graunt's most original was his creation of "life tables"—a new way to present population and mortality statistics by calculating survivorship on a chart. Using this method Graunt was able to predict the number of persons who would survive to each successive age on his chart and the life expectancy of the groups from year to year. Development of the life tables has been hailed as marking the beginning of the science of demography. Such charts are said to have made an impact on the pioneer demographic work of other noted astronomers and scientists, including Edmund Halley (1656-1742), England's astronomer royal. The types of charts Graunt originated remain in use today.

The widespread acceptance of Graunt's work also led to his being acclaimed as the founder of the science of statistics, particularly the branch that deals with the analysis of population data. Yet Graunt never made a formal study of mathematics. Some historians have speculated that Graunt received more help with his book from his better-educated friend, William Petty (1623-1687), than is generally acknowledged. However, while Petty surely offered support to his friend and probably made some contribution to the

book, most historians agree that Graunt wrote at least a major portion of the work.

Graunt's book on the Bills of Mortality had great influence throughout Europe. It has been noted that soon after its publication, France embarked on the most precise registering of births and deaths in all of Europe. The publication also caused Charles II of England to endorse Graunt's being made one of the early members of the then newly-established and prestigious Royal Society, a distinct honor for someone who was a businessman and not a professional scientist. Charles requested of the society "that if they found any more such tradesmen, they should be sure to admit them all, without any more ado."

### Financial Problems and Religious Conversion

Graunt's *Observations* became popular reading in educated circles. On June 20, 1665, the Royal Society declared its support for the publishing of the third edition of the book, which appeared later that year. But the following year, 1666, was to bring personal disaster for Graunt. A great fire in London on September 2 destroyed his clothing firm, leaving him with financial problems that were to persist throughout the rest of his life.

During this period, Graunt converted from the Protestant faith that he had adopted as a young man to Roman Catholicism. Graunt had been brought up as a Puritan but had lived as an anti-Trinitarian for a number of years before his final conversion to Catholicism. Anti-Trinitarians rejected the notion that God is made up of three distinct beings, the Father, the Son, and the Holy Spirit.

Around the time that fire destroyed his fortune, Graunt became a manager at the New River Company, which was involved with furnishing London's water supply. Graunt's position there led to a rumor spread by enemies who despised his religious conversion. They accused Graunt of having played a role in starting the great fire of London, or at least of trying to interfere with water being transported to the city the night before the fire broke out. However, the accusation was disproved when an examination of the New River Company's books showed that Graunt had not become part of its management group until 21 days after the fire took place.

### Lauded After Death

On April 18, 1674, after several years of working for the New River Company, Graunt died of jaundice, a disease of the liver. Among the mourners at his funeral were members of the London government and distinguished scientists, including Sir William Petty, who appeared grief-stricken at his friend's death. In addition to his famous book *Observations*, Graunt left behind another book titled *Observations on the Advance of Excise*, as well as a manuscript on religion.

In the centuries since his death, Graunt has been acknowledged by many historians and scientists for his important scientific contributions. In his 1741 work *Divine Order in the Changes of the Human Race shown by its Birth, Death, and Propagation*, German chaplain J. P. Sussmilch

(1707-1767) praised Graunt as "a Columbus" for his discovery of the new field of demographics. In the opinion of Kenneth J. Rothman, writing in the British medical journal, *The Lancet*, "With [Graunt's book on the Bills of Mortality] he added more to human knowledge than most of us can reasonably aspire to in a full career."

### Books

*Autobiography of Science*, edited by Forest Ray Moulton and Justus J. Schifferes, Doubleday and Co., Inc., 1960.  
 Boorstin, Daniel J., *The Discoverers: A History of Man's Search to Know His World and Himself*, Random House, 1983.  
*Dictionary of National Biography*, edited by Sir Leslie Stephen and Sir Sidney Lee, Oxford University Press, 1963-64.  
*Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie, Charles Scribner's Sons, 1972.

### Online

"John Graunt," *Encyclopedia Britannica*, <http://www.britannica.com> (December 14, 2000).  
 "John Graunt," <http://es.rice.edu/ES/humsoc/Galileo/Catalog/FilesBAK1/graunt.html> (December 14, 2000).  
 "Lessons from John Graunt," *Lancet*, January 6, 1996, <http://www.findarticles.com> (December 14, 2000). □

## John Robert Gregg

**Irish-born educator John Robert Gregg (1867-1948) is best known for inventing the system of shorthand writing that bears his name. His phonetic system became the dominant method in the United States and is still in use today, although it has largely been supplanted by computers and word processors.**

John Robert Gregg was born in a small town in Ireland on June 17, 1867. He was the youngest of five children born to Robert and Margaret Gregg, who were Presbyterians and strict disciplinarians. The senior Gregg, a worker for the railroad, had an inventive, inquiring mind, and two of his children were considered brilliant. Great things were expected of the youngest Gregg when he started school at the age of five. However, on his second day at school, his teacher grew so angry at Gregg's whispering with a schoolmate that he "crashed the children's heads together so violently that he severely damaged John's hearing," according to Leslie Cowan in his book *John Robert Gregg*. Fearing his father's anger, Gregg did not report the incident and his injury was not treated. With his hearing thus impaired, Gregg had difficulty in school and was thereafter considered slow-witted.

### Became Enamored of Shorthand Writing

When Gregg was about ten years old, the family was visited by a journalist friend of his father, who, while attending church, was observed taking notes using the Pitman shorthand system (introduced by Isaac Pitman in 1837 and, with improvements, still the most widely used system in

English-speaking countries today). The villagers were tremendously impressed and so was John Gregg, who decided that his children should learn the system—all except his youngest child, who was considered too “simple.” The Pitman system makes great speed possible but is difficult to master, and one by one the Gregg children abandoned it. Young Gregg, fascinated by the concept, decided that he would learn another system of shorthand writing. He took up the 1786 system of Samuel Taylor and excelled at it, but his grades remained poor throughout the six years he spent at the village school. That was his only formal education; he then went to work to help support his family.

In 1878, the Gregg family moved to Glasgow, Scotland, where young Gregg found a position as an office boy in a lawyer’s office. His duties were light and he spent many happy hours devouring library books about shorthand writers and learning their systems. He became a self-educated man, reading American history and attending debates and lectures, at which he took notes in shorthand. At the age of 18 Gregg won a gold medal in a shorthand competition. Reporting on the accomplishment, a shorthand journal noted that “with him, shorthand is a work of love, and he has devoted no small amount of time to the collection of literature of the various systems and comparisons of their merits.” Eventually he mastered the Pitman system that had stymied his siblings, but he disliked that system and continued to investigate others.

Although shorthand would later become the property of people preparing for secretarial positions, during Gregg’s young manhood it was a time-saving measure used by intellectuals, lawyers, preachers, politicians, and authors. Shorthand associations formed and members met to discuss and debate the artistry and science of shorthand, shorthand theory, and the pursuit of an ideal system—one that was simple and unburdened by an overabundance of symbols. Gregg, a member of one such organization, also wrote dissertations, corresponded with shorthand experts around the world, and came to be regarded as an authority, although he was only 19 years old. One day a man named Malone, who ran his own shorthand school and was regarded as an expert, asked Gregg to become a teacher at his school. The extra income was welcome, and the two men became friendly. Malone confided that he was working on a new system of shorthand much like the one Gregg was perfecting. Malone offered to collaborate and to use his influence to get the system published. In 1885 *Script Phonography* was published with Malone listed as sole author. Gregg received no recompense for his rights in the project.

### Gregg Shorthand System Published

Gregg later described *Script Phonography* as “a crude, hurried production.” Disillusioned by Malone’s betrayal but spurred into action, he continued to work on devising a new and better shorthand system. When in a short space of time he lost both his brother and sister to tuberculosis, Gregg decided to move to Liverpool, England, where his brother Samuel lived. With a small amount of money he had managed to save, he set up a shorthand school. He was an enthusiastic teacher and before long his school was flourish-

ing in a small way. Then one day, as Symonds related it, Gregg resurrected his old notes and saw that his “dream system was already virtually complete. It was wonderfully easy to write and beautiful to look at.” With a small amount of money borrowed from his reluctant brother, in 1888 Gregg published 500 copies of *Light-Line Phonetic Hand-Writing*, a 28-page pamphlet describing the basic principles of his shorthand system. Called light-line phonography, it was based on longhand writing, with connected vowels and no shading (the Pitman system uses shading; heavily drawn lines have different meanings from the same lines lightly drawn). A second 28-page pamphlet designed for the advanced student was published with money he earned from pioneer Light-Line students.

The impoverished 20-year-old author faced the problem of making his system known to a larger public. He distributed cheap leaflets and posters and later benefited from word-of-mouth by his students, who were easily and quickly reaching a speed of 100 words a minute with Gregg shorthand. According to Cowan, “When the intellectuals, shorthand enthusiasts, and historians discovered Light-Line, all but the entrenched bigots acknowledged that John had solved the problems which had pre-occupied the attentions of inventors for more than 2,000 years.” But it required constant effort over the next two decades to win wide acceptance for his system.

Gregg set up shorthand schools in Manchester, England, and his pamphlets were printed in several editions. He defended himself in a London court against a suit brought by Malone, who claimed that Gregg’s shorthand system infringed on Malone’s copyrighted system; the case was dismissed in 1890, but the legal costs set Gregg back in his efforts to publicize Light-Line shorthand. But thanks to favorable reviews in newspapers and magazines, written by shorthand enthusiasts and journalists who had mastered his system, Gregg shorthand was becoming known in North America.

### Success in America

All of Gregg’s efforts seemed to have come to nothing when, early in 1893, he lost the hearing in his good ear. That same year a former pupil, then living in Boston, wrote to tell him that his American copyright was in danger. With treatment, he partially recovered his hearing, and in August 1893 he set out with enthusiasm and \$130 in his pocket to protect his copyright and to spread the good news about Light-Line shorthand throughout the United States. He landed in Boston, opened a tiny school for the teaching of shorthand, and by dint of extremely hard work managed to eke out a meager living. Twenty years later Gregg recalled his first Christmas in Boston and his dream of “the United States covered with schools teaching Gregg Shorthand.” The dream became a reality after his 1895 move to Chicago, which was experiencing a boom in commerce and industry. Gregg opened one school and his enterprise slowly grew to several schools. Word of Gregg’s system spread among teachers of business classes. He offered free lessons to public school teachers to show them how easy the system was to learn.



By 1896 dozens of American public schools were teaching Gregg Shorthand. The first Gregg Shorthand Association was formed in Chicago that year with 40 members. Its purpose was to extend the use of the system while providing a social outlet for people of common interests. Increasingly, students of the Gregg system were winning shorthand competitions. The wins—and other shorthand news—were reported in Gregg's magazine, *The Lightliner*, which had an international following. In 1897 the Gregg Publishing Company was formed to publish shorthand textbooks.

Gregg established a reputation as a scintillating public speaker and was often invited to address important gatherings of business teachers. In 1899 he married Maida Wasson, a teacher and journalist from Hannibal, Missouri. She was his constant companion and assisted him in his work. The couple produced no children, but over the years they invited many young students to live in their home until they could afford to go out on their own. The Greggs entertained prominent members of Chicago society, including lawyer Clarence Darrow. Gregg became an American citizen in 1900. Over the next ten years, his Gregg School at Chicago expanded to offer other business courses; it became the standard against which all such institutions were judged.

By 1907 Gregg was so successful that he opened an office in New York and then moved there, determined to allow himself a respite from his busy schedule to begin enjoying life. He became a patron of the fine and applied arts and a supporter of struggling young artists. Meanwhile, the popularity of his shorthand system grew; according to Cowan, 28 public school systems taught the system in 1900, but by 1912 it was being taught in 533. Recognition and honors were bestowed upon Gregg. In 1914 the New York Board of Education approved the experimental introduction of Gregg Shorthand into its high schools, where the Pitman system had long held sway. That same year the system was admitted to two prestigious universities, Columbia (New York) and the University of California-Berkeley. In 1918 a Gregg student won for the first time the National Shorthand Reporters Association contest, the "supreme accolade of the reporting profession," according to Cowan. Demand for Gregg shorthand classes and textbooks exploded.

After World War I, Gregg traveled extensively throughout Great Britain, hoping to popularize his system there. He was not quite as successful in this endeavor as he had been in America, but he saw Gregg shorthand become wildly popular in France, Germany, Poland, Spain, and especially Latin America, where for years Gregg's birthday was a national holiday. Maida Gregg died in London on June 28, 1928, and Gregg returned to New York. He threw himself into volunteer work and continued to perfect the Gregg system. Over the next several years he was the recipient of several honorary degrees from American educational institutions; at one such ceremony in June 1930 he renewed his acquaintance with Janet Kinley, daughter of the president of the University of Illinois. The two were married in October of that year. They bought a home in Cannondale, a historic section of Wilton, Connecticut. Named by Gregg "The

Ovals," the home became a magnet for gatherings of people from the arts and education worlds. Janet Gregg was an active participant in the family business and bore Gregg two children, Kate Kinley and John Robert.

In the 1930s Gregg began writing a history of shorthand, the subject that had been his lifelong obsession. The first chapter was printed in 1933 and successive chapters followed at intervals until 1936. He continued publishing *The Gregg Writer*, a magazine for devout followers of his system that he had taken over in 1901. He updated his own textbooks and also published the works of Gregg shorthand experts. Gregg devoted time to charitable work and instituted scholarships in the arts and in court reporting at his Chicago school. His voluntary work on behalf of Allied soldiers and British civilians during World War II won recognition from King George VI, who awarded him a medal for "Service in the Cause of Freedom" in 1947. In December of that year Gregg underwent surgery from which he seemed to recover well. However, on February 23, 1948, he suffered a heart attack and died in Cannondale, Connecticut at the age of eighty.

### Books

Cowan, Leslie, *John Robert Gregg*, Pre-Raphaelite Press, 1984.  
Symonds, F. Addington, *John Robert Gregg, The Man and His Work*, Gregg, 1963.  
*Who Was Who in America*, Marquis, 1966.  
*World of Invention*, Gale, 1994.

### Online

"Shorthand," *Columbia Encyclopedia*, Sixth edition, <http://www.bartleby.com/65/sh/shorthan.html> (January 15, 2001). □

## Gregory IX

**During his relatively short tenure as pope, Gregory IX (ca. 1145-1241) named many new cardinals, established the medieval Inquisition, promulgated a code of canon law, and twice excommunicated Roman Emperor Frederick II.**

Ugo (Ugolino) di Segni was born around 1145 at Anagni in the Campagna region of Italy. His father was Count of Segni and his uncle would become Pope Innocent III. Young Ugo was provided a strong education, attending the universities of Bologna and Paris, where he studied theology and law. He was a deeply religious man and pursued his spiritual calling with vigor and enthusiasm. Little is known about his early years as a priest.

In 1198, with the ascension of his uncle to the papacy, Ugo di Segni was appointed papal chaplain, then archpriest of St. Peter's, and finally cardinal-deacon of St. Eustachio. In May 1206, Pope Innocent III promoted him to cardinal-bishop of Ostia and Velletri.

In 1207, Innocent sent Cardinal Ugo, along with Cardinal Brancaleone, as papal legates to Germany to mediate



between Philip of Swabia and Otto of Brunswick, who both claimed the German throne. The legates failed to convince either man to give up his claims, but did succeed in establishing a truce. After Philip was assassinated, they made another trip to Germany in 1209, to convince the German princes to accept Otto as the rightful king.

### A Growing Reputation

Upon the death of Innocent III, Ugo di Segni played a pivotal role in the election of the next pope. The College of Cardinals, searching for someone to quickly succeed Innocent, empowered Cardinal Ugo and Cardinal Guido of Preneste to appoint the new pope. Their selection of Honorius III as pope proved beneficial to di Segni in many ways.

Ugo di Segni played a pivotal role during the pontificate of Honorius III (1216-1227). In January 1217, Honorius made Cardinal Ugo plenipotentiary legate for Lombardy and Tuscany, directing him to preach the crusade in those regions. Developing his diplomatic skills, Ugo became a successful mediator between Pisa and Genoa in 1217; between Milan and Cremona in 1218; and between Bologna and Pistoia in 1219. During this time his reputation expanded beyond the church. In addition to enjoying the support of the Pope, he developed a relationship with the young Roman emperor-elect, Frederick II, King of Sicily. It would prove to be the most contentious relationship he would have over his long and productive life.

On November 11, 1220, Frederick II was crowned emperor in Rome. At this ceremony, Frederick received the

holy cross from Cardinal Ugo as a sign of his vow to embark on a crusade to the Holy Land. Ugo was a strong supporter of the Crusades, and he often preached about the importance of the Crusades, never losing sight of the fact that Frederick repeatedly failed to keep his promise.

### Church vs. State

On March 18, 1227, Honorius III died, and once again the College of Cardinals sought a swift replacement. The previous selection success led the cardinals to approach Ugo di Segni and two other cardinals, asking them to appoint a new pope. One of these men, Cardinal Conrad of Urach, was initially chosen, but refused to accept the post, fearing it would appear self-serving. On March 19, Ugo di Segni reluctantly accepted the papacy and took the name Gregory IX. He was over 80 years of age but enjoyed good health and a vigorous mind.

Soon, the pope's problems with Frederick II began to escalate. For seven years, Frederick had avoided his commitment to a crusade. Within days of Gregory's election, the new pope ordered Frederick to fulfill his obligation. On September 8, 1227, Frederick reluctantly set sail from Brindia. Within three days he turned back, saying he was seriously ill and that a companion was dying from an outbreak of the plague. On many previous occasions, Frederick had announced he was sailing to the East and then had postponed his departure for various reasons. Gregory no longer trusted the emperor, and he excommunicated him on September 20, 1227.

The battle lines were now drawn. While Gregory wrote an encyclical to justify the excommunication, the emperor countered with a manifesto to the Christian princes condemning the actions of the pope. Frederick's manifesto was read publicly, and imperial colleagues stirred up an insurrection. When the pope published his encyclical in the basilica of St. Peter on March 23, 1228, he was publicly insulted and threatened by a mob. The pope fled, first to Viterbo and subsequently to Perugia.

Three months later, with the pope still in exile, Frederick mustered a small army and on June 28, 1228, embarked for the Holy Land. He asked the blessing of the pope, but Gregory refused, saying that an excommunicated emperor could not undertake a Holy War. The pope released the crusaders from their oath of allegiance to Frederick. But Frederick continued with his plans anyway. He conquered Cyprus, but when he reached the Holy Land, he accepted the excommunication and his mission turned into a diplomatic one. Negotiating with the Sultan of Egypt for Jerusalem, he reached a treaty at Jaffa that resulted in the cities of Jerusalem, Nazareth and Bethlehem reverting to the Christians in exchange for the Mosque of Omar remaining with the Muslims. The following year Frederick crowned himself King of Jerusalem. Gregory denounced Frederick's treaty and sent a papal army to invade the emperor's kingdom in Sicily. Frederick II returned from the Holy Land, defeated the papal army, and made new peace overtures.

## Reconciliation and Confrontation

Gregory remained in exile until February 1230, when he returned to Rome. Frederick sent Herman of Salza as his representative to negotiate with the pope. The Treaty of San Germano was signed on July 20, 1230, restoring papal possessions in Sicily to the pope. This treaty brought a truce between the two leaders. The ban of excommunication was removed on August 20, 1230, and the pope and emperor met at Anagni, where they finalized their reconciliation.

The peace between these two strong-willed men was short-lived. The emperor sought supreme temporal power, so that the pope would have no right to interfere with his empire in Italy. Gregory, on the other hand, believed the pope should have supreme power in Italy. Although Frederick assisted the pope in suppressing some minor revolts as required by the Treaty of San Germano, he soon began to disregard the treaty.

Frederick wanted to unite his empire with Lombardy and Tuscany. He launched a war against Lombardy, winning a key battle at Cortenuova on November 27, 1237. The freedom of Lombardy was necessary for the safety of the pontifical states. In order to protect Lombardy from the emperor, Gregory allied with the Tuscans, Umbrians and Lombards to stop Frederick's progress. But Frederick kept winning battles and extended his ambitions to include the Patrimony of St. Peter, the papal territory, and all of Italy. When Frederick invaded Sardinia, a papal fiefdom, Gregory on March 12, 1239, again excommunicated the emperor.

This action once again divided the papacy and the empire. Gregory believed that there could be no peace as long as Frederick remained emperor. He preached against Frederick, urging the princes of the empire to elect a new leader. He placed a ban on any princes who supported the emperor, threatening excommunication.

Despite the papal threats, many princes remained on the side of Frederick and the empire. Encouraged by this support, Frederick set out to declare himself master of the Pontifical States. Gregory ordered all bishops to convene in Rome on March 31, 1241, but the emperor forbade the bishops to travel to Rome and his troops captured several of those who defied his order. Frederick sent an army to Rome and encamped outside the city. But before a confrontation could occur, Gregory died suddenly on August 22, 1241.

## Canon Law and Education

The contributions of Gregory IX are overpowered by the complex relationship between the pope and Frederick II. To his credit, Gregory is considered to have been one of the most energetic popes of his time. He played many roles, including canon lawyer, theologian, defender of papal prerogatives and diplomat. He published the *Decretals*, decrees of ecclesiastical discipline that remained fundamental to the Catholic Church until modern times. These codes of canon law are among his greatest accomplishments.

Gregory IX recognized the importance of education and is credited with reintroducing Aristotle's teachings as the basis of scholastic philosophy. He commissioned William of Aubergne to make Aristotle's work once again ac-

cessible to students. He bestowed privileges on the University of Paris, his alma mater, and watched over its professors. Gregory had a deep and abiding relationship with St. Francis and St. Dominic, founders of the Franciscan order, and he was a cardinal protector of the order. He also acted as an advisor to St. Clare of Assisi.

Through his religious beliefs, Gregory hoped to reunite the Roman and Greek churches. Germanos, the Patriarch of Constantinople, sent a letter to Gregory in which he recognized the papal primacy. In the letter, Germanos complained of the persecutions that the Greeks suffered at the hands of the Romans. Gregory dispatched four monks to discuss reunification, but Germanos and the Emperor Vatatzes would make no commitments. Gregory's attempts to reunite the two churches failed despite his strong efforts.

During his papacy, Gregory created 14 new cardinals. Two went on to become popes—Sinibald of Fiesco (Innocent IV) and Raynald of Segni (Alexander IV). He canonized his good friend St. Francis of Assisi, as well as St. Anthony of Padua, St. Virgil, St. Dominic, and St. Elizabeth. He wrote hymns in honor of St. Francis and was instrumental in establishing the Office of St. Francis.

The deeply religious beliefs of Gregory IX were a primary consideration in the decisions he made. The pope saw the crusades as necessary to the continued growth and defense of Christianity. At the request of King Louis IX of France, he sent a papal legate to assist the king in his crusade against the Albigenses, a religious sect in southern France. The Albigenses were considered heretics, and Gregory showed little patience or compassion toward heresy. He approved a law that condemned unrepentant heretics to death by fire and repentant heretics to life in prison. This teaching was the basis for the medieval Inquisition, through which the Church would punish heretics for many years to come.

Were it not for decades of skirmishes with Frederick II and the role he played in the Inquisition, Gregory's religious devotion and educational advancements would have been his primary legacy.

## Books

*Catholic Encyclopedia*, Volume VI, Robert Appleton Company, 1909.

*Columbia Encyclopedia*, Fifth Edition, Infonautics Corporation, 1993.

*HarperCollins Encyclopedia of Catholicism*, edited by Richard P. McBrien, HarperCollins, 1995.

*Microsoft Encarta Encyclopedia 99*, Microsoft, 1998.

## Online

"Gregory IX," *Catholic Online*, <http://www.catholic.org/saints/saints/gregory9.html> (November 24, 2000).

"Gregory IX," *Encyclopaedia Britannica Online*, <http://members.eb.com/bol/topic?ed-38793=1>, (November 20, 2000).

"Gregory IX, Pope," *Encyclopedia.com*, <http://encyclopedia.com/printable/05404.html> (November 24, 2000).

"Pope Gregory IX," *Catholic Forum*, <http://www.catholic-forum.com/churches/saintsindex/pop0178.htm> (November 24, 2000).

"Pope Gregory IX," *New Advent*, <http://www.newadvent.org/Popes/ppgr09.htm> (November 24, 2000). □

## Samuel David Gross

**A revered teacher, an influential author, and a skilled surgeon, Samuel David Gross (1805-1884) initiated many important advancements in medicine, particularly surgery. He formulated and taught the first hands-on, systematic approach to surgery in the United States.**

One of six children, Gross was born to Philip and Johanna Juliana (Brown) Gross on July 8, 1805, on a farm outside Easton, Pennsylvania. Growing up in the heart of Pennsylvania Dutch country, Gross spoke German until the age of 12, and even after he learned English, his dialect retained a distinct German accent. His father was a farmer who died when Gross was nine years old. After that, his mother raised him, instilling strong moral values that stemmed from her devout Lutheran faith. As a child Gross spent a good deal of his time outdoors. He was very attentive to nature, studying the calls of birds, the habits of the local animals, and the indigenous plant life.

Gross received his early education at country schools. At 17, he decided to begin his studies in medicine. As was the custom of the time, he was paired with a practicing physician, Joseph K. Swift. From Dr. Swift he learned basic medical skills such as how to make pills, apply plaster casts, and bleed patients. He also assisted in surgical procedures and in childbirth. In his spare time he would study subjects such as anatomy as best he could. Feeling he needed more formal education, Gross abandoned his apprenticeship with Swift to enroll in school in Wilkes-Barre, Pennsylvania. He completed his general educational requirements at the highly regarded Academy in Lawrenceville, New Jersey.

In 1824 Gross returned to work once again with Swift in local practice. He planned to attend medical school at the University of Pennsylvania. But before he could do so, Gross was accepted as a private student of Dr. George McClellan, the father of the Civil War General George B. McClellan.

In 1828 Gross received his medical degree from Jefferson Medical College in Philadelphia, a school McClellan founded in 1825. His thesis was "The Nature and Treatment of Cataract." In the same year that he graduated he married Louisa Ann Weissell, a 20-year-old widow with one child. They would have six children of their own.

### Translations and Original Works

After getting his degree, Gross remained in Philadelphia. He continued to work with McClellan and opened his own medical practice on Library Street, near Fifth Street. Business was slow during the first months of his practice. With few patients to see, Gross worked on translating French and German medical works into English. The trans-



lations he published included *A Manual of General Anatomy* (1828) by A.L.J. Bayle and H.L.G.M. Holland, *A Manual of Practical Obstetrics* (1828) by Jules Hatin, and *A Treatise on the Nature, Cause, and Treatment of Contagious Typhus* (1829) by V.J. von Hildenbrand. His most important and well-received translation was *Elements of Operative Surgery* (1829) by Alphonse Tavernier, the first treatise on surgical medicine published in the United States.

Believing that the United States needed its own body of medical literature, Gross stopped translating foreign texts and began to write original works. His first book, *Treatise on the Anatomy, Physiology, and Diseases and Injuries of the Bones and Joints*, was published in the fall of 1830. Although highly regarded by the medical profession, the book produced no income for Gross, who was still struggling to make ends meet.

To make more money, Gross in late 1830 moved his practice back to Easton, where he became more successful. He conducted important experiments on dogs regarding gunshot wounds in the abdomen. C.J. Parkes of Chicago later used his works. His similar experiments gained a wide audience. In 1832 Gross was chosen by the Easton Town Council to travel to New York to study Asiatic cholera, a disease recently introduced to the United States.

### *Elements of Pathological Anatomy*

In 1833, with the recommendation of Dr. John Eberle, a former professor at Jefferson Medical College, Gross was appointed demonstrator of anatomy at the Medical College

of Ohio. When Daniel Drake founded the Cincinnati Medical College two years later, Gross secured a position as a professor of pathological anatomy and chair of the department. There, based on a series of lectures, he created the first systematic study of morbid anatomy in the United States.

In 1839 Gross published his landmark work, *Elements of Pathological Anatomy*. It was the first time information on pathological anatomy was presented in a complete, systematic form. Primarily due to the book's great length, Gross had difficulty getting a publisher. It was published only after many rejections. Although the work was extremely popular and sold many copies, Gross received no profits from the sales of the first edition. Nonetheless, its publication earned him acclaim worldwide, and he became the most celebrated doctor in the United States. *Elements of Pathological Anatomy* was issued in several editions, and it remained the leading reference in its field for over 25 years.

When the Cincinnati Medical School closed in 1839, Gross accepted a position as the chair of the surgical department at the Louisville Medical Institute, later known as the University of Louisville. He remained in Louisville until 1850, then went to New York to take over the chair in surgery at the University of the City of New York. The following year he returned to Louisville. In 1856 he became professor of surgery at his alma mater, Jefferson Medical College, where he remained until the end of his life.

### Other Influential Works

Over the course of his long career, Gross published numerous works that substantially influenced the development of a systematic theory and practice of medicine in the United States. In 1843 he published *Wounds of the Intestines*, an exhaustive clinical study based on animal research, again the first book of its kind to be published in the United States. In 1851 he gained recognition for his contribution to urology with his book *A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra*. The book was subsequently accepted as the primary authority in the field of urology. Two more editions, in 1855 and 1876, followed. His son, Samuel Gross, edited the latter. The book described the surgical method of cutting into the bladder to remove a calculus, an innovative procedure for which Gross gained even more attention. Gross was widely recognized for his skills as a surgeon, and people traveled long distances to have Gross perform bladder surgery on them.

In 1854 Gross published *A Practical Treatise on Foreign Bodies in the Air-Passages*. Again, Gross offered the first systematic approach to this medical procedure in the United States. The work served as the chief source in the field until the development of the bronchoscope, which allowed for more in-depth observation.

Gross published yet another highly influential work in 1859. His two-volume *A System of Surgery: Pathological, Diagnostic, Therapeutic and Operative*, went through six editions from 1859 to 1882. The first edition consisted of 2,360 pages and 936 illustrations; the last edition included 2,300 pages and 1,600 illustrations. In the *Dictionary of*

*American Biography*, J. Chalmers Da Costa refers to the work as "the greatest surgical treatise of the day, and probably one of the greatest ever written." Da Costa describes it as "a veritable mine of information" and noted that it "gives evidence of the broadest scholarship and the most complete acquaintance with surgical literature, a philosopher's grasp of all surgical problems, and an immense clinical experience." Translated into numerous languages, the book was an immense success.

When the U.S. Civil War began, Gross produced *A Manual of Military Surgery* (1861), with a pirated Confederate version appearing in Richmond in 1862. Also in 1861, Gross edited a hefty edition of *Lives of the Eminent American Physicians and Surgeons of the Nineteenth Century*, and in 1868 he issued *Memoir of Valentine Mott*, a renowned American surgeon. In honor of the U.S. centennial, Gross published *A History of American Medical Literature from 1776 to the Present Time* (1876) and *A History of American Surgery From 1776 to 1876*, each important for its historical and bibliographical value. He also published *John Hunter and His Pupils* (1881), a biography of another medical pioneer.

Published posthumously, the *Autobiography of Samuel D. Gross, M.D., with Sketches of His Contemporaries* (1887) was edited by his sons and serves as a valuable history of 19th-century medicine. Along with his books, Gross conducted surgical clinics, addressed medical societies, and participated in medical debates. He also served as an editor for several medical journals, including the *North American Medico-Chirurgical Review* and the *Louisville Medical Review*, which he founded with T.G. Richardson in 1856.

### Achieved Great Acclaim

The renowned doctor was immortalized in American culture as the subject of Philadelphia artist Thomas Eakins's painting, originally known as "The Portrait of Professor Gross." Eakins began his work in 1875, hoping to capture Gross in the midst of his surgical brilliance. The painting, which became a national icon of the times, is now known as "The Gross Clinic." It was first displayed at the Philadelphia Centennial Exhibition in 1876 and subsequently purchased by the Jefferson Alumni Association two years later.

Gross was one of the founders of the American Medical Association and served as its president in 1867. He was also the first president of the Philadelphia Pathological Society, vice-president of the German Surgical Society, and a member of the Philadelphia Academy of Surgery and the American Surgical Society. In 1876 he led the International Congress of Surgeons, held in Philadelphia. He also established a prize for original medical scholarship. Given every five years, the award was sponsored by the Academy of Surgery and became known as the Samuel D. Gross Prize. Gross held numerous honorary degrees from academic institutions around the world, including Oxford University, Cambridge University, the University of Edinburgh, and the University of Pennsylvania.

Active as a teacher and surgeon until the very end of his life, Gross died in Philadelphia on May 6, 1884. Just days

before his death, he operated on a patient to remove a stone from the bladder. Although medical research has advanced tremendously since his day, Gross is still considered one of the greatest surgeons and one of the most important advocates for the advance of medicine.

### Books

*American National Biography*, Volume 9, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.  
*Biographical Dictionary of American Educators*, Volume 2, edited by John F. Ohles, Greenwood Press, 1978.  
*Encyclopedia of American Biography*, 2nd edition, edited by John A. Garraty and Jerome L. Sternstein, HarperCollins, 1995.

### Online

"Samuel David Gross," *Dictionary of American Biography*, <http://www.galenet.com> (January 18, 2001).  
 "Gross, Samuel David," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (January 18, 2001). □

## Daniel Guggenheim

**Daniel Guggenheim (1856-1930) was a member of one of the wealthiest and most powerful families in the world during the early twentieth century. He led his family's mining enterprise, which controlled much of the world's metal industry. When Guggenheim retired at the age of 67, he turned his attention to philanthropy.**

**D**aniel Guggenheim was born July 9, 1856 in Philadelphia, Pennsylvania. He was the second son and one of 11 children born to Swiss immigrants Meyer and Barbara Guggenheim. Meyer Guggenheim was a hard-working peddler. He and his father had become successful by manufacturing stove polish and "coffee essence," an inexpensive coffee substitute. During the Civil War, Meyer sold wholesale supplies to the Union Army. He also had a lace and embroidery business. By 1880, he had \$800,000 in the bank.

Although the family was Jewish, Daniel Guggenheim attended a Catholic high school in Philadelphia until the age of 17. When Meyer Guggenheim determined that Daniel would never be a scholar, he sent him to Switzerland to study the Swiss lace and embroidery business and serve as a buyer for Meyer's importing business, M. Guggenheim's Sons.

While his son was in Switzerland, Meyer invested in two Leadville, Colorado, lead and silver mines. The mines proved to be extremely productive. Meyer founded the Philadelphia Smelting and Refining Company and built a smelter in Pueblo, Colorado, so that he could control both the mining and refining of his ore. Soon Meyer was earning \$750,000 a year. Meyer closed the lace business and, in 1884, asked Daniel to return to the United States and help



the family manage the mining company. The same year, Daniel married Florence Schloss. The couple had three children, Robert, Harry and Gladys.

### Family Dominated Mining

In 1888, Meyer Guggenheim, his six sons and their families moved to New York City, where they managed their business and sought to dominate the mining industry in North America. Daniel was considered the most ambitious of the sons and became the business's primary negotiator and organizer.

In 1890, a tariff was placed on imported ore and the price of the Mexican lead and silver the Guggenheims refined in Colorado rose dramatically. They responded by buying Mexican mines and building their own smelter in that country. Daniel successfully negotiated the new venture. His father and brothers were so impressed with his business acumen that they assigned him to oversee the company's mining and smelting business and to plan future expansion.

At 34, Daniel was driven to achieve wealth and stature. His father had arrived in America penniless and wanted to make every one of his sons a multi-millionaire. Biographer John H. Davis described Daniel as "short, quick, intense, of medium build" and "a born general, in whom command was instinctive." During his years in Switzerland he had acquired a European air. He felt comfortable with aristocratic society, which helped him negotiate business contracts. His years in Germany had also taught him to be

dogmatic, industrious and disciplined. He was a tireless worker, and extremely autocratic.

By 1895, the Mexican operation was producing a profit of \$1 million a year. The Guggenheims formed the Guggenheim Exploration Company and named Daniel president. The independent corporation searched for mines throughout the world, purchased and developed them, then invited public participation in them. Soon another American mining concern, American Smelting and Refining Company (ASARCO), backed by the Rockefeller family, began to challenge them. Daniel Guggenheim took the lead in negotiating on behalf of the family and, after a lengthy struggle, the family acquired majority control of ASARCO. Daniel was named chairman of the board. Meyer died in 1905. He had lived to see his sons become multi-millionaires.

### Amassed Enormous Wealth

Following his father's death, Daniel assumed control of the family and its enterprises. He was power hungry and tenacious. He suffered repeatedly with stomach ulcers and hypertension. With firm control of mining in the Western Hemisphere, the Guggenheims went on to dominate mining and metallurgy throughout the world during the next three decades. Through ASARCO and their family-owned companies, the Guggenheims mined tin in Bolivia, gold in the Yukon, diamonds and rubber in the Belgian Congo, diamonds in Angola, copper in Alaska, Utah, and Chile. Daniel Guggenheim's business policies affected entire nations. "It was said that Daniel could make or break a government with a telegram," Davis said.

The Guggenheims' strategy required large sums of money to find mining properties and overcome engineering obstacles to move the ore out. They utilized modern technological processes to mine and process the ore, often using low-grade metals that others found unprofitable. In 1912, the Guggenheims joined with J.P. Morgan and Jacob Schiff to mine copper in Kennecott Creek in Alaska. The syndicate built a railroad over a moving glacier to get to the mountain of copper. At Chuquicamata, Chile, in 1911, workers had to get to a mine at 9,500 feet, 45 miles from a water supply and 85 miles for a power supply.

During World War I, the Guggenheims were criticized for profiteering. This led to a wave of anti-Semitism, as the family was the most prominent Jewish family in the United States. When the press, Congress and President Woodrow Wilson demanded that the company lower the price of copper during World War I, the Guggenheims refused until Wilson threatened to nationalize the metals industries.

### Tough on Labor

The Guggenheims had a reputation for being tough on labor. Daniel Guggenheim claimed to favor labor unions. During a meeting with Samuel Gompers, president of the American Federation of Labor (AFL), in 1917, the two men embraced and appeared to agree on labor issues. In reality, Daniel, like many other capitalists of the day, paid his employees starvation wages and forcibly broke strikes. In 1912, when workers at Guggenheim's Perth Amboy mine struck, the company brought in strikebreakers and four

strikers were shot. In 1916, the Guggenheims evicted strikers from their bunkhouses in Alaska when they struck over poor conditions and low wages. The laborers were left in minus 30 degree weather.

Guggenheim was also criticized for his flagrant disregard for conservation. Gifford Pinchot, chief of the U.S. Forest Service, battled the Guggenheim-Morgan syndicate for mining Alaskan land that Pinchot said belonged to all the American people. The Guggenheims won the battle with the help of their brother, Simon, a United States senator.

Guggenheim amassed enormous wealth through his mining enterprises. By 1918, the family fortune was estimated at \$250 million to \$300 million, making them among the richest people in the world.

### Family Disagreements

Over the years, a rift had developed among the seven Guggenheim brothers. The two youngest brothers, Will and Ben, often disagreed with their siblings' business decisions. The older brothers believed that Will and Ben didn't want to work hard, since they had grown up after the family had become wealthy and didn't have the same work ethic as their father. The family empire began to collapse during a series of events in the early 1920s. Younger brother Will Guggenheim accused his older brothers of excluding him from a profitable copper mine in Chile. The well-publicized case attracted attention around the world. It was settled for an undisclosed sum when the older brothers decided they didn't want the family's finances revealed to the public.

In 1922, the older Guggenheims were accused of milking ASARCO, which they controlled, to the benefit of their family business, Guggenheim Brothers. The ASARCO board voted the brothers out of control. Then, in 1923, the family had the opportunity to sell the Chilean copper mine for \$70 million. The older brothers, who were ready to retire, wanted to take the offer. Will and some of the Guggenheims' sons disagreed. When the older family members won the battle, some of the sons resigned from Guggenheim Brothers, leaving the family business without firm guidance from the next generation. The family's final indignity occurred when Daniel led the family into a bad investment in Chilean nitrates.

### Established Foundations

With their reputations tarnished, the four older brothers, Daniel, Sol, Murray and Simon, retired. They each set up foundations and in essence, established new careers as philanthropists, trying to outdo each other with their generosity. Daniel, who retired in 1923 at the age of 67, retreated to his castle-like home overlooking Long Island Sound where he enjoyed the life of an aristocrat. In 1924, he established the Daniel and Florence Guggenheim Foundation, which supported education, arts and medicine all over the world. Benefactors included Mount Sinai Hospital in New York, the New York Botanical Gardens and New York's Guggenheim Museum.

But Daniel's principal interest was in the field of aviation. His son Harry first got Daniel interested in aviation after he returned from World War I. Harry was appalled to

discover that the United States was far behind Europe in aviation development. America's idea of aviation was airmail pilots and barnstormers. The public had no desire to develop aviation for personal travel. Daniel set out to develop the American aviation industry by volunteering \$500,000 to create a school of aeronautics at New York University. In 1926, he established the Daniel Guggenheim Fund for the Promotion of Aeronautics to promote aeronautical education, research and transportation. The fund established schools at a number of universities and proved the necessity of two-way radio communications, navigation aids and weather reporting during flights. The fund was liquidated in 1930 after Guggenheim determined that its goals were accomplished.

The Daniel and Florence Guggenheim Foundation went beyond aviation and contributed to the aerospace industry. It supported the experiments of Dr. Robert H. Goddard of Clark University, a young scientist who believed that rockets could propel themselves into outer space. It also helped train aerospace engineers and laboratories, helping to usher in the age of rocketry. In 1929, Guggenheim earned the American Society of Mechanical Engineers' first aeronautical medal in recognition of his support of the aviation industry. In 1930 he received an honorary degree of Doctor of Commercial Science from New York University.

Guggenheim died on September 30, 1930 in Sands Point, New York, at the age of 74. By the time of his death, the man who had been hated for being a greedy, union-busting capitalist had earned a reputation as the "father of aviation." Known for his generosity, few people today realize how Daniel Guggenheim amassed his fortune.

### Books

Davis, John H., *The Guggenheims, 1848-1988: An American Epic*, Shapolsky, 1988.

### Periodicals

*Aviation History* November 7, 1996.

### Online

"Daniel Guggenheim," *Business Leader Profiles for Students*. Gale Research, 1999. Reproduced in *Biography Resource Center*. The Gale Group, 2000, <http://www.galenet.com/servlet/BioRC> (December 20, 2000).

"Daniel Guggenheim," *Dictionary of American Biography* Base Set. American Council of Learned Societies, 1928-1936. Reproduced in *Biography Resource Center*. The Gale Group, 2000, <http://www.galenet.com/servlet/BioRC> (December 20, 2000).

"Daniel Guggenheim," *Gale Encyclopedia of U.S. Economic History*. Gale Group, 1999. Reproduced in *Biography Resource Center*. The Gale Group, 2000, <http://www.galenet.com/servlet/BioRC> (December 20, 2000). □



# H

## Walter Hagen

**Walter Hagen (1892-1969), often referred to by golf fans as “Sir Walter” or “The Haig,” was the first superstar of American golf. Hagen earned his fame by winning tournaments with spectacular recovery shots and unmatched putting ability, skills that made up for his unpredictable tee shots. He is remembered as a master gamesman with an uncanny ability to remain relaxed and make the game of golf fun.**

Hagen was born in Rochester, New York, on December 21, 1892, into a middle-class family of Dutch descent. His parents were William, a blacksmith for auto shops, and Louise Balko Hagen. As a child Hagen excelled at both golf and baseball. He became the leading baseball pitcher in the district, honing his fastball in his backyard after teaching his sister to catch for him. He was also exposed to golf at an early age, shagging balls at the Country Club of Rochester by the age of seven. During his teenage years Hagen wavered between pursuing a career in baseball or golf. Finally, speculating that baseball required the skills of eight teammates, Hagen decided to choose the sport over which he alone controlled his destiny.

### Became a Golf Professional

When the National Open came to Buffalo, New York, in 1912, 20-year-old Hagen, having been promoted to working in the pro shop, asked his boss, club pro Andy Christie, for time off to play the tournament. Christie, afraid Hagen would be easily out-played by the professionals, refused to allow him to enter, but afforded him time off to

watch the tournament. When Hagen returned from watching Johnny McDermott win the Open, he was wholly unimpressed with the play of the field. The following year Hagen was determined to enter the ranks of the golf greats. In his first outing at the 1913 Shawnee Open he played respectably but failed to finish in the money. Hagen’s brash personality first came to the attention of the pros in the same year when he entered the National Open in Brookline, Massachusetts. The odds makers were favoring Harry Vardon or Ted Ray to win the tournament. Hagen made a legendary entrance into the locker room prior to the start of play and introduced himself to McDermott amidst a group of onlookers, explaining that he had come down from Rochester to help him stop Vardon and Ray. The golfers chuckled, but Hagen won new respect by finishing in a tie with McDermott for fourth place, with Francis Ouimet taking the victory away from Vardon and Ray.

In 1914 Hagen won his first tournament, the U.S. Open at Midlothian in Chicago. Hagen led from first round, shooting a new course record of 68. Going into the final day of play, Hagen held a four-stroke lead over crowd favorite Chick Evans, an advantage that Evans reduced to one by the time Hagen reached the final hole. According to Herbert Warren Wind in *The Story of American Golf*, “All Chicago, it seemed, was following Evans. Playing about three holes ahead of Chick, with no gallery to speak of, Hagen heard one mighty roar after another come from Evans’ mob. All the way in Hagen heard the bursts of applause from Evans’ gallery telling him that Chick was still coming.” Hagen showed the first signs of his uncanny ability to focus and stay calm despite unnerving pressure, sinking an 8-foot putt on the final hole to win by one stroke.



### Wins and Losses

Many were skeptical that the new champion could maintain his place among the leading golfers. His swing on his tee shots was unorthodox at best, and whether his drive would land in the fairway or in the rough to the left or to the right, no one, not even Hagen, was ever sure. But his putting skills, deft short iron play, and ability to get himself out of the trouble caused by his regular miscues gave him the ability to win tournaments. Grantland Rice, a sportswriter who followed Hagen throughout his career, wrote in *The Tumult and the Shouting: My Life in Sport*, "Walter Hagen, a dazzling ornament to the history of sport, had the soundest golf philosophy I've ever known. More importantly, he applied it. 'Grant,' he said, 'I expect to make at least seven mistakes each round. Therefore, when I make a bad shot I don't worry about it. It's just one of the seven.'" According to Rice, "A mistake meant nothing to him. Neither did defeat. He scorned second place. 'The crowd remembers *only* the winner. I'd as soon finish tenth as second,' he said."

Hagen's distracters were not entirely wrong. Hagen's career performance was, in fact, a series of peaks and valleys. He always went for the win when other golfers opted for safer play to place in the money. He won in spectacular fashion, and sometimes he lost in similar style. In 1915 Hagen failed to defend his U.S. Open crown, and the following year was not even in contention. He took an even bigger blow in 1920 during his first attempt to play in the British Open, characterized by barren, bunker-filled

courses and strong winds. Because Hagen lofted his shots high in the air, some predicted that his basically unsound game would be completely dismantled by the winds and bunkers. Confident as always, Hagen teed up the first day of play but ended with an abysmal score of 83 and finished the second day in last place of the field of 53. However, nothing could shake the unshakable Hagen. The next year he finished in sixth place at St. Andrews. In 1922 he won at Sandwich, becoming the first American to win a British Open. He would return to win again in 1924, 1928, and 1929.

By the end of the 1920s, Hagen had established himself as one of the greatest and most colorful golfers of his time. During his career he won the U.S. Open twice (1914 and 1919), the Professional Golfers' Association (PGA) Championship five times (1921, 1924, 1925, 1926, and 1927), and the British Open four times (1922, 1924, 1928, and 1929). He also won the French Open (1920), the Belgian Open (1924), and the Canadian Open (1931). Preferring to have a major title to his name throughout the year, Hagen did not mind working his way around the U.S. circuit. He won opens in Massachusetts (1915), Michigan (1921 and 1931), New York (1922), and Texas (1923 and 1929); three Metropolitan Opens (1916, 1919, and 1920); two North and South Opens (1918 and 1923), five Western Opens (1916, 1921, 1926, 1927, and 1932); one Eastern Open (1926); and the Gasparilla Open (1935). He was also selected to play as a member of the American Ryder Cup team, which played golf against teams from other nations, in 1927, 1929, 1931, 1933, and 1935. He was the nonplaying captain of the Ryder Cup team in 1937.

### More than a Superstar

Hagen did more for golf than win tournaments. He was the sport's first superstar, ambassador, and flamboyant personality. According to Stephen Goodwin in *Golf Magazine*, "Hagen could have been a poster boy for the 1920s. As a professional golfer, he became an international celebrity, known not only for his accomplishments on the golf course, but his extravagant lifestyle. His story wasn't exactly a tale of rags-to-riches, but he made pots of money and spent it with legendary abandon. He liked to travel in chauffeur-driven limousines, and he once showed up on the first tee of an exhibition match in top hat and tails, and a wee bit tipsy." Hagen enjoyed drinking and was known to occasionally arrive at a tournament or exhibition match slightly late and still wearing the clothes from the day before. His love of show did not bode well for his two marriages. He wed Margaret Johnson in 1917. They had one child and were divorced in 1921. He married Edna Strauss in 1924, and they divorced in 1934. Financially, Hagen was the first professional golfer to reach 1 million dollars in earnings and spent it all on extravagance as he went. He was also the first golfer to hire an agent to represent him. Hagen, like no other pro before him, knew the power of image and appearance.

### The King of Match Play

Match play was where Hagen was the king of his domain, which included the PGA Championship. He won 29

consecutive matches in the PGA Championship and 34 out of the 36 he played. He also played in some legendary match play exhibitions. Perhaps the most famous was the 1926 challenge match between Hagen and the great amateur golfer, Bobby Jones. Publicized as a battle between amateur and pro, Jones was considered by most to be a better golfer; however, Hagen was the supreme match player. According to Pat Seelig in *Golf Magazine*, Jones, who was already considered a great golfer and a favorite of the press, represented golf in its unsullied purity as an amateur, whereas "on the other hand was Walter Hagen, a brilliant showman for whom money was nothing more than something to spend-and the only way to get it was by playing golf. In other words, professional golf at its best-or worst." In his usual manner, Hagen combined ridiculously poor shots with brilliant recoveries and spectacular putting to take the lead. Jones, who agonized over every errant shot and bemoaned each Hagen recovery, lost his focus, and Hagen won the two-round match, 12 and 11.

He was not only a master of playing golf, he was also a master at playing people. This made match play, in which score is tallied by the number of holes won, not total shots, a perfect venue for Hagen who loved to play with the minds of his opponents. John M. Ross described Hagen's "applied psychology" in *Golf Magazine*, "One of Hagen's most successful tactics was to lull an opponent into swapping banter between shots, getting him so amused he was vulnerable to a crack in concentration when important shots were played. Hagen, on the other hand, could turn off the fun like a light switch and devote total attention to the task at hand." Hagen would distract younger opponents with conversations of a possible invitation to a future exhibition tournament. He acknowledged in his autobiography *The Walter Hagen Story* (1956): "Through the years I've been accused of dramatizing shots. Of making the difficult shots look easy and the easy shots look difficult. Only that last came naturally, believe me. Well, I always figured the gallery had a show coming to them. I deny I ever held up a game by any such shenanigans, but I don't deny playing for the gallery. I don't deny trying to make my game as interesting and as thrilling to the spectators as it was possible for me to make it."

### Sir Walter

Despite his love for flashy clothes, limousines, and nightclubs, Hagen was the consummate gentleman, always charming and at ease, making others, including Hollywood stars and British royalty, desire to be in his presence. As Sir Walter, Hagen was both golf star and entertainer. Wind concludes, "Great as he was as a golfer, he was even greater as a personality-an artist with a sense of timing so infallible that he could make tying his shoelaces seem more dramatic than the other guy's hole-in-one." Hagen was named a charter member of the PGA Hall of Fame in 1940 and retired the following year. He died in Traverse City, Michigan, on October 5, 1969.

### Books

Hagen, Walter and Margaret Seaton Heck. *The Walter Hagen Story by The Haig, Himself*. Simon and Schuster, 1956.  
Rice, Grantland. *The Tumult and the Shooting: My Life in Sport*. A. S. Barnes and Company, 1954.  
Wind, Herbert Warren. *The Story of American Golf: Its Champions and its Championships*. Simon and Schuster, 1956.

### Periodicals

*Golf Magazine*, 34 (August 1991): 68-70; 35 (January 1993): 62-64; 39 (December 1997): 48-56.

### Online

"Walter Charles Hagen," *Dictionary of American Biography, Supplement 8: 1966-1970*. American Council of Learned Societies, 1988. <http://www.galenet.com> (December 21, 2000).



## Samuel Hahnemann

**Samuel Hahnemann (1755-1843), a 19th century German physician and chemist, developed homeopathy, a form of medicine that uses minute doses of herbs and other substances to promote healing.**

Appalled by the barbaric and violent medical practices of the time and concerned for the health of his growing family, Hahnemann spent years conducting experiments to study the healing properties of various materials. He believed that small doses of natural drugs could provoke symptoms of the diseases they sought to cure, prompting the body's own immune system to heal itself. The practice of homeopathy grew from this theory, based on Hahnemann's thesis that "like cures like." The doctor devoted his life to homeopathy, conducting endless tests, promoting his theories, and battling detractors. Homeopathy flourished around the world. Its popularity peaked in the United States in the early 1900s, then suffered a sharp decline due to protests from proponents of modern medicine, although it has remained immensely popular in many parts of the world, including India and Europe.

### Fascinated by Science

Christian Friedrich Samuel Hahnemann was born April 11, 1755, in Meissen, Upper Saxony, Germany, to Johanna Christiana (Speiss) and Christian Gottfried Hahnemann. His father worked as a painter, decorating porcelain. As a child, Hahnemann studied Latin, Greek, Hebrew, history, physics, botany, and medical science, taken under the wing of teachers who recognized his academic gifts. His father, who disdained formal education, would often withdraw his son for what he called "thinking lessons," but Hahnemann persisted, drawn to the study of medicine. At age 20, he enrolled in the University of Leipzig, where he supported himself by tutoring and by translating books. After two years, Hahnemann moved to Vienna to study at a Catholic



hospital. In 1779, Hahnemann received his doctor of medicine degree from the University of Erlangen.

Still fascinated with science, especially chemistry, Hahnemann further immersed himself in the study of pharmacy after his move to Dessau in 1781. There, he met Johanna Henrietta Leopoldina Kuchler. The two were married December 1, 1782, and settled in Gommern, where they welcomed the first of 11 children in 1783. The next year, Hahnemann published his first medical work.

### Dissatisfied with Treatments of the Day

As the protective father of many children facing a host of diseases and illnesses, Hahnemann became increasingly uncomfortable with the medical techniques of the day, later dubbed the “Age of Heroic Medicine.” Lack of medical knowledge coupled with a belief in evil spirits and curses led well-meaning physicians to prescribe such treatments as blood letting, in which doctors would remove nearly all of patients’ blood. Another popular treatment was blistering, an attempt to draw toxins out of the body through the application of hot substances. Doctors also dispensed huge doses of drugs including mercury, arsenic, opium, and alcohol, often trying to induce vomiting and emptying of the bowels. “Massive doses of calomel,” noted a writer for *FDA Consumer*, “not only cleaned the bowels, they also caused teeth to loosen, hair to fall out, and other symptoms of acute mercury poisoning. Such ‘heroic’ therapy often prolonged the illness, if it did not kill the patient outright.” In the

United States, George Washington died in 1799 after being treated for sore throat. His therapies included bloodletting and blistering with cantharides, a concoction made from dried beetles.

Hahnemann recognized the fallacy of such treatments, and instead encouraged his own patients to seek exercise, healthy food, and fresh air. Eventually, he became so disenchanted with medicine and his inability to effectively treat disease that he quit his job and moved to Dresden. There he spent five years studying chemistry and working on translations of scientific texts and other books into German. Working on his own experiments, Hahnemann began to make important discoveries while gaining eminence for his own publications.

### Like Cures Like

While translating William Cullen’s *Lectures on the Materia medica* into German, Hahnemann began to doubt Cullen’s theory about Cinchona bark, a Peruvian plant that is now the basis of the malaria cure quinine, so he launched his own experiments, using himself as a guinea pig. Taking large doses of the substance, Hahnemann developed the fever, chills, thirst, and throbbing headache that characterize malaria. This experience convinced Hahnemann that small doses of the same substance would prompt the body’s own immune system to fight off the disease, in much the same way a flu shot carrying deactivated germs wards off the flu. This became Hahnemann’s famous maxim, *like cures like*, or the *Law of Similars*.

For years, Hahnemann enlisted his family for experiments that involved inducing various symptoms, testing out more than 2,000 substances ranging from herbs to snake venom, and carefully recording the results. Finally, he began to apply his remedies to actual sick people, administering concoctions he hoped would mimic the symptoms already being exhibited by the patient. At first, Hahnemann noticed that his patients actually became sicker from his substances. This prompted him to dilute his medicines into smaller and smaller doses to find the tiniest possible portion that would still trigger the body’s response. To his own surprise, Hahnemann discovered that the more diluted remedies were actually more effective at treating diseases. This became his *Law of Infinitesimals*, which holds that even though none of the original molecules may remain in a particular dilution, the *vital forces*, or healing power, of the substance remains.

Hahnemann’s remedies were created systematically, in a process that included placing one drop of the substance in 99 drops of water or alcohol, then shaking the container vigorously, and repeating the process several times. In theory, after several dilutions, not a single drop of the original substance was left. However, scientists in the 1970s used a nuclear magnetic resonance machine to prove that “even though there is no substance left in most homeopathic remedies, their footprint remained in the alcohol/water that the substance was diluted in,” wrote homeopathic physician and M.D. Jeffrey Migdow in *New Visions Online*.

Assisted by his four grown daughters, Hahnemann conducted hundreds of experiments, or provings, which he

collected in his landmark 1810 book *Organon der Rationellen Heilkunde*, or *Organon of Rational Healing*. The book, which explains every one of Hahnemann's discoveries and experiments, is widely considered Hahnemann's most important work. In it, he dubs his practice *homeopathy*, from the Greek words *homoio*, or similar, and *pathos*, disease or sickness. Hahnemann called other medical practitioners "allopaths."

### Controversy Alights

The publication of Hahnemann's *Organon* resulted in immediate controversy, even though homeopathy was used successfully to battle a number of disease epidemics. "He was attacked in medical journals of the day, [and] books and pamphlets were fulminated against him and his strange doctrines," wrote Dr. Sumit Goel in *Life and Works of Samuel Hahnemann* at HomeopathyHome.com. "He was called a charlatan, a quack, an ignoramus. His minute doses were declared to be impossible. The books and pamphlets written against homeopathy may be numbered by hundreds."

Pharmacists opposed Hahnemann because he prepared his own remedies, bypassing apothecaries. As a result he was run out of several towns and nearly forced to quit practicing by apothecaries who banded together and complained to authorities that Hahnemann was infringing on their business. In 1821, Hahnemann was saved by the Grand Duke Frederick of Anhalt-Coethen, a staunch homeopathy believer, who invited Hahnemann to live under his protection and practice freely.

Despite the controversy, homeopathy flourished, and developed a strong following that included many prominent people, like Henry Wadsworth Longfellow, Daniel Webster, Louisa May Alcott, James Garfield and John D. Rockefeller. Hahnemann lectured widely and in 1828 published another groundbreaking work, *Chronic Diseases: Their Nature and Homeopathic Treatment*.

### Attempted Retirement

In 1830, at the age of 66, Hahnemann's wife, Johanna, died. A year later, Hahnemann's long-time protector and patron, Grand Duke Frederick, also died. Hahnemann remained in Coethen, lecturing, writing, and receiving students. One of these students was a 35-year-old French woman by the name of Marie Melanie d'Hervilly, whom Hahnemann married in 1835. At the request of his new wife, Hahnemann moved to Paris, where he intended to retire.

Hahnemann, however, was too well-known and his knowledge of homeopathy too in demand. Within a few years, Hahnemann had a larger practice than ever, and students visited from around the world. He spent the last several years of his life visiting patients, lecturing, and revising a sixth edition of his *Organon*, all the while battling a chronic lung infection that reoccurred each spring. He died July 2, 1843, at the age of 90.

### Homeopathy Spreads to the United States

Homeopathy flourished in the United States after Hahnemann's death. Philadelphia's Homeopathic Medical College was opened in 1848, founded by Dr. Constance Hering, a medical doctor whose original exposure to homeopathy was through experiments he designed to disprove it, wrote Migdow in *New Visions Online*. Hering contracted a serious infection in a laboratory accident. Instead of amputating his hand, which was the typical treatment of the day, "he opted to take a homeopathic trauma remedy, and within a few weeks his hand had healed. He subsequently became a firm believer and helped homeopathy grow quickly in the United States." In 1884, the school merged with the Homeopathic Hospital of Pennsylvania under the name of Hahnemann Medical College and Hospital.

By 1900, America was home to 111 homeopathic hospitals, and 22 homeopathic medical schools, and 1,000 homeopathic pharmacies, Migdow wrote, noting that a quarter of urban physicians practiced the art, and nearly half of the population sought its care.

Just like in Europe, however, non-homeopathic medical practitioners opposed homeopathy, for both scientific and economic reasons. "From the 1860s until after the turn of the century," advised the *Family Guide*, "medical groups attempted to expel any physician who practiced homeopathy or who even consulted with a homeopath about the care of a patient." Eventually the American Medical Association issued a report ordering all accredited medical schools to be modeled after the conventional Johns Hopkins University. "Thus," Migdow wrote, "homeopathic schools went unfunded and soon bankrupt." The number of American homeopathic medical schools dwindled to two in 1923. None survive today.

### Decline and Rebirth of Homeopathy

Homeopathy suffered further decline after barbaric practices like bloodletting went out of fashion and new drugs like penicillin and antibiotics gained prominence. Still, "the National Center of Homeopathy carried on, getting all the remedies FDA approval in the late 30s," Migdow wrote. "The remedies were continually made by homeopathic pharmacies and when homeopathy resurfaced in the 60s the remedies were ready and waiting!" Homeopathic remedies are still largely unproven and unexplained by conventional science, although Pelletier notes that "for many commonly prescribed allopathic drugs, including aspirin and some antibiotics, the mechanism of action remains equally unknown."

The 1960s spawned a growing back-to-the-land movement that sparked new interest in alternative medicine, including homeopathy. By the 1990s, the alternative medicine movement had grown to the point that even the American Medical Association was forced to recognize it. A 1998 article in *JAMA*, the *Journal of the American Medical Association*, called homeopathy "another tool in the bag," acknowledging its prevalence. "In a sense, part of homeopathy's popularity may be due to this patient-cen-

tered view of illness, where the key to resolving health issues lies in understanding and treating all symptoms, not just those that fit the textbook description of a specific disease."

The practice remains widely accepted around the world, especially in India, Latin America, and Europe. The United Kingdom boasts five homeopathic hospitals, where homeopathy is covered under the National Health Service, wrote Dr. Kenneth R. Pelletier in *The Best Alternative Medicine*. France is home to eight schools offering advanced homeopathy degrees, and nearly all French and German pharmacies, Pelletier reported, "carry homeopathic medicine along with conventional medicines." In India, there are more than 100 homeopathic medical colleges and more than 100,000 homeopathic physicians.

Homeopathy has been found to be especially helpful for treating chronic illness, including allergies, headaches, arthritis, colitis, asthma, peptic ulcer, high blood pressure, and obesity. It can also help remedy colds and rashes. Many health food stores offer homeopathic first aid kits designed to treat basic injuries, like stings, sprains, cuts and bruises.

### Books

Bratman, Steven, *The Alternative Medicine Sourcebook: A Realistic Evaluation of Alternative Healing Methods*, Lowell House, 1997.

*Family Guide to Natural Medicine*, edited by Alma E. Guinness, Reader's Digest Association, Inc., 1993.

*Nurse's Handbook of Alternative and Complementary Therapies*, Springhouse Corporation, 1999.

Pelletier, Kenneth, *The Best Alternative Medicine: What Works? What Does Not?*, Simon and Schuster, 2000.

### Periodicals

*FDA Consumer*, March, 1985, p. 33.

*The Independent* (London), November 17, 1998, p. 12.

*JAMA, The Journal of the American Medical Association*, March 4, 1998, p. 707.

*Mother Jones*, September, 1998.

*Star Tribune* (Minneapolis, MN), August 14, 2000, p. 02A.

### Online

*Encyclopaedia Britannica*, [www.britannica.com](http://www.britannica.com), (December 10, 2000.)

*Life and Works of Samuel Hahnemann*, [www.HomeopathyHome.com](http://www.HomeopathyHome.com), December 10, 2000.

*New Visions Online*, [www.newvis.net](http://www.newvis.net). □

## John Harington

**Sir John Harington (1560-1612) was an ambitious courtier who spent much of his life seeking favor at Queen Elizabeth's Court. He relied on his sharp wit and lively descriptive writing to attract attention, sometimes for better and sometimes for worse. His work includes numerous epigrams, the first English translation of Ludovico Ariosto's *Orlando Furioso*, a**



**tract on an improved toilet that also served as a metaphor on Elizabethan life, and a political treatise on Ireland.**

Harington was born at Kelston near Bath on August 4, 1560. His father, also named John, had served under Sir Thomas Seymour, high admiral of the fleet of Edward IV. When Seymour was accused of treason, the senior Harington was imprisoned in the tower along with his commander. His lot improved greatly when he became the confidential under treasurer to Henry VIII, the position in which he served at the time of Harington's birth. Harington senior's first wife was the illegitimate daughter of the king. Through her, the Haringtons had acquired the family estate. Isabella Markham, Harington senior's second wife and John's mother, had served as a maid of honor for Elizabeth before she assumed the throne. Through these connections, Queen Elizabeth came to be named Harington's godmother. Throughout his lifetime, Harington ambitiously, if not always successfully, pursued a favored place at the Queen's court.

Harington received his first formal education at Eton, where he studied under William Wickham, who later became the Bishop of Winchester. Showing an early inclination for literary endeavors, Harington translated Foxe's *Book of Martyrs* into Latin. Queen Elizabeth also took an active interest in her godson, "Boye Jack" as she called him. On at least one occasion she sent him a copy of a speech

she had delivered before Parliament, requesting his literary assistance. Although not an exceptionally hardworking student, Harington performed academically well enough to matriculate at King's College, Cambridge, in 1576, earning a bachelor's degree in 1577 (or 1578) and master's degree in 1581. While at Cambridge, Harington maintained the status of *filius nobilis*, an ancient title assigned to sons of noblemen and bishops. Considering his father's lack of a noble designation, the entitlement bestowed on Harington gives evidence to the influence of his relationship as the Queen's godson.

Upon his graduation from King's College, Harington entered Lincoln's Inn in London to study law. However, when both his parents became deceased, his mother in 1579 and his father in 1582, Harington quickly abandoned his studies to claim his inheritance of the family estate at Somerset. The following year he married Mary Rogers, the daughter of Sir George and Lady Jane Rogers of Cannington in Somersetshire. Harington moved into the family estate at Kelston, which remained his primary residence until his death. He and his wife had nine children that lived beyond infancy and two that died at birth. Seven of the nine children survived Harington's own death.

### Began Life at Court

According to Townsend Rich in *Harington and Ariosto: A Study in Elizabethan Verse Translation*, "Harington, although living in the country, spent a good deal of time at Court. Elizabeth favored him because of his position as her godson and because of the long years of service of his parents. He had reason to expect a brilliant career at Court. Harington had a thorough education at Eton and Cambridge, good family connections, and a ready and amusing mind. He began his career as a writer of epigrams as soon as he arrived at Court, and quickly obtained a reputation as a wit." Epigrams, short, witty, and satirical poetic verses, became Harington's trademark. Although only one out of the 400 epigrams that he wrote was published during his lifetime, most circulated widely in unpublished form. He had a distinct talent for the succinct, biting style of poetry: "Treason doth never prosper, what the reason? / For if it prosper, none dare call it treason." Addressing a wide variety of themes and issues, Harington often pointed his barbed remarks at individuals or certain types of people. He seemed to disdain extremes in all directions, attacking the overly pious along with the overly indulgent.

### Translated *Orlando Furioso*

The impact of Harington's wit upon his relationship with the Queen and his place in the Court was varied. Popular for his epigrams, he often pushed his humor to the edge, and sometimes over the edge, thus earning the Queen's ire. According to a traditional tale, during the 1580s, being well versed in the Italian language, he translated the indelicate and bawdy story of Giocondo from canto 28 of Ariosto's *Orlando Furioso*. Probably in an effort to increase his popularity, he began circulating his translation around the Court. The story found the favor of the Queen's maids of honor, but when the Queen discovered

that her godson was behind the translation, she was furious at him for corrupting the minds of her maidens. As punishment, Harington was banned from the Court and ordered by the Queen to translate the whole of *Orlando Furioso*. Harington returned to Kelston and fulfilled the Queen's command.

According to D. H. Craig in *Dictionary of Literary Biography: Sixteenth-Century British Nondramatic Writers*, the resulting translation was an "exceptionally elaborate book." It is filled with marginal notes, illustrations, commentary, summary, and other literary addition. As Craig describes, "Some of this is taken over from the Italian editions of the poem. But a great deal of the apparatus is specifically designed for Harington's English readers. While aware that intruding English references in the text or changing the story would be 'wronging mine author,' Harington fills the spaces around his translation with reminders and observations that make him a remarkably immediate presence in the book. The translation itself is readable, sustaining narrative momentum with a brisk, sometimes spritely, use of the ottava-rima stanza (eight lines of iambic pentameter, rhyming *abababcc*).'" Published in 1591, *Orlando Furioso in English Heroical Verse*, which Harington dedicated to the Queen, became very popular. It was reprinted in 1607 and 1634.

### Metamorphosis of Ajax

Despite the fact that the translation granted Harington some measure of fame, he remained unsuccessful in securing an position of importance at Court. During the 1580s he was recognized as qualified to serve as a justice of the peace, and he traveled briefly to Ireland on a failed expedition to re-colonize the province of Munster. In 1592 he was appointed sheriff of Somersetshire, but the assignment did not carrying the prominence of position to which Harington deeply aspired. Discouraged and disillusioned, Harington returned to his family in Kelston in 1594. However, he did not completely abandon his ties to Queen Elizabeth, sending her frequent correspondence with humorous news of the countryside. At some time during the 1590s Harington also wrote his *Discourse Showing That Elias Must Personally Come before the Day of Judgment*, an unpublished defense of a literate interpretation of Biblical references to the return of the prophet Elijah. Ultimately unable to shake his desire for life at Court, Harington wrote a pamphlet, *Metamorphosis of Ajax*. Rather than earning him advancement, the publication once again resulted in his dismissal by Elizabeth.

During his time in the country, Harington had invented an indoor toilet. The English term for a toilet is a jakes; therefore, *A Metamorphosis of Ajax* is a playful way of noting improvements to the toilet, or privy. Although the work did, in fact, provide an account of an improved toilet that involved flushing with water from a cistern and a stopper that prevented smells from rising from the storage below, the work was much more a satirical metaphor of English society. Most considered the whole subject a breach of common decency, and Harington had difficulty finding a printer. Eventually, Richard Field agreed to serve as the

publisher, and it was released in 1596 with the full title of *A New Discourse of a Stale Subject, Called the Metamorphosis of Ajax*. Harington listed the author as “Misacromos (hater of filthiness).”

Harington’s intent was not to merely broach a subject so repulsive to attract idle attention. His subject matter was meant to shock his audience into hearing his message of reform, moving from “privy faults” to “privy vaults.” According to Craig, “readers were to be repelled initially by all the talk of urine and ordure but then reminded that vice (however painted and perfumed) was a far more serious offense against moral sensibilities.” Filled with characters drawn from family and friends along with veiled representations of his enemies, the work also makes common use of biblical characters and classical writers. Sometimes the tract provides a series of pleading, sometimes a courtroom scene, and, in a part published separately, patrons in a diner raising objections to the subject matter. Whatever his intended effects, the result of the publication of *Metamorphosis of Ajax* probably ruined any chance of obtaining a position at Court. Although Elizabeth sympathized with the message, she was displeased with her godson for once again stepping over the line of decency. Interpreting a section of the treatise as an attack on Leicester, she was sufficiently angry to send Harington away from the Court once more. She did, however, install Harington’s “water closet” in the Richmond Palace, making it the first indoor plumbing of its type.

### Traveled to Ireland

For several years, Harington remained away from Court. By 1599, however, the stir caused by *Metamorphosis of Ajax* had subsided, and he was appointed by the Queen to accompany the Earl of Essex to Ireland to squelch a rebellion of the Earl of Tyrone. In the complex politics of the Queen’s Court, in which the loyalty of the Earl of Essex was not completely trusted by Elizabeth, most likely Harington was sent along to protect the Queen’s interests, serving as something of a spy. Granted an important mission with the chance to prove his worthiness to the Queen, Harington, having been warned by his friends and family to maintain his distance and cap his wit, made the mistake of allowing Essex to bestow knighthood upon him on July 30, 1599. He was also reported to have visited the outlaw Earl of Tyrone while waiting in Ireland for the rest of the expedition to arrive. The whole venture was a grand failure. Upon his return, Essex was removed from his position, tried, and placed under house arrest. Having associated himself too closely with Essex, Harington faced the Queen’s anger. He assuaged her by presenting a detailed account of the expedition. Nonetheless, he removed himself from Court and returned to Kelston.

### Back at Court

Harington was back at Court in early 1601 and participated in protecting the Queen from the now-rebellious Essex. Following the rebellion, Harington made several trips between Kelston and London. On at least one occasion the Queen told him bluntly to leave. During one stay in London, he visited Essex, who convinced Harington to carry a mes-

sage of contrition to the Queen on his behalf. Finding himself in the uncomfortable position of being in the middle of the quarrelling sides, Harington found the solitude of his country home appealing for once. He did, however, continue to return to the Queen’s side, especially in her dying days in 1602.

With the Queen’s death and James’s accession, Harington continued to seek the Court’s favor, but he was never to achieve the position he desired. His financial situation had deteriorated, and the unwise promise of guaranteeing a loan for his uncle, Thomas Markham, landed Harington in jail for debt in 1603 and 1604. Despite his situation, he continued to write, translate, and court the favor of the king and Prince Henry (to whom he forwarded some of his writings). After publishing *A Short View of the State of Ireland* in 1605, in which he lists his qualifications for the positions, Harington suggested that he be appointed archbishop and lord chancellor of Ireland. Nothing became of his attempts at self-promotion, and he returned to writing. In 1607 he published *The Englishman’s Doctor*, which addresses some of the issues raised in *Metamorphosis of Ajax*. He was working on a metrical paraphrase of the Psalms in May 1612 when he became ill. He died at Kelston on November 26, 1612.

### Books

- British Authors Before 1800*. edited by Stanley J. Kunitz and Howard Haycraft, The H. W. Wilson Company, 1952.  
 Browning, D. C. *Everyman’s Dictionary of Literary Biography, English and American*. J. M. Dent and Sons, 1969.  
*Dictionary of Literary Biography*, Gale Research, 1994.  
*The Oxford Companion to British History*. edited by John Cannon, Oxford University Press, 1997.  
*The Oxford Companion to English Literature*. edited by Margaret Drabble, Oxford University Press, 1998.  
*Reference Guide to English Literature*. edited by D.L. Kirkpatrick, 2nd edition. St. James Press, 1991.  
 Rich, Townsend. *Harington and Ariosto: A Study in Elizabethan Verse Translation*. Yale University Press, 1940.  
 Ruoff, James E. *Crowell’s Handbook of Elizabethan and Stuart Literature*. Thomas Y. Crowell, 1975. □

## John Harvard

**Little is known about the short life of John Harvard (1607-1638). Yet his legacy has continued down through the centuries as the principal benefactor of Harvard University, arguably one of the world’s most highly respected centers of learning.**

Although John Harvard was certainly an accomplished man he was not a man of great accomplishments. It must be noted, however, that he died in his 31st year and it is impossible to say what he would have accomplished had he lived a full life. He is thus remembered not for his achievements but for a generous endowment. Harvard is often described as the founder or sometimes as the “principal founder” of what is now known





as Harvard University. This characterization is quite misleading. It is more apt to describe him as "Harvard's benefactor" or as a philanthropist responsible for aiding the school.

When Harvard died in 1638 he left half of his estate and his library of classic and theological texts to a college whose operations were overseen by the Great and General Court of the English Colony of Massachusetts Bay. In October of 1636, two years prior to Harvard's death, it was decided by this governing body that funds would be allocated for the establishment of a college especially for the advanced training of ministers for the Congregational Church. Originally called Newton the college's name was changed to Cambridge by 1638 but then ordered changed to 'Harvard' in 1639 following John Harvard's death and subsequent bequest.

John Harvard was born into a prosperous middle class family in November of 1607 in St. Saviour's Parish, Southwark, England near by London Bridge and the Southwark Cathedral. Southwark has been described as one of the roughest and bawdiest sections of London. Although his exact birth date is not known, Harvard was christened on November 29th. His father Robert owned a butcher shop and the Queen's Head tavern. His mother, Katherine Rogers, was the daughter of a livestock dealer and alderman in Stratford-upon-Avon. Katherine was Robert's second wife. John Harvard's father and four of his siblings died, however, in the 1625 plague—leaving John, his mother, and a younger brother Thomas. There is no mention of John

Harvard in any historical records except those relating to his 1607 baptism and the 1625 plague which devastated his family. Katherine was re-married to a prosperous cooper named John Elletson. However, her second husband soon died, leaving the Harvard family with an even larger estate.

These various family inheritances allowed Harvard to enter Emmanuel College, Cambridge in 1627 where he studied for seven years earning an A.B. in 1631 and an A.M. in 1635. It is believed that Nicholas Morton, the rector of St. Saviour's, provided the credentials that allowed Harvard to enter the college. Emmanuel College was known for its Puritan ideals. Even though Harvard received religious training, there is no indication he was ever ordained to the ministry or was connected officially with any church. With the exception of Harvard's admission papers, the College has no records concerning him. It still does, however, have one of the two extant Harvard signatures on a subscription book related to his taking his degrees.

In July of 1635 Harvard's mother died following a third marriage. The following year Harvard married Anne Sadler, a classmate's sister. Her father, John Sadler, was vicar of Ringmer. Their marriage did not produce any children. Harvard's brother Thomas died before May 5, 1637 leaving Harvard with an inheritance. During these years various legal documents including his mother's will, his father-in-law's will, a real estate lease, and a debt document describe Harvard as a 'clerk'. The term 'clerk', however, is believed to be used in conjunction with Harvard taking his holy orders.

As part of a Puritan migration Harvard and his wife emigrated to America in 1637. Before leaving England, however, Harvard sold four inherited houses with which he purchased a large number of books to be taken to America with him. Being the sole survivor of a fairly well-to-do family, made even more prosperous by inheritances from his mother's re-marriages, Harvard could be justly described as a "wealthy citizen" of Charlestown, Massachusetts. He and his wife joined the Puritan Church and, by late 1637, Harvard had become a freeman. This position bestowed upon him many political rights and privileges and 120 acres of land. This land grant indicates that, in all probability, Harvard brought over cattle and servants to care for them, livestock at the time being a profitable industry in New England. Harvard and his wife soon built or purchased a house in Charlestown. It was most likely a substantial residence as 60 years later it was serving as a parsonage. Harvard also served as the assistant to the Reverend Zechariah Symmes, pastor of the First Church of Charlestown and as a teaching elder which required him to explain scripture and deliver sermons to the congregation. It is doubtful, however, if Harvard was ever formally ordained to that position. Harvard, Symmes, and Increase Nowell were appointed to a committee "to consider of some things tending towards A body of Lawes, etc.," indicating Harvard's high standing in the community. Unfortunately Harvard died in Charlestown on September 14, 1638 of "a consumption." While some sources claim Harvard died of tuberculosis others claim that the length of his illness is unknown or may have been rather short. It is thought that

Harvard was to sick to write a will and it is imagined by some that his wife, Pastor Symmes and friend Nowell were gathered around his death bed when he whispered: "My books and half my estate to the College, the rest to my beloved wife." Fifteen months after Harvard's death the widow Katherine married the Reverend Thomas Allen. Allen executed Harvard's estate and his nuncupative will.

The amount of Harvard's bequest has never been officially determined because much of his estate consisted of real estate in England which was not readily converted to cash. Respected historians, however, put the bequest at around 375 dollars, a sizeable amount of money at the time and the school's largest bequest to that date. The bequest provided enough money to construct a sizeable building first known as Harvard College and then later known as Harvard Hall (although one of Harvard's biographers believes that construction of the building had started prior to Harvard's death). A 1764 fire destroyed most of Harvard's books that were willed to the school.

There is little in the historical record, other than the bequest, to provide a legacy for John Harvard. Thomas Shepard, a Cambridge minister, described him as being "a scholar and pious in his life and enlarged toward the country and the good of it in life and death." An early history of Harvard College described its benefactor as "a godly gentleman and a lover of learning." Harvard has also been described as preaching and praying with tears in his eyes while showing great affection. Harvard left behind no writings, papers, letters, or sermons. There have also been persistent but unproven assertions that there was a relationship, although not necessarily familial, between both sides of Harvard's family and William Shakespeare. It has been asserted, but again without much hard evidence that Shakespeare served as a matchmaker between Robert Harvard and Katherine Rogers. In 1828 Harvard alumni dedicated a granite monument to the memory of John Harvard. In 1864 a seated statue to their school's namesake was likewise dedicated. According to one source, however, Harvard's greatest legacy is his obscurity and the almost "accidental" link between John Harvard and the great university.

## Books

- American National Biography*, edited by John A. Garrat and Mark C. Carnes, Oxford University Press, 1999.
- Dictionary of National Biography*, edited by Leslie Stephen and Sydney Lee, Oxford University Press, 1917.
- International Dictionary of University Histories*, edited by Carol Summerfield and Mary E. Devine, Fitzroy Dearborn Publishers, 1998.
- Morison, Samuel Eliot, *The Founding of Harvard College*, Harvard University Press, 1935.
- Shelley, Henry C., *John Harvard and His Times*, Little, Brown and Company, 1907.

## Online

- "John Harvard 1607-1638," *Hidden London*, [http://www.hiddenlondon.com/john\\_harvard.htm](http://www.hiddenlondon.com/john_harvard.htm) (December 7, 2000).
- "Harvard House and a Brief History of John Harvard of Stratford-upon-Avon," *Stratford-upon-Avon*, <http://www.stratford-upon-avon.co.uk/soaharv.htm> (December 7, 2000). □

# Will Hays

**A prominent Republic politician, Will Hays (1879-1954) gave up his political ambitions after serving as U.S. postmaster general to become the motion picture industry's morality czar. Hays set up a strict movie production code that saved Hollywood from government censorship by imposing limits on acceptable screen behavior; it became the basis for an early industry movie rating system.**

William Harrison Hays was born on November 5, 1879, in Sullivan, Indiana. His parents, John T. Hays and Mary (Cain) Hays, were strict Presbyterians, and Will Hays became steeped in small-town values. John Hays ran a law firm in Sullivan after moving the family from Ohio. In 1900, Will Hays graduated from Wabash College and was admitted to the bar. He joined his father's law firm.

Hays married Helen Louise Thomas on November 18, 1902. In 1904 he received his master's degree from Wabash College. He practiced law in Indiana until 1920 while becoming prominent in politics.

Hays was a staunch and active Republican. His strict, conservative upbringing made him an attractive figure for the party. He did not smoke or drink, was a brilliant speaker and excelled at public relations. Before he was 21, he was elected precinct committeeman. From 1904 to 1908, while still practicing law with his father, he served as chairman of the Republican Committee of Sullivan County. During this same period, he also was a member of the Republican State Advisory Committee. From 1906 to 1908, Hays served as chairman of the speakers' bureau of the Republican State Committee.

Hays found satisfaction in his growing political activities and community responsibilities. In 1910 he became a state district chairman for the Republican Party, a position he held until 1914. He was also elected city attorney for Sullivan County in 1910 and served in that post through 1913. He soon began to stretch his political power from local committees to statewide activity. From 1914 through 1918 he was chairman of the Republican State Central Committee in Indiana. In 1917, when the United States entered World War I, Hays became chairman of the Indiana State Council of Defense, a post he held until 1918.

Hays' reputation soon spread beyond Indiana and he became a prominent national Republican figure. In 1918 he was named chairman of the Republican National Committee. Hays was a dark-horse candidate for the Republican presidential nomination in 1920, and ended up playing a key role in the election of the party nominee, Warren G. Harding, to the White House. Harding appointed Hays as postmaster general of the United States on March 5, 1921. Three months later, he resigned as chairman of the Republican Party.



### Hollywood's White Knight

Morality became a divisive issue during the 1920s in the United States. One focal point of the cultural debate was Hollywood and its movies. Known for promiscuity, gambling and alcohol, Hollywood developed an image as a hotbed of immoral behavior. In the early 1920s the town was rocked by a series of scandals which brought widespread condemnation from civic, religious and political organizations. In 1921, one of America's most popular movie stars, comic Roscoe "Fatty" Arbuckle, was accused of raping a young actress, Virginia Rappe. After she died of internal injuries, he was indicted for manslaughter. Arbuckle was eventually acquitted, but the public outcry about Hollywood's lack of morals became deafening.

Women's clubs, church organizations, youth movements, and various reform groups demonstrated across the country, calling for censorship of Hollywood films. By 1922 the federal government and 36 states were considering enacting laws against the industry. Banks began to rescind movie companies' credit lines. The media fed the frenzy by blowing minor scandals out of proportion, with the encouragement of many European business interests. The European movie industry, decimated by the war, was eager to rebuild itself and break Hollywood's near-monopoly on feature films. Besides these attacks, the American film industry was concerned about declining attendance at movies and competition from radio. Nervous about the growing backlash toward the industry and fearing censorship, the movie industry decided to regulate itself.

Industry leaders sought the right man to help them fend off censorship. The choice came down to three: Herbert Hoover, Hiram Johnson and Will Hays. Hays had met many of the movie industry leaders while campaigning for Harding. His political background, skill in public relations, legal and religious authority, and his connections with well-placed people made him the top choice. Hays was a shrewd judge of political opinion, a successful executive and, most importantly, a master communicator to mass audiences.

On December 8, 1921, movie moguls Lewis J. Selznick and Saul Rogers approached Hays. On January 14, 1922, less than a year after becoming Postmaster General, Hays became head of the newly formed Motion Picture Producers and Directors Association (MPPDA), at a salary of \$100,000 a year. Hays insisted that his job be defined as "spokesman" for the industry, yet he was granted veto power over decisions by the MPPDA's board of directors.

### The Hays Office

The Motion Picture Producers and Directors Association soon became known as the "Hays Office." Hays kept his office and staff in New York, removed from the Hollywood atmosphere, yet near the headquarters of movie production companies. As spokesman for the industry, Hays used his powers of persuasion to mollify the public. Within three months of taking office, Hays established relationships with major banks, which resumed giving loans to the film industry.

Hays met with dozens of influential critics of the industry, from the Boy Scouts of America to the National Council of Catholic Women. Hays persuaded these and other organizations to drop their calls for censorship and instead join an industry public relations committee to advise the movie companies. A representative of the committee was assigned to the Hays Office and paid a salary. Some of the organizations eventually dropped out of the committee, calling it a smokescreen for the industry.

Will Hays was a passionate and persuasive speaker. When he was overtaken by emotion, his voice would rise and he would wave his hands, pounding on his desk for emphasis. He had a strong memory for faces, situations and circumstances and a passion for minute detail. Hays possessed a quick political mind; he was able to take multiple bits of information, categorize them and make an evaluation within moments. He garnered the respect of the leaders of the industry he was hired to save as well as the conservative leaders who were trying to establish strict moral codes governing Hollywood.

Hays directed much of his attention to improving the public image of Hollywood movies. Hays got publicists to eliminate references to movie star luxuries that common people associated with immorality, such as expensive cars and champagne baths. Some prominent actors known as partygoers soon disappeared from movies altogether, women with questionable reputations were dropped from the lists of extras, and certain romantic relationships between stars were publicized as marriages. "Morals clauses" soon began to appear in actors' contracts, giving studios the power to terminate contracts if actors were involved in

scandals. President Calvin Coolidge felt the Hays Office efforts were so effective that he scuttled efforts for federal regulation of Hollywood in 1926.

### The Production Code

On November 27, 1930, Will Hays married his second wife, Jessie Herron Stutsman. By then Hays had authored the Production Code, a detailed description of what was morally acceptable on the screen. The code listed every subject that was forbidden in movies. It prohibited profanity, "lustful embracing," and "illegal drug traffic." It allowed no negative representation of the United States government. Producers were required to summarize their screenplays for approval from the Hays Office. If a movie did not meet the Hays Production Code, it was not released. Rather than face censorship, the movie industry accepted the code, which remained in effect for three decades until it was supplanted in 1966 by a voluntary ratings system.

As the Great Depression took hold in the United States in the 1930s, attendance at films began to decline. The American public looked to the movie industry to provide escape from daily troubles, and films became more overtly sexual. Movie stars such as Mae West pushed the Production Code as far as possible, prompting a renewed backlash against Hollywood immorality. In the mid-1930s, the Legion of Decency was formed by a group of Catholics bent on reforming films. The Legion pledged to review all movies and recommend which were acceptable for viewing by good Catholics. This pressure forced the MPPDA to reaffirm the Production Code and announce it would levy a \$24,000 fine against any production company that did not meet it. The "Purity Seal" of the Hays Office was created, and a movie was required to have this stamp of approval before it could be distributed through MPPDA-affiliated theatres.

Hays also put into effect an Advertising Code. First presented in 1930, it became binding in 1935. It forbade distributors and producers from using objectionable material in publicity campaigns for films, with fines of \$1,000 to \$5,000 for violations.

In the late 1930s, the United States government tried to sue the movie industry for alleged violation of anti-trust laws, but failed. Hays remained unaffected, having risen to become the industry's virtual czar. He was given a new five-year contract in 1941. Although he continued to face minor uprisings by various conservative groups, Hays successfully oversaw the activities of the Motion Picture Producers and Distributors of America until 1945, when he retired as its president. He remained as an advisor to the MPPDA until 1950. During that time he used his influence to work against the spread of Communism in America, laying the groundwork for the Hollywood blacklisting of the 1950s.

During his life Hays was active in the American Red Cross, Kiwanis Club, the Masons, the Rotary Clubs and the Boy Scouts of America. He died on March 7, 1954, in his hometown of Sullivan, Indiana.

### Books

Cook, David A., *A History of Narrative Film* W.W. Norton and Co., 1981.

Moley, Raymond, *Hays Office*, Bobbs-Merrill Co., 1945.

*Oxford Companion to Film*, edited by Liz-Anne Bawden, Oxford University Press, 1976.

Tuleja, Tad, *New York Public Library Book of Popular Americana*, Infonautics Corporation, 1994.

### Periodicals

*Current Biography*, July 1943, April 1954.

*Time*, September 30, 1999.

### Online

"Hays, Will H.," *Encyclopedia Britannica*, 2000, [http://members.eb.com/bol/topci?map\\_id=91041&\\_typ=dx](http://members.eb.com/bol/topci?map_id=91041&_typ=dx) (November 17, 2000).

"Hays, Will H.," *infoplease.com*, <http://lycos.infoplease.com/ce6/people/A0823065.html> (November 17, 2000).

"The Silents Majority," <http://www.mdle.com/ClassicFilms/PhotoGallery/3/willlhays.htm> (November 17, 2000). □

## Bernard Herrmann

**Bernard Herrmann (1911-1975) is perhaps the greatest composer of motion picture music in the twentieth century. He is best remembered for his dark, suspenseful, innovative musical scores, written for such celebrated film directors as Alfred Hitchcock, Orson Welles, Francois Truffaut, and Martin Scorsese.**

Herrmann composed some 50 original film scores over the course of his career. He became known as a master of psychological and emotional intensity, expressed through bold, dark compositions, often described as moody or brooding. He had a keen ear for creating a sense of foreboding, evoking an eerie, chilling atmosphere with haunting, atonal compositions that perfectly complemented the dialogue and visual imagery of the cinematic medium. Characteristic of his work is a simplicity of composition, made up of small, fragmentary musical units, used in repetition, and intentionally lacking melodic resolution. Herrmann's signature is the use of obsessive sounds, expressing the interior of a disturbed, often psychotic, mind. His brilliant sense of timing made for some of the scariest suspense music in the history of cinema. In the factory-like context of classic Hollywood film production, Herrmann managed to attain the almost unheard-of power to both orchestrate and conduct his own compositions. This allowed him a broad freedom to make use of unconventional and innovative instrumentalization, another signature of his work. He frequently used unusual instruments or unique combinations of instruments, sometimes adding to or eliminating whole orchestra sections, and was among the first film composers to utilize electronic instruments.

### A Promising Young Musician

Herrmann (called "Benny" by his friends) was born on June 29, 1911, in New York City, the son of Russian Jewish



immigrants Abraham Herrmann, an optometrist, and Ida Gorenstein. He grew up on New York's Lower East Side, where he attended DeWitt Clinton High School. Herrmann showed early promise in music, winning a \$100 prize for composition at the age of 13. As a teenager, he was inspired by the music of Charles Ives, an innovative composer not widely recognized at that time. By the age of 18, he was playing violin in the local Yiddish theater.

Herrmann studied music at New York University and Juilliard Graduate School of Music. However, he quit school in 1932, before completing his degree. That year, Herrmann made his debut as a composer of ballets for the Broadway production of Schubert's *Americana*. At age 20, he founded and conducted the New Chamber Orchestra, which performed in New York and Washington, D.C. In 1933, the Young Composers Group performed a string quartet composed by Herrmann. He later worked as a guest conductor for the New York Philharmonic Orchestra.

### Radio

In 1934, Herrmann began his 25-year career as a conductor and composer for radio, working for the Columbia Broadcasting System (CBS). He was chief conductor of the CBS Symphony Orchestra from 1940 until 1951, often championing the innovative compositions of many new composers, such as Ives (whom he befriended). Always interested in the work of lesser known or unknown composers, Herrmann hosted radio programs such as his "Music of Famous Amateurs" show, in which he conducted and

broadcast performances of musical compositions by famous people—royalty, artists, writers, philosophers—who were *not* known for their musical talents. These included philosopher Frederick Nietzsche, poet John Milton, and King Henry VIII. In another program, Herrmann broadcast the amateur compositions of high school students.

While at CBS, Herrmann worked with radio-play writer Orson Welles, composing scores for broadcasts of Welles' Mercury Theater program. He collaborated with Welles on the 1938 radio adaptation of the H.G. Wells novel *The War of the Worlds*—a broadcast which became infamous for having been so realistic that citizens throughout the Northeastern United States panicked, fearing that Martians had actually landed on earth in a hostile invasion.

Herrmann's live musical compositions included the cantata *Moby Dick*, performed by the New York Philharmonic Orchestra in 1939. In 1941, Herrmann saw the live performance of a symphony he had composed. However, he was gravely disappointed that his opera *Wuthering Heights* was never performed during his lifetime.

Herrmann was married three times. He and his first wife, Lucille Fletcher, a writer, with whom he had two children, were married from 1939 until 1948. Their divorce was in part precipitated by the fact that Herrmann had fallen in love with his wife's cousin, Lucille Anderson, whom he married in 1949. His second divorce came in 1965. In 1967 he married the young Norma Shepherd, a journalist.

### Hollywood

When Orson Welles, who was eventually recognized as one of the greatest film directors of all time, moved to Hollywood, he invited Herrmann to join him in working on his masterpiece first film, *Citizen Kane* (1940). Herrmann's role in the production was unique for that time, in that he was allowed to observe the filming of the movie, rather than merely composing the score after filming was completed. Welles actually edited one scene of the film in accordance with Herrmann's score, granting the composer a level of influence previously unheard of in Hollywood. Herrmann subsequently composed the score to Welles' next cinematic masterpiece, *The Magnificent Ambersons* (1942).

Herrmann's talent for film composition was early recognized when he won an Academy Award for best musical score on *All That Money Can Buy* (1941; British title: *The Devil and Daniel Webster*). In Hollywood, however, Herrmann also quickly earned a reputation as a short-tempered, hot headed, egotistical man, prone to explosive confrontations with friends and enemies alike. His widely respected musical genius outweighing his well-known personality flaws, Herrmann worked with many of the greatest directors of the classic film era, including: Michael Curtiz (*The Egyptian*, 1954); Joseph L. Mankiewicz (*The Ghost and Mrs. Muir*, 1947, and *Five Fingers*, 1952); Nicholas Ray (*On Dangerous Ground*, 1950); Raoul Walsh (*The Naked and the Dead*, 1958); and Robert Wise (*The Day the Earth Stood Still*, 1951), among others.

Herrmann's work in film represented a great innovation in motion picture musical composition, in contrast to such early masters as Max Steiner. He created expressive

film scores that evoked the inner psychological state of the characters, rather than the conventional practice of film scoring which was literal and functional, or overblown and sentimental. As stated in the documentary film *Bernard Herrmann* (1992), "In the era when film music came into its own, Herrmann's work helped to shape our very idea about what music does for movies."

## Hitchcock

Herrmann, who had continued to live in New York, moved to Hollywood in 1951. His life-long ambition was to become a conductor of a live orchestra. He accepted his lot as a film music composer only after many disappointments in his efforts to compose and conduct for live musical performance. In the 1950s, Herrmann began what was to become an eleven-year long collaboration with master of suspense Alfred Hitchcock, for whom he scored eight films. His early works with Hitchcock include such successes as *The Trouble with Harry* (1955), *The Man Who Knew Too Much* (1955), and *The Wrong Man* (1956). Herrmann's one cameo film appearance was as a conductor of the London Symphony Orchestra at Albert Hall, in *The Man Who Knew Too Much*.

Herrmann's greatest film compositions, and his greatest works with Hitchcock, were *Vertigo* (1958), *North by Northwest* (1959), and *Psycho* (1960). The score to *Vertigo* is characterized by the repetitive, melodically unresolved sounds expressive of an obsessive mind. His most widely recognized score, however, is that of *Psycho*, about which Edward Johnson, in *Bernard Herrmann* (1977), observed: "For the first half of the film nothing much happens beyond a girl absconding with forty-thousand dollars—yet Herrmann's stark, jagged music, so redolent of Bartok and Stravinsky, is sufficient to grip the spectators in their seats, filling them with a nightmarish apprehension of the terror to come." In particular, the famous shower scene in *Psycho*, in which a woman is stabbed to death while she is taking a shower, is perhaps the most recognizable, and most widely imitated, of any piece of film music. For the score to *Psycho*, Herrmann used only string instruments. The short, repetitive, high-pitched bursts of sound, which accompany the rhythm of the knife stabbing repeatedly into the woman's body, call to mind the shrill shrieks of a bird in danger, birds being associated throughout the film with the killer, Norman Bates. French film director Claude Chabrol, in the documentary *Bernard Herrmann* (1992), said of the *Psycho* shower scene, "the music is like the gasps of a person who is relieving himself of an obsession."

Herrmann worked with Hitchcock as a sound consultant on *The Birds* (1963), which had no musical score, but utilized electronic sound effects to represent the sounds of birds. The last film they completed together was *Marnie* (1964). In 1966, however, one of the greatest film composers of all time and one of the greatest film directors of all time had a falling out, after which they never again spoke to one another. Hitchcock had hired Herrmann to score the music for *Torn Curtain*, but fired him before the job was completed, and replaced him with another composer. Hitchcock's cataclysmic decision was in part motivated by

pressure from the studios to incorporate more pop music into film soundtracks, a change which the obstinate Herrmann was unwilling to make. Embittered by this experience, he did not work in Hollywood again until ten years later.

Herrmann's career included composing for television, such as the theme music for the series *The Twilight Zone* (1959), *The Alfred Hitchcock Hour* (1962), and *Lost in Space* (1965), as well as special broadcasts and made-for-television movies.

In the mid-1960s, his Hollywood film career waning, Herrmann traveled frequently to England, finally moving to London in 1971. During this period, he composed for many British and European films, mostly in the thriller/suspense genre, including movies produced in France, Italy, Holland, West Germany, and Yugoslavia. Francois Truffaut, the avant-garde filmmaker of French New Wave cinema, employed Herrmann to score his films *Fahrenheit 451* (1966), and *The Bride Wore Black* (1967). Herrmann also devoted his time to recording most of his original compositions on phonograph album collections. Since his death, more than ten albums of his recorded music, primarily his original film scores, have been released.

## A New Generation of Filmmakers

In the 1970s, Herrmann was rediscovered by a new generation of young American directors. Brian de Palma hired him to compose scores for the horror/suspense films *Sisters* (1972; British title: *Blood Sisters*), and *Obsession* (1975). He also scored the music for Larry Cohen's 1974 thriller *It's Alive!*

Herrmann's last film composition was for *Taxi Driver* (1976), directed by Martin Scorsese, one of the greatest directors of the American New Wave cinema. In the documentary *Bernard Herrmann*, Scorsese said of the effect of Herrmann's score on *Taxi Driver* (1975): "His music is like a vortex: it goes deeper and deeper and deeper. It has a feeling that it never comes to completion, and it starts all over again—just when you think it's finishing, it starts all over again. It's kind of like a whirlpool, a vortex, an emotional one, a psychological one—and it has deep psychological power."

Herrmann died of heart failure in his sleep, in New York City on December 24, 1975, just hours after completion of the sound editing for *Taxi Driver*, which was dedicated to his memory. At the 1977 British Academy Awards, he was posthumously granted the Anthony Asquith Award for Film Music for *Taxi Driver*. Scorsese paid further homage to Herrmann when he used his score from the original *Cape Fear* (1961) in a 1991 remake. Several films by other directors posthumously applied Herrmann's film scores to new cinematic productions.

## Books

Bruce, Graham, *Bernard Herrmann: Film Music and Narrative*, UMI Research Press, 1985.  
*Contemporary Musicians*, Gale Research, 1995.  
*Contemporary Theatre, Film and Television*, The Gale Group, 2000.

*Dictionary of American Biography, Supplement 9: 1971-1975*, Charles Scribner's Sons, 1994.  
*International Dictionary of Films and Filmmakers, Volume 4: Writers and Production Artists*, St. James Press, 1996.  
 Johnson, Edward, *Bernard Herrmann: Hollywood's Music-Dramatist*, Triad Press, 1977. □

## Rowland Hill

**The ideas of the great 19th century British reformer, Rowland Hill (1795-1879) not only changed the postal service around the world, but also made commerce more efficient and profitable.**

Hill was primarily noted for his postal reforms that enabled the poor to use the postal service without the financial sacrifices that had been necessary previously. He also contributed to humanity and commerce through his work in education, the British colonization of Australia, and his service for a British railway.

### Impact on Education

Hill was born on December 3, 1795 in Kidderminster, England. He was the third son born to Thomas Wright Hill, the father who fostered a tight-knit family. Family members actively contributed to one another's endeavors by their advice, support and hard work. Perhaps this family cohesiveness was a natural result of the environment created by Thomas Hill in the school that he opened in 1802, at the age of 39. All his sons began studying at the school at an early age. By age 12, Rowland Hill had become a student teacher at the school.

When the school opened, corporal punishment was the norm and Greek and Latin were the mainstays. However, Thomas Hill's *Prospectus of Hill Top School* states that the goals were to instill moral training by kindness instead of fear of authority. Rowland Hill and his brothers carried this system even further when the family opened Hazelwood School in Birmingham in 1819—a school which was designed by Rowland Hill.

Colin G. Hey tells us in his book *Rowland Hill, Victorian Genius and Benefactor* that the amenities of the school were vast and quite different from what was available elsewhere. Rowland Hill designed perhaps the first school to be heated by gas that went through a central air-duct system. There were six classrooms and a large assembly hall with stage, as well as craft rooms, laboratory, gymnasium, study rooms, a canteen, observatory, swimming pool, and sports field.

The curriculum itself was a testament to the family's approach to applied learning, with a wide range of practical subjects being offered: Penmanship, English (which included speech and drama), Elocution, Geography, History, Mathematics, French, Italian, Spanish, Latin or Greek as an optional class, Gymnastics, Art, Music, Woodwork, Metalwork, Science, and practical Mathematics which included



Astronomy and Surveying. Excursions away from campus were part of the activities.

Perhaps the most innovative aspect of the school was its democratic procedures and the rewarding of the whole contribution of the student. Discipline was maintained by a system that included an elected body of students to draw up school rules, while infractions were heard by the judges and the courts, which were also mainly composed of students. Students were given metal coins within the school to use for privileges. These coins could be earned by excellent class work, participating in the court system or other voluntary work such as special projects.

By 1820, when still a young man of 25, Rowland Hill became in charge of the day-to-day running of the school. He used his extraordinary administrative abilities to run the school efficiently and in an organized manner. In 1822, with his older brother Matthew, Rowland Hill published a book about the school and its accomplishments, called *Plans for the Government and Liberal Instruction of Boys in Large Numbers, Drawn from Experience*. Immediately, the school began to gather publicity by receiving favorable reviews in journals of the day. International visitors toured the school and enrolled their sons. Part of the international renown was due to the fact that French education leader and editor Marc Antoine Jullien, former secretary to Robespierre, visited and wrote about Hazelwood in the June 1823 issue of his journal *Revue*. He even transferred his son there. Hazelwood's popularity was such that 150 boys were attending the school in 1826.



Rowland Hill taught university level mathematics and science to his students, both at Hazelwood and Bruce Castle, a London branch opened in 1827. He intended to make science compulsory for all grades because of his belief that Britain needed to forge ahead in science and technology in order to maintain its economic status. He was to train the 13 year-old students on the basic background and then train them on more specialized aspects of science as they advanced. About 12 hours per week were devoted to the science study.

However, the middle-class parents of the students disliked this approach and called for an end to the science curriculum. It is speculated that this resistance caused the breakdown in Hill's health. In 1833 he decided to give up his schoolmaster's position.

### Settlers in Australia

In 1832 Rowland Hill published a pamphlet entitled *Home Colonies: a Plan for the Gradual Extinction of Pauperism and the Diminution of Crime*, which was based on a project carried out in Holland. At this time, Britain had sent many emigrants on a 16,000-mile boat trip to Australia that had ended in disaster for many. Hopeful emigrants were crammed into crowded boats with poor conditions, taken advantage of during the voyage as well as being poorly fed so that many died en route or shortly after arriving from various diseases.

On a trip, Rowland Hill happened to run into Edward Gibbon Wakefield, who suggested that he become involved in the colonization of southern Australia, as someone was needed to organize the venture. Hill was appointed secretary to the South Australian Commission and set about organizing the details of the emigration program. This type of work was precisely suited for Hill's administrative skills.

Emigrants were limited to those who could make a contribution to the new community: craftsmen and laborers with special skills. It was necessary to have character references, and be of good health. In addition, the men had to be married. Hill used small ships over which he would have more control and paid the ship-owners, captains, and other ship employees by the number of emigrants who actually landed rather than the usual pay which was based on the number of emigrants who embarked on the voyage.

He also insisted on rigorous specifications for the ships themselves, as well as strict specifications for provisions of food, water, health-care and accommodations. He chartered 38 vessels that carried over 5,000 immigrants to South Australia without a single serious accident.

### Inventor

During the time that he worked for the South Australian Commission from 1835 until 1839, Hill also worked with his brother Edwin, who was an engineer. Together the two patented a rotary printing press in 1835. This press was able to use rolls of paper rather than having to be fed sheets.

### Post Office Reformer

Some sources say that Hill's interest in the Post Office began at an early age when the postman brought a letter to his family. At that time, the Post Office rates were based on the distance the letter traveled, the number of pages in a letter, and the recipient was responsible for the charge. The family could not afford to pay for the delivery of the letter, so eight-year-old Rowland Hill was sent to town with old clothes to sell in order to raise the necessary money. Perhaps it was this event that led him to think about how the Post Office could be reformed.

He studied a cab-load of government documents containing Post Office information that were sent to him by Robert Wallace, a Member of Parliament interested in Post Office reform. Hill found factual evidence that when excise and duty taxes were lowered, the prices of the items taxed also fell. He compiled statistics that led him to believe that this would occur for the Post Office as well and wrote a pamphlet proposing his ideas called *Post Office Reform: its Importance and Practicability*. The pamphlet was published in four editions between 1837 and 1838.

One astonishing fact that Hill discovered was that the cost of sending a letter had nothing to do with distance and that one of the unnecessary expenses of the Post Office was that the postman had to wait at least five minutes for payment at a household. In one test case, it took a postman one and a half hours to deliver 67 letters that had to be paid by the recipient on delivery, and one half hour to deliver 570 letters when he did not wait for payment. Plus, there was the expense of the clerks figuring the 40 different rates for letters, and the time spent keeping accounts to keep track of deliveries and payment by recipients.

The pamphlet proposed his idea of one prepaid postage rate for all letters regardless of distance. The carrying cost of sending a letter from London to Edinburgh was about 1/36 of a penny at that time. The proposal was that the rate for prepaid letters be a low one-possibly a penny. The revenue of the Post Office would initially fall but would grow in the future because the number of people using the postal service would increase due to the low postage rate. Before publishing his pamphlet, he contacted the Chancellor of the Exchequer who granted him an interview in December 1836. Hill was always one to promote his ideas to the highest authority, though in this case nothing was done.

The newspapers were instantly interested and took up Hill's cause, publicizing his novel ideas and catching the public interest. At the time of publication, a Parliamentary Commission of Enquiry into the Post Office was sitting and they invited the author of the pamphlet to give oral evidence. Viscount Wolmer tells us in his book *Post Office Reform* that when asked how he would manage the prepayment, Hill offered a suggestion. Persons could buy stamped covers (similar to envelopes) and sheets, or perhaps those persons who brought letters to the post office on their own unstamped paper might apply: "a bit of paper just large enough to bear the stamp, and covered at the back with a glutinous wash, which the bringer might, by applying a little moisture, attach to the back of the letter, so as to avoid the necessity of re-directing it" into a stamped cover.



And so the idea of the postage stamp was put forth. The Postmaster General, Lord Lichfield, was not enthusiastic. Again, Viscount Wolmer's book *Post Office Reform* quotes the Postmaster as saying "with respect to the plan set forth by Mr. Hill, of all the wild and visionary schemes I have ever heard or read of, it is the most extraordinary." However, due to public pressure, much publicity, and many signatures on petitions, on August 27, 1839, the Penny Postage Act received the Royal Assent. Hill resigned from his position with the South Australia Commission and in September was given a two-year appointment to the Treasury to help implement the act. Unfortunately this appointment came without any real authority.

On May 6, 1840, the Penny Black stamp and the stationery were available for sale. Despite all he had accomplished, the Post Office administration thwarted his attempts to achieve other efficiencies. Though extended one year past the initial two-year appointment, his temporary appointment was ended in September 1842 when the government changed.

### The London and Brighton Railway

Fortunately, the London and Brighton Railway immediately offered Hill a job as a director and later as chairman of the board. He effected many improvements in his time there from 1843 through 1846. He lowered the rates from London to Brighton, offered special excursion trains, made them comfortable, more efficient and popularized the idea of commuting to London while living by the sea in fashionable Brighton.

But his heart was still at the post office and he had told his employers that if he were called back, he would certainly go. This did happen in November 1846 as he was appointed secretary to the postmaster general. However, his foe Colonel Maberly was still secretary to the post office, and thus his superior. Hill finally achieved the coveted post of secretary to the post office in 1854 and was able to implement numerous post office improvements until his retirement due to ill health in 1864. He died in Hampstead, England on August 27, 1879.

### Books

Hey, Colin G., *Rowland Hill, Victorian Genius and Benefactor*, Quiller Press, 1989.

Hill, Colonel H.W., *Rowland Hill and the Fight for Penny Post*, Frederick Warne and Co., Ltd., 1940.

Smyth, Eleanor C., *Sir Rowland Hill, The Story of a Great Reform Told by His Daughter*, T. Fisher Unwin, 1907.

Wolmer, Viscount, *Post Office Reform, Its Importance and Practicability*, Ivor Nicholson and Watson Ltd., 1932. □

## Rogers Hornsby

**Rogers Hornsby (1896-1963) was the greatest right-handed hitter in baseball history. With a single-minded dedication to baseball, Hornsby was the National League's answer to Babe Ruth in the 1920s.**



**A tough, hard-bitten competitor who excelled at hitting, he achieved the highest single-season batting average in modern National League history (.424) and is second only to Ty Cobb in career batting average (.358).**

During the first half of the 1920s, while playing for the St. Louis Cardinals, Hornsby reached an unmatched peak of batting excellence, hitting over .400 for a five-year stretch and compiling several of the greatest offensive seasons in baseball history. To Hornsby, who went on to play and manage for several other major league and minor league clubs, baseball was everything, and the rest of life had little meaning. He wouldn't go to movies or read books for fear of ruining his batting eye. "People ask me what I do in winter when there's no baseball," Hornsby once said. "I'll tell you what I do. I stare out the window and wait for spring."

### The Kid from Texas

Rogers Hornsby's unusual first name came from his mother's maiden name. In 1896, he was born to Mary Dallas Rogers Hornsby and Edward Hornsby on the family's Hereford ranch near Winters, Texas, south of Abilene in the central Texas cattle country. Edward Hornsby died when Rogers was a young boy, and his mother took the family to Austin, then later to Fort Worth. In Fort Worth, Hornsby was the star of his high school baseball team. A rail-thin boy,

Hornsby spent the summer of 1912 wearing a wig and knickers so he could barnstorm through Texas with the Boston Bloomer Girls, an all-women's team.

In 1914, at age 18, Hornsby played his first season of legitimate professional baseball in the low minors at Hugo, Oklahoma. The next year, he was playing for Denison, Texas, in the Texas League. Though he committed 58 errors at shortstop that season, the St. Louis Cardinals bought him for \$500 and brought him up to the big club. He appeared in 18 games as a shortstop, batting only .246. He still was a skinny young man, 5 foot 11 inches but weighing only 130 pounds. Over the winter, he bulked up at his uncle's farm in Texas, adding 35 pounds. The extra weight helped him become a more powerful hitter.

During his first full season with the Cardinals, in 1915, Hornsby batted .313 while playing third base, shortstop and first base. He had a strange batting stance, positioning himself deep in the batter's box and far away from the plate, with feet close together. Yet his powerful stride enabled him to hit the ball with power to the opposite field. In 1917, he hit .327 and led the National League with 17 triples and a .484 slugging percentage, an impressive mark in the dead-ball era. But the next year he slumped to .281.

## Years of Glory

Hornsby was primarily a shortstop at the start of his career, though he played all over the infield and even a few games in the outfield. In 1920, Cardinals manager Branch Rickey installed Hornsby permanently at second base. He played all of his 149 games there that season and his batting average jumped to .370, enough to win him the first of seven league batting championships. He also led the league in hits, doubles, slugging percentage and runs batted in.

Entering his prime, Hornsby over the five seasons (1921 through 1925) broke every existing record for hitting prowess. He won five more batting titles, hitting .397, .401, .384, .424 and .403. Not even the legendary Cobb had ever compiled a five-year stretch in which he averaged over .400. And Hornsby didn't just hit for average—he also hit for power and racked up high on-base percentages. In his incredible season of 1922, he won the Triple Crown, leading the league in home runs with 42 (the most in National League history to that point), RBIs (152) and average (.401). He also led his league in runs (141), hits (250), doubles (46), slugging percentage (.722) and on-base percentage (.459). Many baseball experts consider that 1922 season to be the best batting performance in National League history.

Two years later, Hornsby hit an astounding .424, while leading the league in hits, doubles, runs, walks, slugging and on-base percentage. It was the highest batting mark in the post-1901 era of baseball. Astonishingly, Hornsby finished second in the league Most Valuable Player voting that year, behind Brooklyn pitcher Dazzy Vance.

In 1925, Hornsby finally was named MVP after winning his second Triple Crown, with 39 homers and 143 RBIs to go with his .403 batting average and career-best .756 slugging percentage. In May, he replaced Rickey as manager of the Cardinals, beginning a 14-season managerial career.

At the start of the 1926 season, Hornsby oozed optimism. "We are playing every game for what it's worth," Hornsby told the *Sporting News*. In late June, Hornsby suffered a thigh infection, which sidelined him until early August. When he returned, he fell into a batting slump, and ended the season with a .317 average, nice work for most players, but way below par for Hornsby. Yet his desire to win infected the rest of the club. "Rogers has had his men driving all the way," commented the *Sporting News*. "He is the boss, but at the same time he is one of the gang." Hornsby inspired the team to win the league championship.

In the World Series, the Cardinals faced the heavily favored New York Yankees. Babe Ruth hit three home runs in the fourth game. But Grover Cleveland Alexander, the veteran pitching star whom the Cardinals had acquired in mid-season, won the second and sixth games. With the seventh and final game on the line, Hornsby brought Alexander into the game in relief, and he struck out Tony Lazzeri with the bases loaded to preserve the victory.

## Baseball Blinders

Two months after the Cardinals' World Series victory, St. Louis executives stunned the baseball world by trading Hornsby to the New York Giants for second baseman Frankie Frisch. Hornsby had fought with Rickey, who was still an executive with the Cardinals, and team owner Sam Breadon. Breadon was upset at Hornsby for refusing to send his regular players to some exhibition games in minor-league cities that Breadon unwisely had scheduled during the heat of the pennant race. Breadon also was miffed at Hornsby's one vice—his penchant for betting on horse racing.

Gambling on the ponies was Hornsby's only distraction from baseball. By all reports, Hornsby bet badly and often, piling up huge debts. Other than going to the track, Hornsby's life consisted of baseball and little else. He didn't want to ruin his eyesight, so he never went to the cinema or read anything smaller than newspaper headlines. He didn't smoke, drink or eat excessively and rarely went out at night. His obsession with baseball may have contributed to two divorces. He divorced Sarah Hornsby in 1923 after she had given birth to a son; then he married Jeanette Pennington Hine in 1924; they also had a son before divorcing. His final marriage was to Marjorie Bernice Frederick in 1957.

Hornsby wanted to talk only about baseball. He was always first to come to the ballpark each day, and he would chatter about the sport with the ushers and the groundskeepers. "Baseball is the only thing I know," Hornsby once said, "the only thing I can talk about, my only interest." He was quick-tempered and often cranky, with little tolerance for players who didn't share his single-minded intensity. "I wore a big-league uniform and I had the best equipment and I traveled in style and could play ball every day," he told the *Sporting News* long after his retirement. "What else is there?" He believed baseball should be a required course in public school.

Hornsby's sharp tongue and combative manner riled team executives, umpires, opponents and even teammates. As a manager, he didn't have much patience with his play-

ers or his bosses and he frequently made enemies. In 1927, Hornsby hit .361 for the Giants and led the league in runs and walks, while serving as manager for 33 games. After the season he was traded again, to the Boston Braves. Despite winning his seventh and final batting championship with a .387 average and leading the league in walks and slugging percentage, Hornsby couldn't motivate the woebegone Braves to finish higher than seventh.

### Refused to Quit

In 1929, Hornsby, who had been a fixture with the Cardinals for the first half of his career, found himself playing on his fourth club in four years—the Chicago Cubs. That year, he had his last great season—hitting .380, scoring a league-high 156 runs, clouting 39 homers, and slugging .679. He was rewarded with his second Most Valuable Player award.

Hornsby missed most of the next year with a foot injury. At 34 years old, his skills were in decline, but he would not even consider quitting the game he loved. Near the end of the 1930 season, Hornsby was named manager of the Cubs. He began to concentrate on managing and no longer played regularly. The Cubs enjoyed winning seasons under him in 1931 and 1932, but there was constant friction. Hornsby was fired in August 1932 and the team went on to the World Series. The resentful players refused to vote him a share of their World Series earnings.

In 1933, Hornsby returned to the Cardinals for 46 games as a player only, then got a job across town as player-manager of the American League Browns. He remained with the sad-sack Brownies through the 1937 season as their manager, occasionally inserting himself into ball games. In 1937, his last season, Hornsby hit .321 in 20 games at age 41. He finished his career with a .358 lifetime average, 11 points lower than Cobb's all-time mark.

His playing days over and his managerial record spotty, Hornsby had no future in major league baseball. But he couldn't live without the game. For many years he continued managing in the minor leagues, mostly in Texas and Mexico. In 1942, Hornsby was inducted into the Baseball Hall of Fame.

In 1950, Hornsby was managing the Beaumont Roughnecks of the Texas League. His team won a championship, and management responded by throwing a day in his honor. The town's mayor gave him the keys to a new Cadillac as a gift of appreciation from the town and the team, but Hornsby said gruffly: "It's nice. Now get it out of here so we can start the game."

In 1952, he got another chance at the big leagues when general manager Bill Veeck hired him back to run the St. Louis Browns. Midway through the season, Hornsby was fired and took over as manager of the Cincinnati Reds. He lasted through most of the 1953 season before he was fired again. His final managerial record showed his teams winning 701 games and losing 812.

Hornsby remained in the game, coaching for the Chicago Cubs in the 1950s. He joined the staff of the New York Mets in 1962, coaching under Casey Stengel. Late in 1962,

he went to a hospital in Chicago for surgery on his eyes, but suffered a heart attack and died in the hospital on January 5, 1963.

In retrospect, Hornsby's great offensive career is not diminished by his frequent run-ins with management or his reputation as merely an adequate defensive player. Many baseball experts believe his combination of batting skills has never been matched. Legendary Boston Red Sox slugger Ted Williams contended that Hornsby was "the greatest hitter for average and power in the history of baseball." Hornsby himself was once quoted: "I don't like to sound egotistical, but every time I stepped up to the plate with a bat in my hands, I couldn't help but feel sorry for the pitcher."

### Books

Alexander, Charles C., *Rogers Hornsby: A Biography*, Holt, 1995.  
Burns, Ken and Geoffrey C. Ward, *Baseball: An Illustrated History*, Knopf, 1994.

### Periodicals

*New York Times*, January 6, 1963.

### Online

"Hornsby cared only about results," *ESPN.com*, <http://espn.go.com/sportscenry/features/00014249.html>.

"Hornsby, Rogers," *The Handbook of Texas Online*, <http://www.tsha.utexas.edu/handbook/online/articles/view/HH/fho61.html>.

"Rogers Hornsby," *Total Baseball*, <http://www.totalbaseball.com/player/h/hornr101/hornr101.html>. □

## Edmond Hoyle

**Edmond Hoyle (1672-1769) was an authority on card games and is often referred to as the "Father of Whist." Although he did not invent the game, with the publication of his systematized book of rules and procedures, the game became widely popular, especially among the English aristocracy. He also published rules on backgammon, brag, quadrille, piquet, and chess.**

Almost nothing is known of Hoyle's life before 1741. It has been speculated that he was from Yorkshire and later owned land in Dublin, but scholars agree that the historical records are most likely referring to another Edmond Hoyle. It is commonly believed that he was a lawyer. In 1741 he was residing in Queen Square, London, where he earned at least part of his income by giving lessons on the card game whist. In need of a standard book of rules to assist his students, he wrote *A Short Treatise on the Game of Whist*. When the manuscript handbook was well received by his students, he was encouraged to publish it.

### ***A Short Treatise on the Game of Whist***

The book was entered at Stationers' Hall on November 17, 1742, with Hoyle as the sole owner of the copyright. The book sold for one guinea and became a popular success, despite the fact that numerous pirated versions quickly appeared on the market. Reprinted in 14 successive editions along with numerous revised editions published after Hoyle's death, *A Short Treatise on the Game of Whist* ultimately became one of the best selling books of the eighteenth century.

### **The Game of Whist**

Whist, on which the modern card game bridge is based, is played with a full deck of 52 cards by two sets of partners. The object is to take tricks, or earn points, by playing the highest-ranking card in each round. To begin, all cards are dealt out around the table, one card at a time laid face down, with each player ultimately holding 13 cards. The last card, which belongs to the dealer, is dealt face up and determines the trump suit of hearts, diamonds, spades, or clubs for that hand. The player on the dealer's left begins the play by laying a card on the table face up. Other players then must follow suit. If the same suit is not available in one's hand, a player can lay down a card from the trump suit. Any trump card outranks all cards from other suits. For example, in a round in which spades is trump, if an eight of diamonds is led, followed by a ten of diamonds, a king of diamonds, and a two of spades, the trump card, two of spades, wins the round even though it is numerically lower. If more than one player lays down a trump card, the highest trump card takes the trick. Partners earn one point for every trick that they take after the first six. Therefore, with 13 points possible per hand, the highest score per hand is seven. A game is won by being the first partners to earn seven points.

As the first book to offer a scientific approach to whist, or any other card game for that matter, *A Short Treatise on the Game of Whist* provided new insight and strategy on card playing. Along with providing a systematized book of rules for the game, Hoyle introduced laws of probability in determining the correct play. He also was the first to suggest that play can be aided by inferring the remaining cards in a player's hand based on the previously played cards. In other words, with 13 cards in each suit, if for example 10 cards within a suit have already been laid down during a round, a player can make educated predictions regarding where the other three suit cards lie. Including a code of ethics and fair play, Hoyle provided a foundation of ethical play that went almost wholly unchanged for two centuries.

### **Numerous Editions Printed**

The second edition of *A Short Treatise on the Game of Whist*, which included several additions, appeared as a pocket-sized book in 1743, selling for two shillings. The third and fourth editions were also published in 1743, with the fourth edition revised to contain the 24 rules of whist that would govern the game until revised once again by Hoyle in his twelfth edition, published in 1760. The fifth, sixth, and seventh editions were published in 1744, 1746,

and 1747, respectively. The eighth edition, published in 1748 as *Hoyle's Standard Games*, offered 13 new cases and included Hoyle's rules for quadrille, piquet, and backgammon. The ninth edition, bearing the title *The Accurate Gamester's Companion* was also published in 1748. The tenth edition, produced in 1750 and 1755, is identical to the eighth edition. The eleventh edition, published as *Mr. Hoyle's Games of Whist, Quadrille, Piquet, Chess, and Backgammon, Complete*, is undated. First released in 1760, the twelfth edition was reissued in 1761 with two new cases. Although undated, the thirteenth edition is believed to have been published in 1763, and both the fourteenth and fifteenth editions released in 1770. A French translation, *Traite abrege de Jeu de Whist*, was first published in 1764. Four years later, a German edition, titled *Anweisung zum Whistspiel*, was printed.

Every edition of an original *A Short Treatise on the Game of Whist* bore Hoyle's signature. His rules as laid out in his 1760 edition, slightly amended, governed whist until 1864 when they were replaced by a new set of rules adopted by the Arlington and Portland whist clubs in London. British writer and physician Henry Jones became the leading authority on whist during the nineteenth century. Going through numerous revisions, whist eventually evolved into the game of bridge.

### **Other Works**

Besides the numerous revised editions of *A Short Treatise on the Game of Whist*, Hoyle published six other rulebooks. His *Short Treatise on the Game of Backgammon* appeared in three editions (1743, 1745, and 1748). Hoyle's rules and strategies for backgammon remain largely unchanged to this day. His *Short Treatise on the Game of Piquet, to which are added some Rules and Observations for playing well at Chess* was first published in 1744, with new editions issued in 1746 and 1748. *Short Treatise on the Game of Quadrille, to which is added the Laws of the Game* was published in 1745. These three titles also appeared in the eighth edition of *A Short Treatise on the Game of Whist* (1748). In 1751 Hoyle published *Short Treatise on the Game of Brag, containing the Laws of the Game; also Calculations, shewing the Odds of winning or losing certain Hands dealt*. Hoyle explained how to calculate odds in situations found in piquet, allfours, whist, dice, lotteries, and annuities in *An Essay Towards making the Doctrines of Chances Easy to those who understand Vulgar Arithmetick only, To which is added, Some Useful Tables on Annuities for Lives*, published in 1754 with a new edition appearing in 1764. Finally, *An Essay Towards making the Game of Chess Easily learned By those who know the Moves only, without the Assistance of a Master* was published in 1761.

### **"According to Hoyle"**

Hoyle's books became so popular that all rulebooks for card, table, and board games became known as "Hoyles." The phrase "According to Hoyle" was used to describe the correct rules or procedures in any activity or game. *A Short Treatise on the Game of Whist* became such a success that it spawned a play in 1743, *The Humours of Whist*. The skit

provided a comical look at Hoyle and his pupils and the downfall of card sharks whose secrets Hoyle exposed. References to Hoyle can also be found in literature, including Fielding's *Tom Jones*, Alexander Thomson's poem "Whist," and Lord Byron's *Don Juan*.

His name was widely pirated to signify authority of other writers on games, who often used "Hoyle" in the title of their publication. Even after his death, many misconceptions arose regarding what Hoyle actually wrote. According to Albert A. Ostrow in *The Complete Card Player* (1945), "Many people believe that Edmond Hoyle himself promulgated most of the card rules attributed to him. Even some writers on cards have fallen into the same error and in taking issue with Hoyle have, for example, learnedly discussed 'his' rules on poker. The fact of the matter is this—*Edmond Hoyle never heard of poker.*" Even to this day, books of rules for card, table, and board games are published under the name of Hoyle. Even though the games were unknown to Hoyle himself, his name continues to represent the ultimate authority on game rules. Hoyle died in London on August 29, 1769; he was 97 years old.

## Books

- British Authors Before 1800: A Biographical Dictionary.* edited by Stanley Kunitz and Howard Haycraft, The H. W. Wilson Company, 1952.
- The Cambridge Biographical Encyclopedia.* Second edition. Edited by David Crystal, Cambridge University Press, 1998.
- Chambers Biographical Dictionary.* Sixth edition. Edited by Melanie Parry, Larousse Kingfisher Chambers, 1997.
- The Dictionary of National Biography: From the Earliest Times to 1900.* edited by Leslie Stephen and Sidney Lee, Oxford University Press, 1938.
- Frey, Richard L., *The Official Encyclopedia of Bridge. New, Revised and Expanded Edition.* Crown Publishing, Inc. 1971.
- The New Cambridge Bibliography of English Literature. Volume 2: 1660-1800.* edited by George Watson, Cambridge University Press, 1971.
- The New Century Handbook of English Literature.* edited by Clarence L. Barnhart, Appleton-Century-Crofts, Inc., 1956.
- Ostrow, Albert A., *The Complete Card Player.* Whittlesey House, 1945.
- The Oxford Companion to English Literature.* Fourth edition. Edited by Sir Paul Harvey, Revised by Dorothy Eagle. Clarendon Press, 1967.

## Online

- "Edmond Hoyle," *Britannica Encyclopedia*, <http://www.britannica.com> (December 11, 2000).
- "Edmond Hoyle," *Microsoft Encarta Online Encyclopedia 2000*, <http://encarta.msn.com> (December 11, 2000).
- "Whist," *Microsoft Encarta Online Encyclopedia 2000*, <http://encarta.msn.com> (December 11, 2000). □

# John Hubley

**When the people who worked with animator John Hubley (1914-1977) spoke of him, they agreed that he was a creative genius, a designer who would push the envelope of his medium, a man of vision with the**

**ability to follow a dream. Working with him could also be very difficult.**

Hubley was born in Marinette, Wisconsin on May 21, 1914, into an artistic family. His grandfather was a painter, and his mother attended the Art Institute of Chicago. Growing up watching his grandfather in his studio, Hubley knew that he would be a painter. He went to college in Los Angeles, California, then studied painting at the Art Center there for three years.

## At Disney

At the age of 22, Hubley went to work at the Walt Disney studios. Disney was undergoing a rapid expansion, as work was beginning on the studio's first feature-length cartoon, *Snow White*. Young artists were in demand to do the large amounts of work, and the studio provided training and apprenticeships to determine the best people to work on the important features. Hubley soon found himself at work on *Snow White*, painting backgrounds and preparing layouts. He was art director for the classic *Pinocchio*, working with the animation director to determine the layout and general look of the entire film. He had the same role on *Bambi* and *Dumbo*, and for the opening sequences of *Fantasia*.

The famous Disney strike occurred in 1941. Many of the younger art school graduates that had joined Disney after the success of *Snow White*, and who were now part of a large production company, found themselves at odds with Disney's paternalism. Both in matters of compensation and creative freedom, the artists felt cheated. Walt Disney's goal was greater realism in his studio's animation, which went against what many, including Hubley, saw as the unlimited possibilities for imagination, stylization and fantasy in the medium.

Hubley was one of the first to walk out, and soon found himself working at Screen Gems, making cartoons that were released by Columbia Pictures. The studio was run by former Disney animator Frank Tashlin, and employed many former Disney artists. There, Hubley told interviewer John D. Ford, "we tried some very experimental things; none of them quite got off the ground, but there was a lot of ground broken." There was certainly more artistic freedom at Screen Gems than at Disney, but the final product still had to meet the criteria of the studio heads who wanted safe, familiar products. In 1942, Tashlin was replaced by veteran animation producer Dave Fleischer, who was much less open to experimentation, and preferred to run a more Disney-like operation.

## From FMPU to UPA

The United States had entered World War II in December 1941. Soon Hubley took the opportunity to join the Army, specifically the newly formed Army Air Force First Motion Picture Unit (FMPU), designed to create training films for the large number of recruits entering the Air Force. Hubley was assigned to the Animation Unit, working with veteran Disney animator, Frank Thomas. While the Air

Force had strict guidelines about what they wanted to be taught, they were far more flexible than any commercial studio had been in terms of presentation. The animators at FMPU found creative freedom they had only dreamed about.

In 1944, Hubley was given his first chance to apply this freedom to something other than teaching someone how to fire a machine gun. The United Auto Workers (UAW) approached Hubley about making an animated cartoon to support Franklin D. Roosevelt in the 1944 presidential election. The script had been written and Hubley worked with fellow animator Bill Hurtz to prepare the storyboards. (Storyboards are an early step in many films—animated, live-action, and advertising—where the script is first translated into a visual medium, like a large comic strip so that the filmmakers can get an idea how the progression of action and scenes will look before committing more time and money.) When a studio was needed to produce it, the task fell to newly formed Industrial Film, started by two former Disney employees and a former Screen Gems animator. Industrial Film had never made a film before as a company, but *Hell-bent for Election* was made, and an association between Industrial Film and Hubley was forged. When the UAW approached Industrial in 1945, with a script for an anti-racism film, *Brotherhood of Man*, Hubley was chosen to direct. He was still in the Army, though and could only work weekends and evenings, so the credit for directing went to another.

On December 31, 1945, Industrial Film was incorporated as United Productions of America, or as it came to be known, UPA. Hubley was now a regular employee. The studio survived on government and industrial films for awhile until a FBI report listed communist ties to numerous employees, including Hubley. This put an end to most government contracts. Fortunately, the fledgling studio had struck a deal with Columbia pictures—which was unhappy with the productions of its own Screen Gems Unit—for distribution.

Columbia wanted UPA to continue to use its established cartoon stars, the Fox and the Crow. The two cartoons Hubley directed featuring those characters are dull. Clearly he wanted to work on something new.

For his third Columbia release, Hubley created his most famous and long-lived character. After convincing the decision-makers at Columbia that UPA's strength lay in its human characters, not in anthropomorphous animals, Hubley made *Ragtime Bear*, and introduced Mr. Magoo as a supporting player. He was based on an uncle of Hubley's, who was bull-headed and obstinate. Magoo had the additional handicap of being incredibly nearsighted, which caused him to incorrectly perceive almost everything he saw. Magoo's long life must also be credited to the man who provided his voice, veteran broadcast and nightclub performer, Jim Backus. After the first recording session with Backus reading the script seemed to lack something, Hubley told Backus to keep to the main plot but to improvise the dialogue. Magoo had found his voice, and Hubley found another technique he would use throughout his career:

spontaneous, and sometimes overheard, conversations in place of scripted dialogues.

Hubley did four Magoos before feeling restricted by the character and his actions. Magoo became the mainstay of UPA, lasting long into the 1960s and television specials, but Hubley was disappointed with where the character went. "They just took very limited aspects of his character," he told John D. Ford. "Mostly his nearsightedness—and hung onto it." UPA enjoyed its success, but found it had to make commercially appealing films to stay successful.

Although he became busy supervising the studio, Hubley was able to create a few more critical successes—still well regarded to this day—while at UPA. One was *Rooty Toot Toot*, a retelling of the Frankie and Johnny legend. Hubley also collaborated with Paul Julian on the main titles and linking segments for Stanley Kramer's live-action film, *The Fourposter*.

In the early fifties, Hubley fell victim to McCarthyism and the general wave of anti-Communist sentiment sweeping the United States. The House Un-American Activities Committee (HUAC) listed many in the entertainment industry as suspected Communists, with information obtained in often unconstitutional and unsubstantiated manners. Most found themselves out of work, as public groups, investors, and sponsors pressured studios and networks. Tired of where the studio was going, frustrated with doing too much on the business end of the studio and not enough creatively, and not caring to fight the charges, Hubley left UPA and formed his own studio, producing mainly commercials.

### Independent Filmmaker

Soon afterward, in 1955, he married his second wife, Faith Elliott. The two had met years before when both were working on the Columbia lot. Elliott had worked in the live-action film industry in various capacities before marrying Hubley. Working together in his new studio, which they had relocated to New York City, they realized the difficulty of combining art and commerce. As part of their wedding vows, they promised to produce one independent film a year.

The first film they worked on together was *Adventures of an \** (asterisk), commissioned by the Guggenheim Museum. Hubley told interviewer John D. Ford that film came from a "need to break through and play around with more plasticity. We wanted to get a graphic look that had never been seen before. So we played with the wax-resist technique: drawing with wax and splashing it with watercolor to produce a resisted texture." The film had a large influence on European animators, Hubley added, "For a while that little \* became a symbol in Europe of the breakthrough for animation." Not content to repeat themselves, the Hubleys let every subsequent film explore a different technique, both graphically and in terms of structure.

It was also the first of many films about human growth and development that the Hubleys would create. The theme was returned to again in notable films like *Moonbird* (1959), *Cockaboody* (1974), and the epic *Everybody Rides the Carousel* (1975) about the stages of life. *Moonbird* used a soundtrack of the Hubley's children at play. The Hubleys

used improvised or found soundtracks in many of their films, along with jazz musical accompaniment from many leading musicians, like Shelly Manne and Quincy Jones. Jazz trumpeter Dizzy Gillespie even improvised dialogue with Dudley Moore for 1964's *The Hat*.

*Moonbird* was Hubley's first film nominated for an Academy Award, winning the Oscar for Best Short Subject (Cartoon) in 1959. This was the first of three Oscars that he would garner, sharing the award with Faith in the same category in 1962 for *The Hole*, a film about the imagination and the horrors of nuclear war. In 1966, the couple won once again for *Herb Alpert and the Tijuana Brass Double Feature*, animation keyed to two of the popular band's songs. The Hubleys received four more nominations, over the next eleven years, including one in 1977 for *A Doonesbury Special*.

Bringing Garry Trudeau's comic strip characters to life for a half-hour television special was the last project Hubley worked on. Trudeau was a student of Hubley's in 1973, when he suggested that even though the strip was static (Trudeau had often been criticized for the copier-like uniformity of his drawing) the characters were strong enough to translate into motion. As Trudeau wrote in his introduction to the book based on the show, "He believed strongly that any aspect of the process of human growth could be symbolized and that no idea was too weighty to be dramatized visually."

Trudeau and the Hubleys began working on the project in November of 1976, but John Hubley became ill soon after. He died of cancer in New Haven, Connecticut on February 21, 1977. Faith Hubley and Trudeau completed *A Doonesbury Special* as a tribute to John Hubley.

### Hubley's Legacy

John Hubley's influence is still around. Faith Hubley is still keeping her vow and creating at least one independent film a year, collaborating with their daughter, Emily, also a filmmaker. The influence he had in Europe is still felt, as the international organization for animation education and preservation that he helped to found in 1960, ASIFA (Association Internationale du Film d'Animation), is still going strong, with chapters around the world.

And there is the intangible. Bill Scott, one of the creative minds behind-and the voice of-1960s cartoon icon Bullwinkle, worked for Hubley at FMPU during World War II and collaborated with him at UPA. He provides this coda to the Hubley's life, as quoted by Keith Scott: "I loved 'Hub' as a leader. He was the guy way out on the end of the string, pulling animation as a medium after him, as far as its expanse and what it could do. He was one of the first to bring both social and moral passion into animation, and to expand the frontiers beyond what it had been: moving versions of old German fairy-tale illustrations. Anything you could visualize could be animated. That was the genius of Hubley, and it was very exciting to be hooked up to somebody like that."

### Books

- The American Animated Cartoon*, edited by Danny Peary and Gerald Peary, Dutton, 1980.  
 Barrier, Michael, *Hollywood Cartoons*, Oxford University Press, 1999.  
 Maltin, Leonard, *Of Mice and Magic*, New American Library, 1980.  
 Scott, Keith, *The Moose That Roared*, St. Martin's Press, 2000.  
 Stephenson, Ralph, *The Animated Film*, Tantivy Press, 1973.  
 Trudeau, Garry, *A Doonesbury Special*, Sheed Andrews and McMeel, 1977.

### Online

- "Faith Hubley," *Onion AV Club*, <http://www.theavclub.com/avclub3610/> (January 1, 2001). □

## Walter Hunt

**Walter Hunt (1796-1859) was a nineteenth century inventor who created many practical things, as well as a few unusual ones. Among his many inventions, Hunt is best known for creating the safety pin and making the first workable sewing machine. However, he failed to profit from any of his inventions.**

Walter Hunt was the first of thirteen children born to Sherman and Rachel Hunt on July 29, 1796 in Martinsburg, New York. As a child he was educated in a one-room schoolhouse. In 1817 Hunt earned a degree in masonry. He married Polly Loucks and the couple had four children together.

Hunt worked primarily as a farmer in a milling community. A textile mill dominated the economy of Lowville, a small town in Lewis County, New York. Most of Hunt's family and friends, including his younger brother Hiram Hunt, were in the business of spinning wool and cotton. When the mill did poorly, it affected the entire community. Hunt had exceptional mechanical ability that he put to use as the need arose. For example, his talents enabled the flax mill owner Willis Hoskins and community member Ziba Knox to obtain a patent on a spinning and roping machine. Again in 1826 when Hoskins threatened to cut his employees' wages because the cost of flax had fallen, Hunt convinced Hoskins that his poor profits were the result of an inefficient mill and not the fault of the workers. To improve efficiency, Hunt suggested that they build a better flax spinner. Several months later Hunt created the new machine that was patented on June 22, 1826. After receiving the patent, Hunt traveled to New York City for the first time in his life to raise the capital needed to manufacture the new machine. Instead he sold the patent outright, which would become Hunt's pattern of doing business.

### Moved to New York City

During Hunt's first day in New York City he witnessed an accident where a carriage ran over a little girl. He was



extremely disturbed by the incident and the fact that this was not a rare occurrence in the city. When he returned to Lowville, he decided to think of a way to help prevent these accidents. While drivers had horns to blow to warn pedestrians that they were coming, they rarely used them because they needed to keep both hands on the horse reins during an emergency. Therefore, Hunt devised a metal gong with a hammer that could be operated by foot. On July 30, 1827 Hunt patented his new invention. When he decided to return to New York to sell his new invention, he took his family with him. He sold his home and belongings and moved his family to the city. After much work, Hunt was finally able to sell his coach alarm. Once again he sold his idea outright and therefore did not profit from further sales of the product.

Hunt had moved his family to a modest home and needed a steady income to support them. In late 1827 an acquaintance suggested that he go into the real estate business. While Hunt supported his family as a land speculator, he continued to invent things as the need arose. His next creation was a knife sharpener. In the country the Hunts had used a grindstone to sharpen knives, but a grindstone was too large and expensive for city living. Hunt created a better and more practical sharpener that even included a protective guard. He patented the device on February 19, 1829.

Hunt's next inventions included a machine to make rope patented on June 11, 1829, a castor globe to move furniture more easily patented on February 8, 1834, and a coal heating stove that directed heat equally in all direc-

tions, patented on February 8, 1834. For all of these inventions, Hunt sold the rights to the products in order to pay his debts, but he never received any profits from future sales.

### Invented First Sewing Machine

Hunt's next invention was probably his most famous, even though it did not bring him much glory while he was alive. In 1833 Hunt invented the first workable sewing machine. As Joseph Nathan Kane explained in *Necessity's Child: The Story of Walter Hunt, America's Forgotten Inventor*, "With nothing to serve as a basis or model, with no other machine from which parts could be obtained, he evolved a plan for mechanical sewing which was so revolutionary that had he even dared to suggest it before completion of his model he would have been scoffed at and regarded as insane." Hunt's revolutionary machine was well-received by the public, but he was reluctant to try to manufacture it. He had not really profited from the Globe Stove Company and was reluctant to put his family in debt again. Instead he sold the rights to the machine to George A. Arrowsmith. Hunt's machine was made of wood that splintered during use, so Arrowsmith hired Hunt's brother, Adoniram, to make another model out of iron. Arrowsmith did not patent the machine because he first wanted to raise the capital for its manufacture. However, his plans did not materialize because of a financial crisis in 1834, followed by a cholera epidemic, and later labor disputes. Although the machine impressed people, they were afraid that it would put seamstresses out of business. Therefore, there was some reluctance to finance such a project. In the end, Arrowsmith never patented the machine, which proved to be a mistake.

More than a decade later the Industrial Revolution was underway and manufacturers were looking for ways to mechanize the needlework industry. On February 21, 1846 John James Greenough received the first United States patent for a sewing machine. Several other patents followed, but none produced a practical machine. On May 27, 1846 Elias Howe, Jr., with the financial backing of George Fisher, obtained the fifth United States patent for improvements to the sewing machine. Howe could not raise the capital necessary to manufacture his machine in either the U.S. or England and he fell into debt trying. While he was attempting to sell his machine, other American inventors were producing their own machines. Howe claimed that he had created the first workable sewing machine and the later machines were infringing on his patent rights. More specifically, Howe claimed to have created the first machine to sew a lock stitch, using two threads. Howe began to sue manufacturers for royalties. Hunt was involved in the ensuing trials as defense attorneys argued that Hunt's invention really preceded Howe's and therefore Howe's patent claims were not valid. Howe won the initial lawsuits, but the manufacturers refused to give in to his claims. More lawsuits followed for over a decade, with the most well-known defendant being I.M. Singer and Company.



### Sewing Machine Controversy

Hunt was under a lot of pressure from his family and friends to challenge Howe's claim to the sewing machine and share some of the financial benefits. On April 2, 1853 he submitted the paperwork to the U.S. Patent Office for his 1834 sewing machine to show that his invention preceded Howe's machine. The decision from the Patent Office was issued on June 10, 1854. It recognized Hunt's invention as preceding Howe's, but it did not grant a patent because Hunt had not applied for one prior to Howe's application. Hunt was given public credit for his invention, but Howe's patent remained valid because of a technicality.

While the controversy between Hunt and Howe continued in the courts, Hunt received another patent for improving the sewing machine on June 27, 1854. Hunt noticed that all of the sewing machine models at the time were flawed because the material had to be pushed through the vibrating needle. A new user would not know how fast or how slow to push the material and the machine would often jam. Hunt created a rotating circular top that allowed the cloth to be fed through the needle at an even rate and therefore fixed the problem of jamming. Hunt's invention did not catch on quickly, but he did prove that he had the mechanical ability and the creativity to improve upon the sewing machine, even though he could not capitalize on it.

### Other Important Inventions

During and after the sewing machine controversy, Hunt continued to create new inventions. Between 1836 and 1869 he received patents, some issued by his family even after his death for a saw for cutting down trees, a flexible spring attachment for belts and suspenders, and an attachment for boats to cut through ice. He also received patents for a machine for making nails, hob nails for boots and shoes, an inkstand, a fountain pen, a dress pin, bottle stoppers, paper shirt collars, and a non-explosive lamp. Hunt developed a repeating gun and cartridge that was eventually adapted by Smith and Wesson. He invented many other things for which he did not receive a patent, including an antipodean apparatus that could be attached to shoes so a person could walk upside down on a ceiling. The contraption was used by circus performers as late as 1937.

The product that Hunt patented as a dress pin is what is commonly known as a safety pin. Hunt was anxiously trying to figure out how to pay back a \$15 debt. While discussing his dilemma with a friend, Hunt was nervously twisting a piece of wire in his hand when he suddenly came up with the idea for a pin. Hunt's creation improved upon existing safety pins in two important ways. First, the point was com-

pletely covered when the pin was closed so it was truly safe. Second, Hunt added a circular twist at the bend of the pin to act as a spring and hold it in place. Hunt took his new invention to a manufacturer named Jonathan Richardson and sold the rights to him for only \$100. Hunt was able to pay off his debt, but he once again could not profit from future sales of his product.

### Respect as His Reward

Hunt continued to work on his inventions until his death. He died on June 8, 1859 of pneumonia in his workshop in New York City. Just before his death, Hunt at least had the satisfaction, if not the financial reward, of finally profiting from his sewing machine. In 1858 Isaac Singer agreed to pay Hunt \$50,000 for his original design to end the patent controversy. However, Hunt died before Singer made any payments. Hunt's family was able to capitalize on another of his inventions after his death, namely the paper shirt collar. In 1875 Hunt's son, George W. Hunt of New Jersey, reached a settlement with the Union Paper Collar Company for \$5,000 plus expenses in cash, \$50,000 in company stock, and ten percent of all royalties for the use of Walter Hunt's invention.

Although Hunt did not die a rich man, he was well-respected. On June 13, 1859 the *New York Tribune* wrote the following of Hunt's death: "For more than forty years, he has been known as an experiment in the arts. Whether in mechanical movements, chemistry, electricity or metallic compositions, he was always at home: and, probably in all, he has tried more experiments than any other inventor."

### Books

- Garrison, Webb B., *Why Didn't I Think of That? From Alarm Clocks to Zippers*, Prentice-Hall, 1977.
- Kane, Joseph Nathan, *Necessity's Child: The Story of Walter Hunt, America's Forgotten Inventor*, McFarland and Company, Inc., 1997.
- Walter Hunt American Inventor*, Clinton N. Hunt, 1935.
- Wulffson, Don L., *Extraordinary Stories Behind the Invention of Ordinary Things*, Lothrop, Lee, and Shepard Books, 1981.
- Wulffson, Don L., *The Kid Who Invented the Popsicle and Other Surprising Stories about Inventions*, Cobblehill Books/Dutton, 1997.

### Online

- "Invention of the Safety Pin," <http://www.ideafinder.com/history/inventions/story019.html> (December 13, 2000).
- "Walter Hunt: Inventor of the Safety Pin," [http://inventors.about.com/science/inventors/library/inventors/blhunt\\_pin.html](http://inventors.about.com/science/inventors/library/inventors/blhunt_pin.html) (December 13, 2000). □

## Thomas Ince

**Thomas Ince (1882-1924) played a significant role in the development of the film industry in Hollywood as both a producer and director. He was an originator of the studio system of filmmaking.**

Thomas Harper Ince was born on November 6, 1882, in Newport, Rhode Island, into a theatrical family. He was the son of John E. Ince, a comedian who later became a theatrical agent, and his wife, Emma B., an actress. Ince was the middle of three sons; his brothers, John and Ralph, also worked in the entertainment industry.

### Worked as an Actor

Ince was put on stage at an early age. He made his stage debut at the age of six. During his childhood, Ince primarily appeared in stock and vaudeville productions as a song-and-dance man. When he was 15 years old, he began appearing on Broadway after debuting in *Shore Acres*. In 1905, Ince had his own stock company, though it ultimately failed. Ince met his wife, actress Elinor "Nell" Kershaw, whom he married in 1907, when they appeared together in a Broadway Show, *For Love's Sweet Sake*.

Kershaw was a Biograph girl; that is, she was a signature actress in films produced by the Biograph film company. Ince had appeared in a few films during his acting career, though at the time film acting was regarded as inferior to the live theater. But after his marriage, Ince started to appear in more films through his wife's connections at Biograph. By 1910, he was working exclusively in films, making \$5 per day, but was regularly under employed. Ince

ended his acting career in that year and decided to become a director.

Ince had appeared in some films for the Independent Motion Picture Company (IMP). In 1910, he was given an opportunity to direct for them. Ince's break came when a director at IMP was unable to complete work on a small film. Ince's work on the film, *Little Nell's Tobacco* (1910), impressed IMP's owner Carl Laemmle and Ince was hired as a director. During Ince's short tenure at IMP, he and another director worked on several films in Cuba with Mary Pickford.

In 1911, Ince joined New York Motion Pictures (NYMP), leaving IMP because of the opportunities NYMP offered. After directing some films in New York City, Ince moved to Edendale (later known as Echo Park), California in November. There, he wrote and directed westerns for Bison Life Motion Pictures, a subsidiary of NYMP, for \$150 per week. Ince's first western was *War on the Plains* (1912); one of his most successful was *Custer's Last Fight* (1912), which featured many extras and much realism, including many Indians who had actually been in battle. Ince became known as the "father of the western," completing several hundred one- and two-reel western pictures through 1914. (Almost none of these films remain in existence today.)

### Supervised Construction of Inceville

Soon after Ince moved to California, the company bought land and built the biggest movie plant of the time. Ince oversaw construction of the studio, located on 18,000 acres on what is now the Pacific Coast Highway and Santa Ynez Canyon. The studio, known as Inceville, featured stages, offices, labs, commissaries, dressing rooms, props, sets, and other necessities and changed the way in which films were made. Because many westerns were made at



Inceville, Ince took the innovative step of putting a Wild West show on his payroll, the Miller Brothers' 101 Ranch Wild West Show, to add authenticity to his pictures.

Ince was also changing the way films were made in other ways. Previously the director and cameraman controlled the production of the picture, but Ince put the producer in charge of the film from inception to final product. He defined the producer's role in both a creative and industrial sense. Ince was the first producer-director, though he had to hire other directors to make all the films that needed to be produced. He found many talents, including William S. Hart, who appeared in and made some of the best early westerns, beginning in 1918. (The pair later had a falling out over the sharing of profits.)

Ince contributed to the evolving film production process in other ways as well. In 1913, the concept of the production manager was created. NYMP used George Stout, an accountant, to reorganize how films were outputted in order to bring discipline to the process. Film production became more departmentalized and factory-like, anticipating the studio system of filmmaking that would become the norm in the 1920s. With this model, Ince gradually exercised even more control over the film production process as a director-general. He controlled the conception and execution in an executive sense, letting others direct, write and edit the product.

Ince also exerted control through the way scripts were written. Previously, film stories were loosely defined. Ince helped institutionalize the continuity script, which was

more of a blueprint for production. The scripts contained more than just the story, but also many directions for aspects of production. This contributed to a more efficient production process and gave producers greater ability to anticipate and control costs. These kinds of innovations made Ince a very powerful man.

In the early days, Ince primarily produced westerns and action pictures. By 1913, he was identified with quality, diverse pictures that appealed to a wide audience. In 1914-15, Ince was still working for NYMP, which by this time had three production umbrellas for their various products, Domino, Broncho, and Kay Bee, as well as a new distribution company, Mutual. While many of Ince's films were praised in Europe, many American critics did not share this high opinion. One such picture was *Battle of Gettysburg* (1913), which was five reels long. This film helped bring into vogue the idea of the feature-length film. Another important early film for Ince was *The Italian* (1915), which depicted immigrant life in New York City.

### Founded Triangle Film Corporation

In 1915, Ince was very powerful and one of the best known producer-directors. He left NYMP and formed Triangle Film Corporation with other prominent filmmakers including D.W. Griffith, Mack Sennett and Harry Aitken. Triangle was a production-distribution-exhibition company, one of the first vertically integrated film companies. Ince was a vice president. Triangle focused on epic and quality dramas that were feature length. Ince and his partners charged more money for their prestige pictures based on their reputations as producers.

Though Ince had many credits as a director in this time period, he really only supervised the production of most of these pictures. Ince was working primarily as an executive and producer, but he still directed some films. One of his most important and famous pictures as a director was *Civilization* (1916). This pacifist work was set in a mythical country and dedicated to the mothers of those who died in World War I. *Civilization* competed with Griffith's famous epic *Intolerance* and beat it at the box office at the time. Ince directed his last film in 1916, though he continued to write scripts for other people's pictures. Overall, Ince's career as a director did not lack critical controversy. While some believed that he was an mediocre hack, others felt that he was an artist of the shadows.

Before 1918, Triangle was dissolved as a company. While trying to remain vital as a distribution company, financial mismanagement led to failure. Ince then formed his own production company in 1918. This company was located in Culver City, where he built a new Inceville after selling the first one. (This Inceville later became physical plant for Metro-Goldwyn-Mayer.) While his films made money, there were only a limited number of features produced per year. While Ince found distribution through Paramount and Metro, he was no longer as powerful as he once had been.

Ince tried to regain his status in Hollywood in several ways. In 1919, he co-founded the independent releasing company, Associated Producers, Inc., and served as its pres-

ident. Associated Producers distributed major producer-directors like Mack Sennett, but could not function on its own successfully. In 1922, Ince's company merged with First National. Ince's production company still made movies that were released through First National until 1924.

Though Ince still made some significant films, the studio system was taking over Hollywood. There was little room for an independent producer and Ince could not regain his powerful standing. He and other independent producers tried by forming the Cinematic Finance Corporation in 1921. This company made loans to producers who already had been successful, but only accomplished its goal in a limited sense. Ince made a few last important films. One was a prestige version of *Anna Christie* (1923), based on the novel by Eugene O'Neill. He also produced the significant *Human Wreckage* (1923) which was an early anti-drug movie.

### Died in Mysterious Circumstances

Shortly before Ince's death, he attended a party/yachting trip on newspaper magnate William Randolph Hearst's yacht, the *Oneida*. The party was given for Ince's birthday as well as the signing of an important film contract. The contract was for the production and distribution of the films of Hearst's mistress, Marion Davis, an actress. What actually happened aboard the ship is unknown. Some believe there was a cover-up and that Hearst accidentally shot Ince when he was aiming at another guest, Charlie Chaplin. But Ince also suffered from ill health, including ulcers and angina pectoris. Others believe that Ince just fell ill with acute indigestion or because of a heart attack. After being removed from the yacht, Ince died in his own bed at his new elaborate home in Benedict Canyon on November 9, 1924. His wife and two sons were with him when he died. Ince was only 42 years old. The official cause of death was listed as heart failure. Cecilia Rasmussen of the *Los Angeles Times*

wrote that "All Nell ever wanted was for her husband to be remembered as the pioneering filmmaker he was, the man who turned movies from a 'toy into an art.'" It was not to be.

The circumstances of Ince's death tainted his reputation as a pioneering filmmaker and diminished the way his role in the growth of the film industry was remembered. Even his studio could not survive his death. It shut down soon after he passed. The final film he produced, *Enticement*, a romance set in the French Alps, was released posthumously, in 1925. In summarizing Ince's career and the potential for his future in Hollywood had he lived, David Thomson wrote in *A Biographical Dictionary of Film*, "His shameless self-aggrandizement seems the original of a brand of ambition central to American film. In that sense, he was the first tycoon, more businesslike than Griffith and much more prosperous. Remember that he died in early middle age, and it is possible to surmise that he might have become one of the moguls of the 1930s."

### Books

- American National Biography: Volume 11*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.
- Austin, John, *More of Hollywood's Unsolved Mysteries*, Shapolsky Publishers, Inc., 1991.
- Katz, Ephraim, *The Film Encyclopedia*, HarperPerennial, 1998.
- International Dictionary of Films and Filmmakers-4: Writers and Production Artists*, edited by Grace Jeromski, St. James Press, 1997.
- 100 Years of American Film*, edited by Frank Beaver, MacMillan, 2000.
- Thomson, David, *A Biographical Dictionary of Film*, Alfred A. Knopf, 1994.

### Periodicals

- Daily Telegraph*, April 3, 1997.
- Films in Review*, October 1960.
- Los Angeles Times*, April 4, 1999. □



## Joseph Marie Jacquard

**Innovator of the loom that bears his name, Joseph Marie Jacquard (1752-1834) developed the first loom to weave designs into cloth. It was also recognized as the first machine to employ the punch-card technology, that would eventually program the computer of the mid-twentieth century.**

In the 1700s, the European textile industry and specifically weaving, had not changed for hundreds of years. Using a loom, a weaver created woven fabrics by interlacing two sets of threads—taut lengthwise or “warp” threads that were crosswise, and “weft” or “filling” threads, at right angles. To create wide finished textiles, such as those used for window coverings, narrow lengths of fabric had to be woven by hand. Warp threads were then tautly stretched across the loom’s frame, and raised and lowered by the loom’s harness, to allow the weft threads to be woven between them. These intricately textured patterns, as well as multi-colored designs were time-consuming. Even so, with its generations of skilled weavers, by the mid-1800s, France was known around the world for the quality of its woven silks.

As ever-larger mechanized looms replaced skilled hand weavers in the 1790s, an explosion of woven goods appeared in European and American trade markets. These goods were inexpensive due to being mass-produced. However, these new, mechanized looms could not compete with the skilled manual labor required to create fabrics containing anything other than a plain or simple, woven pattern, such as a check or stripe.

It would be the invention of a Frenchman named Joseph Marie Jacquard that would spread mass production to these more complicated, and costly, textile designs, allowing even intricate patterns to be automatically woven into the cloth at much the same rate as a plain length of fabric could be generated.

### Son of a Silk Weaver

Born July 7, 1752, in the southern French city of Lyon, Jacquard spent much of his life in the silk textile industry. Like his parents had before him, young Joseph went to work at a silk mill in Lyon. Along with many young boys of his generation and economic status, he grew up working 10-hour days within the factory. His first task as a young worker was to serve as a draw-boy.

Sitting on a perch above the heavy, massive loom and working quickly in advance of each passage of the flying shuttle carrying the weft thread, he would lift and re-position warp threads of various colors in different spots to create the pattern desired by the Master weaver who operated the loom. This tedious and sometimes dangerous task was given to children because their smaller fingers were more capable of setting the fine silk, wool, or cotton threads used.

The Industrial Revolution heralded what would be a long, gradual shift from a farming economy, to an industrial, trade-based economy. As fewer peasants made their living off the land, they migrated to the cities, where factories sought workers in response to foreign demands for their trade goods. Throughout France, the textile industry flourished.



### Poverty Leads to Revolution

Unfortunately, this new economic growth and the growth of a new entrepreneurial class came at some expense. The citizens of Lyon, as well as other industrial cities, were overworked, yet still poor and lacking food. The “curse” of the Industrial Revolution was that the upper middle-class factory owners profited from the rise in foreign trade, while the lower classes suffered crowded living conditions and little pay.

By the time Jacquard had entered adulthood, France was entering one of the most tumultuous periods of its history: the French Revolution. And in Lyons, one of the country’s most densely inhabited cities, this unrest—particularly that caused by the shift in political power from the wealthy nobility into the hands of the masses—was felt by all. Changes in the status quo were happening on all levels, including political, social, economic, and technological areas.

As early as 1775, French Controller-General Anne-Robert Turgot had encouraged free trade by inhibiting the restrictive guild system and subsidizing innovations in those industries he believed would one day make France an economic rival with her nemesis, Great Britain. Following the execution of Turgot’s employer, King Louis XVI, and the rise of a revolutionary government, innovations among the French citizenry continued to be encouraged and the inventive spirit was rewarded with government grants. This trend would continue following the Revolution, as Emperor Na-

poleon Bonaparte himself encouraged technological advances in his every-growing republic.

This encouragement by the government drew the interest of young men such as Jacquard, who had grown up and advanced to the position of mill mechanic in Lyon. Reflecting on his childhood job, Jacquard set about to find an alternative to the position of draw-boy in the silk industry.

A concept developed by fellow Frenchman Jacques de Vaucanson in 1745, that utilized a perforated roll of paper to control the weaving process, served as Jacquard’s starting point. Given one of Vaucanson’s looms to restore, Jacquard set to work on correcting Vaucanson’s unworkable design. Absorbed by his project for several years, Jacquard created an operative prototype of his loom by 1790.

By 1793, the Revolution was in full swing, forcing Jacquard to abandon his project; instead he joined the republican lower classes in mounting their historic attack on the French nobility. After fighting alongside his fellow citizens in defense of the new French republic, Jacquard resumed his work in 1801, shortly after Napoleon’s rise to power. His improved draw-loom, displayed that same year at an industrial exhibition in the Louvre in Paris, earned Jacquard a bronze medal.

Three years later, in the fall of 1803, the inventor was again summoned to Paris, this time to demonstrate a second version of his original loom design. This version had attached to the top of its frame the “Jacquard mechanism” or “Jacquard attachment,” which was a device connecting the wooden loom to an interchangeable continuous roll of connected punch cards. This remarkably innovative method of “programming” a machine allowed the Jacquard loom to produce tapestries, brocades, damasks, and other intricately woven silk fabrics far more quickly than had the manual technology of the past.

### The Technology of Jacquard Weaving

The innovation underlying Jacquard’s loom was the use of encoded punch cards to control the action of the weaving process, allowing any desired pattern to be reproduced automatically. The required design is encoded onto a series of connected pasteboard cards as a group of punched holes, each card containing a single line of holes representing a single row of weave. Each series of rectangular cards, when connected, creates a grid of rows and columns.

Jacquard’s mechanism allowed each warp thread to operate independently, much like a player piano, where each note is sounded by a hole on a music roll as it passes over a certain opening. In the Jacquard mechanism, a specific combination of holes punched in a row through an individual card allowed selected sprung rods or needles to pass through the card and pick up certain threads. The connected cards create a continuous loop allowing for repeated patterns; when all the cards have been used, the sequence begins again.

Combining any number of connected cards in a loop, Jacquard’s loom was able to weave patterns of great complexity, and these became popular for tablecloths and bed coverings. In addition to textile designs featuring small-

scale, repeated patterns, Jacquard became known for intricate representational coverlets featuring a single large design, woven in a variety of colors.

One remarkable example of his craft that still exists is a black-and-white silk portrait of Jacquard himself, which was woven using a strip of ten thousand cards. Also important is the course his technology would take. Jacquard's open hole/closed hole system was the first use of the binary system that would be translated into a basic computer over a century later. In addition, computer operators would refer to his concept of sequencing individual cards in a specific order to create a specific pattern, as sequencing commands to create a "program."

### Innovation Gave Rise to Computer

Jacquard's invention was immediately recognized as something that would revolutionize the French textile industry. Ironically, the impoverished factory mechanic, who had also risked his life in defense of his country, would earn no money directly from his invention. Instead, in an agreement with the city of Lyon, the patent for his Jacquard mechanism reverted to the city, which declared his invention public property in 1806. Fortunately, Jacquard was awarded a state pension by Emperor Napoleon that allowed him to profit from his innovation; in addition he received royalties on each loom sold and put into operation.

Perhaps more significant that its revolution of the textile industry, Jacquard's innovative use of the punched card mechanism greatly influenced other inventors. English inventor Charles Babbage used Jacquard's technology in his development of the analytical engine, a simple form of a calculator. American statistician Herman Hollerith adopted punchcards as a means of entering data into his census collator. His collator, developed in 1890, was used through the 1960s to tabulate results of the United States census.

### Repercussions of Progress

Like many labor-saving developments that occurred during the Industrial Revolution, Jacquard's technology was not immediately embraced by silk weavers and others in weaving trades. They saw it as a threat to their jobs and protested its use. As early as 1801, riots broke out in Lyon over changes to the traditional loom. In 1804, after Jacquard's revised loom was introduced, the violence escalated. In addition to trying to destroy any Jacquard looms that were in use in Lyon, attempts were made on Jacquard's life.

However, the advantages of his looms eventually won out over the opposition. In 1800, only 3,500 working looms were in use in Lyon's silk industry. Within a decade, the number of working looms in the city reached 11,000. One textile mill owner even had thousands of workers on his payroll.

By 1810, France had become competitive with its long-standing rival, Great Britain, in the textile industry. In 1819, Jacquard was awarded the Legion of Honor Cross, as well as a gold medal, for his role in his nation's economic success. During the 1820s, his name became known worldwide as use of the Jacquard loom spread to England.

Jacquard died in Oullins, France on August 7, 1834. Over 160 years later, the technology that bears his name is still in use around the world.

### Books

- Feldman, Anthony, and Peter Ford, *Scientists and Inventors*, Facts on File, 1986.  
 Ireland, Norma Olin, *Index to Scientists of the World from Ancient to Modern Times*, F.W. Faxton, 1962.  
 Wolf, A., *History of Science and Technology in the Eighteenth Century*, 1939.

### Online

- "Computer Pioneers," *Homepage der (Institute der) Tu Graz*, <http://www.cis.tugraz.at/edvarch/history/jacquard.htm> (March 11, 2001).  
 "From Weaving Looms to Programmed Calculation," *Compuseum-American Computer Museum*, <http://www.compustory.com/Jacquard.htm> (March 11, 2001).  
 "Joseph Jacquard," *Spartacus Educational Home Page*, <http://www.spartacus.schoolnet.co.uk/Scjacquard.htm> (March 11, 2001).  
 "Joseph Jacquard by Erin Terkoski," *Kalamazoo College website*, <http://kzoo.edu/~k00et01/jacquard.html> (March 11, 2001).  
 "The Jacquard Loom," *University of Rochester Department of History website*, <http://www.history.rochester.edu/steam/hollerith/loom.htm> (March 11, 2001).  
 "Jacquard's Loom," *Welcome to Willamette University website*, <http://www.willamette.edu/~jjuran/lab0.html> (March 11, 2001). □

## Bruce Jenner

**One of the most famous athletes of the 1970s, Bruce Jenner (born 1949) won the gold medal in the decathlon in the 1976 Olympic Games.**

**B**orn in Mount Kisco, New York on October 18, 1949, Bruce Jenner was the second of four children of William Jenner, a tree surgeon, and Estelle Jenner. It would be no surprise to Jenner's parents that their son would excel at athletics; William Jenner had competed in the U.S. Army Olympics in Nuremberg, Germany, in 1945, and won a silver medal in the 100-yard dash. Jenner's grandfather had run in the Boston Marathon several times. Jenner told an interviewer in *Ability* magazine, "By the time I turned two, I'd already developed a big chest, wide shoulders, and boundless energy."

### Encountered Difficulties in School

While Jenner's innate athletic talent led to success on the playground, classroom work came far less easily to him because he was dyslexic. People with this learning disability have trouble reading, spelling, and expressing themselves. Jenner explained to the *Ability* interviewer that while coping with this disability was hard enough, what made school even harder was that he felt that everyone else was so much better at it than he was. "My biggest fear was going to school," he recalled. "I was afraid the teacher was going to



make me read in front of the class, and I was going to look bad. I lost enthusiasm for school and I flunked second grade."

Fortunately, in fifth grade Jenner discovered something he was good at. His teacher had all the students run, and timed them to see who was fastest. Jenner was the fastest student in the school. He liked the positive response he got. Because he could excel in sports, "Sports became my little niche in life."

### Focused on Personal Strengths

By the time he started high school Jenner's family had moved to Newtown, Connecticut. At Newtown High Jenner was on the basketball, football, and track teams. He was also a three-time water skiing champion in the Eastern States competition, and was New York's all-state pole vault and high-jump champion. His all-around talent, however, was viewed as a liability by some. Jenner told Greg Garber of the *Hartford Courant* that he once overheard his football coach saying, "He's the best punter, but he's also the best center. How's he going to snap it to himself?" The praise felt good, Jenner said, but the comment also turned him off from team sports. "Teams could only let you down. In individual sports, it was just me."

Although Jenner's grades were not very good, he was eager to go to college. The Vietnam War was raging and, as he told Garber, "I was getting kind of scared. In those days, you got drafted if you didn't go to college." At the last minute, he received a football scholarship to Graceland

College in Iowa, and accepted it. However, he wasn't able to play after an injury his freshman year put him on the sidelines; while blocking a punt, he tore the medial collateral ligament in his knee, had surgery, and was put in a cast. "I thought sports were over for me," he later told Garber.

Fortunately, Jenner was wrong. Although no longer on the football team, 16 months after his knee injury he was playing basketball and training on the school's track. In 1970 he competed in his first decathlon—a two-day competition in ten different track and field events—and not only won, but broke the school record, set by his roommate, Mike Maddox. In the *Biographical Dictionary of American Sports*, James D. Whalen wrote that this collection of running, jumping, and throwing events "is the most grueling and comprehensive test of strength, skill, speed, and endurance in athletic competition." Jenner was fortunate in the fact that his coach at Graceland, L. D. Weldon, was not only familiar with the decathlon, but had also coached Jack Parker, who won the bronze medal at the 1936 Olympics.

### Qualified for 1972 Olympic Team

Jenner, intrigued by the challenge of the decathlon event, began seriously training. Within a year, he attended the trials for the U.S. Olympic team. No one expected him to make the team; only the top three athletes in the country would be selected and Jenner was an unknown. After the first day of trials, Jenner, in 11th place, still did not appear to be a likely prospect. On the second day, with three events to go, he had climbed to tenth place. After completing the pole vault, he advanced to seventh place, and his javelin throw propelled him to fifth place. In order to make the team, he had to beat the athlete in third place by 18 seconds in the 1500 meters. Jenner set a personal record, beating the competition by 21 seconds, advancing to third place, and making the team.

"It is still the biggest athletic thrill of my life," Jenner recalled of making the team. "Never, ever in a million years did I think I'd be competing in the Olympics." At the 1972 Olympics, held in Munich, Germany, he came in tenth.

In December of 1972 Jenner married his college sweetheart, Chrystie Crownover, a minister's daughter. For the next four years Chrystie Jenner worked as a flight attendant while her husband concentrated on training, hoping to get another chance at the Olympics. He trained hard, often eight hours a day, and sold insurance on the side. In 1974 and 1976 he won the Amateur Athletic Union decathlon. In 1975 he won the Pan-American Games. Because of these successes, he was chosen for the 1976 U.S. Olympic team.

In the *Encyclopedia of World Sport*, David Levinson and Karen Christensen pointed out that Jenner had a perfect physique for the decathlon. "Most really good decathletes are remarkably similar in size," they wrote. "Today's average height/weight for world-class decathletes is 1.88 meters/88 kilograms (6 feet, 2 inches/195 pounds), exactly Bruce Jenner's statistics."

### Brought Home 1976 Olympic Gold

Jenner was expected to win at the 1976 Olympics, held in Montreal, and he didn't disappoint his fans. His strategy



was to stay within 200 points of the leader's score by the end of the first day, when the 100-meter dash, long jump, shot put, high jump, and 400-meter dash were held. After these events, Jenner had amassed a total of 4,298 points—only 35 points behind the leader, West Germany's Guido Kratschmer. On the second day, Jenner's strongest events were held: the 110-meter hurdles, discus, pole vault, javelin, and 1500-meter run. By the eighth event, he had an unshakable lead; there was no way any other athlete could catch up with his score. He set a personal record in the 1500 meter run, the final event of the decathlon, and overall, set a decathlon world record of 8,618 points for the ten events.

After the win, Jenner didn't plan to compete any more and, in fact, left his vaulting poles in the Olympic stadium because he knew he was done with his track career. He told Garber, "I retired that day. I had to give up too much to get there, lifewise. I knew it was the last hurrah."

In addition to his Olympic accolades, Jenner was named Associated Press Athlete of the Year and received the Sullivan Award for the best amateur athlete in the United States. Fellow decathlete, Bill Toomey won the gold at the 1968 Olympics. He was quoted by Whalen as saying, "It takes a decathlon athlete to truly appreciate what Jenner has done. It was total artistry, a beautiful composition. He was hungry, extremely motivated."

### Earned a "Spectacular Living"

After the Olympics Jenner was the most popular athlete in the United States. Capitalizing on his fame, as well as his good looks, he made more money from winning a single event than any other athlete had before him, as he was widely sought after for commercials, promotions, and public appearances. As Garber commented, he "has made a spectacular living simply being Bruce Jenner." Jenner appeared in movies, on television, was a sportscaster with ABC-TV, and co-authored two books, *Decathlon Challenge: Bruce Jenner's Story* (1977) and *Bruce Jenner's Guide to Family Fitness* (1978). He later explained to Garber, "I looked at it like a business. I made decisions based on the long term. I didn't want to be up there just until the next name came along."

Jenner and his wife, Chrystie, were considered the "All-American couple," according to Ralph Hickok in *A Who's Who of Sports Champions*. Often in the public eye, they were both involved in Jenner's promotional activities and appearances, and were featured in a book titled *Lifestyles of the Rich and Famous*. Unfortunately, the couple's high profile came at too high a cost to their relationship. When they divorced in 1980 they received almost as much publicity as Jenner had for winning the decathlon. They had two children.

In 1981 Jenner married Linda Thompson, a former beauty-pageant winner and ex-girlfriend of singer Elvis Presley. Jenner and his second wife also had two children, and divorced after five years.

### The Price of Fame

By the late 1980s Jenner's success and fame had caught up with him. He told an interviewer on the Longevity Net-

work Web site that his sudden exposure to the public had unnerved him. "I was surrounded by tele-prompters as a TV sportscaster, and I found myself suddenly thrown into a glass fishbowl as a celebrity and American hero. What I was hiding was that I had the same mindset as the nervous dyslexic schoolboy hiding from my teacher." Although he retained his upbeat public persona, his private life was in disarray. "In 1990, you would have found me living in a one-bedroom Los Angeles bungalow, my sink piled high with dirty dishes and my living room decorated with a dried-out Christmas tree. My main source of income was from public speaking jobs—at which I always wore my best attire—an out-of-style 1976 tuxedo." In an interview for *Pathfinder.com*, Jenner summed up that period by saying, "I was drifting. I had worked really hard and didn't have much to show for it. But everything turned around the day I met Kris."

### Found Strength to Bounce Back

Jenner met Kris Kardashian in 1990, and five months later they were husband and wife. Since that time they have added several children to the Jenner family, for a total of ten—"kind of a Brady Bunch deal," Jenner explained to Garber. Kris Jenner became the moving force behind a new family conglomerate that included their infomercials ("SuperFit with Bruce and Kris Jenner"), exercise machines, and Jenner's aircraft sales company. They also produced a video, *Women's Self-Defense and Fitness Program*. Meanwhile, Jenner continued to work as a motivational speaker for corporate audiences, spreading his message on "How to Compete Successfully in Life and in Business." According to promotional literature, the Jenners sold more than \$450 million of fitness-related products by the late 1990s.

Jenner's business activities allowed him to remain in the public eye long after his Olympic moment. The subject of a CD-ROM game titled *Bruce Jenner's World-Class Decathlon*, he also authored the book *Finding the Champion Within* (1997). As he admitted to Garber, "Nobody has milked one performance better than me—and I'm damned proud of it. It completely amazes me how this whole thing turned out." Although he retired from running after his win in 1976, Jenner continued to be active and involved in a variety of sports. He was often seen riding his mountain bike in the hills near his California home or on the golf course. A commercially ranked pilot, Jenner piloted his own jet and also raced cars in Grand Prix events.

Despite the many avenues he pursued in his adult life, Jenner has remained a well-respected athlete. Inducted into the National Track and Field Hall of Fame, he is also represented in the Olympic Hall of Fame. On the *Sports Stars USA* Web site, Jenner commented: "I love life, and I want to live it! Activity, variety and the next challenge around the bend and my eight kids—keep me excited and inspired. I wouldn't have it any other way."

### Books

*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.

*Encyclopedia of World Sport*, edited by David Levinson and Karen Christensen, ABC-Clío, 1996.

Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton Mifflin, 1995.

## Periodicals

*Hartford Courant*, January 5, 2000.

## Online

"Bruce Jenner," *Sports Stars USA*, <http://www.sportsstarsusa.com/> (January 3, 2001).

"Bruce Jenner Interview," *Ability*, <http://www.abilitymagazine.com/> (January 3, 2000).

"Olympic Heroes: Bruce Jenner," *Pathfinder.com*, <http://www.pathfinder.com/> (December 27, 2000).

"Seeking Olympic Gold," *Longevity Network*, <http://www.longevitynetwork.com/> (January 3, 2001). □

# William Le Baron Jenney

**William Le Baron Jenney (1832-1907) was one of the most influential American architects of the late 19th century. Working almost exclusively in Chicago, Jenney made important advancements in the structure of tall office buildings by incorporating iron and steel in his designs.**

Jenney was born in Fairhaven, Massachusetts, a small town near New Bedford, on September 25, 1832. He was the son of William Proctor, a prosperous owner of a fleet of whaling ships, and Eliza Le Baron (Gibbs) Jenney. He attended Phillips Academy in Andover, Massachusetts. After graduating, he traveled to California in 1849 to participate in the gold rush.

While in San Francisco, Jenney witnessed the rapid rebuilding of the city with brick structures after many wood buildings were destroyed by fire in 1850. He then journeyed to the Philippines and the South Seas. In the Philippines, he became intrigued by the durability of the native huts built of light, flexible bamboo. After these experiences, he decided to return home and begin his studies in engineering.

In 1851 Jenney enrolled in the Lawrence Scientific School at Harvard University. During the next two years, he became displeased with the quality of the education he was receiving. His search for better opportunities led him to France, which had a long-standing tradition of training engineers. In 1853 he entered the *Ecole Centrale des Arts et Manufactures* in Paris, where he came under the influence of structural designer Jean Nicolas Louis Durand, an early proponent of classical functionalism in architecture.

In an article in the *Journal of the Society of Architectural Historians*, Theodore Turak notes: "Jenney was given training in engineering and architecture at the same time. One finds, therefore, the gradual dissolution of the academic division of the building art into architecture and construction. Jenney was to absorb a system which treated

structure and design as interrelated." Jenney's mixed emphasis on engineering and architecture later led to a debate among historians about whether he should be considered primarily an engineer or an architect.

## Became Interested in Architecture

After Jenney graduated from *Ecole Centrale des Arts et Manufactures* in 1856, he worked in Mexico as an engineer for the Tehuantepec Railroad Company. The following year, the Berdon Bakery Company employed Jenney to design a mechanical bakery for the French army. During his second stay in France, he continued his studies and gained some practical experience. He also became increasingly interested in architecture.

Jenney's career plans were interrupted by the outbreak of the U. S. Civil War, and in 1861 he returned to the United States and enlisted as an engineering officer. He was assigned the post of captain additional aide de camp with engineering responsibilities under General Ulysses S. Grant. After serving with Grant for some time, he was transferred to the command of General William T. Sherman. He was appointed chief engineer of the XV Army Corps and led the army's engineering efforts in Memphis, Tennessee. By the time he resigned from the army in 1866, he had risen to the rank of major, a title he continued to employ throughout his life.

## Opened Chicago Architectural Office

After leaving the army in May 1866, Jenney spent the remainder of the year in western Pennsylvania doing engineering work. In 1867 he married Elizabeth Hannah Cobb, with whom he had two sons. In the same year, he relocated to Chicago and, in 1868, opened an architectural office. Eventually Jenney organized the firm Jenney, Schermerhorn, and Bogart. His first significant assignment came two years later, when he was awarded the contract to design the West Chicago Park System. Then, with Frederick Law Olmsted, Sr., he laid out the suburb of Riverside, Illinois. In 1869 he published the influential book *Principles and Practice of Architecture*.

Jenney's business increased dramatically after Chicago was destroyed by fire in 1871. Much of the city needed to be rebuilt. During the reconstruction of Chicago, Jenney began to be recognized as one of the leading architects in the Midwest.

Although he also designed spacious homes, Jenney was best known for his downtown Chicago office buildings. His first building after the fire was the Portland Block, located at Dearborn and Washington Streets. In 1879 he completed the first Leiter Building, which later became known as the Morris Building. It originally stood five stories high; two more stories were added in 1888. The structure was a hybrid of old and new form. In the past, buildings were made of bricks and wood. In the first Leiter Building, iron columns were placed adjacent to the brick piers. Since the iron columns were the primary load-bearing structure, Jenney was free to place large windows between the brick piers. It was the first building with an abundance of windows, appearing as nearly a glass box.

### The Home Insurance Building

Jenney began construction of the Home Insurance Building in 1883. That same year, he gave a series of important lectures at the University of Chicago, which were published in *Inland Architect and Builder*. The Home Insurance Building, finished in 1885 with the assistance of engineer George B. Whitney, became Jenney's most influential engineering work. It was an important step in the development of the structural technology that spawned skyscrapers. The load-bearing components of the structure were made completely of cast iron, wrought iron, and steel, marking the first use of steel in a building in the United States. Jenney's use of Bessemer steel beams resulted in the Bessemer Steamship Company of New York naming a ship after him.

In the *Encyclopedia of American Architecture*, William Dudley Hunt, Jr. refers to the Home Insurance Building as "the most important building of its era, and one of the most important in American history." Even so, the Home Insurance Building was far from a great architectural achievement due to Jenney's tendency to overlook aesthetic beauty for functionality. According to Carl W. Condit in *The Chicago School of Architecture: A History of Commercial and Public Building in the Chicago Area, 1875-1925*, "Jenney was perhaps the most original structural talent of the Chicago school, but at the same time he was the least conscious of the aesthetic problem fixed by his new construction. As an engineer he had that kind of easy confidence in his ability that seldom led to self-questioning or to theoretical considerations. But Jenney knew what he was doing, and it had to be done before others could move on greater heights."

Jenney's new structural formation attracted the immediate attention of architects and builders. By doing away with the need for a supporting wall, the weight of the building was cut tremendously. Because iron-and-steel frames were one-third the weight of brick-and-wood frames, the height of buildings could be greatly increased. Iron and steel were cheaper, and builders could work with greater speed and efficiency. Though it stood only 11 stories tall, the Home Insurance Building is often referred to as the first skyscraper, because it was so much taller than other buildings of its day. At the least it was an important precursor to the modern skyscraper. It was demolished in 1931.

### Other Jenney Buildings

Having gained considerable fame in Chicago for the Home Insurance Building, Jenney became very busy and his business grew rapidly. Continuing to use an iron-and-steel skeletal frame, Jenney next designed the Manhattan Building. Completed in 1891, it was the first 16-story commercial building in the United States that was supported entirely on an iron frame. In the same year, he took on a partner, William H. Mundie, previously a draftsman in his office. The association of Jenney and Mundie lasted the remainder of Jenney's life.

Over the next few years, Jenney designed numerous buildings, many of which remained standing into the 21st century. The second Leiter Building (1891), built after the

first was destroyed by fire, is often regarded as his best aesthetic design. Characterized by an unprecedented vast openness, the building, later known as the Sears and Roebuck Building, offered brightly lit office spaces, wide halls, and a minimalist decorative style combined with a functional approach to design. For the first time, Jenney incorporated the steel and iron frame into the architectural design so that it added to the beauty of the building. Other works included the Central Young Men's Christian Association Building (1891), the Ludington Building (1891), the Fair Store (later known as the Montgomery Ward and Company Store, 1892), and the Isabella Building (1893). During his career, Jenney also devised many conveniences for modern offices, including tile office vaults, metal elevators, and an improved plumbing system.

Jenney reached the pinnacle of his career in the early 1890s. Although he continued to design buildings, including the Horticultural Building (1893), the Morton Building (1896), and the Chicago Garment Center (1905), they offered little new creativity in design. In 1905 Jenney and Mundie took on a new partner, Elmer C. Jensen, who had worked for the firm since 1885. In a letter to Condit, written April 13, 1949, Jensen commented on Jenney: "While he felt he was contributing to the making of new architectural forms, that was not his motive. His main purpose was the development of more efficient structural features. My personal opinion is that while he was fully conscious that his ideas and buildings were developing new forms, his main purpose was to create structural features which increased effective floor areas and made it possible to secure more daylight within buildings."

At the age of 73, Jenney retired due to poor health. He left unfinished his last project, an Illinois memorial on the battlefield of Vicksburg. He died two years later, on June 15, 1907, while visiting Los Angeles, California.

### Mentor for Younger Architects

Jenney was not only an important architect and engineer, he contributed greatly to the development of modern buildings by training several younger architects who became the next generation of innovative and influential building designers. His trainees included Louis Henri Sullivan (1856-1924), Martin Roche (1855-1927), William Holabird (1854-1923), and Daniel Hudson Burnham (1846-1912). Jenney's style as exhibited in his early tall buildings became known as the Chicago school of architecture.

Throughout his career he was active as a member, officer, and Fellow of the Chicago Chapter of the American Institute of Architects. In recognition of his contributions to the industry, he was elected as a delegate to the International Congress of Architects in Madrid, Spain, in 1901. Although his buildings are seldom considered to be aesthetically pleasing, Jenney possessed a unique combination of engineering and architectural abilities that provided a foundation for the development of the modern skyscraper and a new emphasis on functionalism in design.

## Books

- American National Biography*, Volume 11, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.
- Condit, Carl W., *The Chicago School of Architecture: A History of Commercial and Public Building in the Chicago Area, 1875-1925*, University of Chicago Press, 1964.
- Hunt, William Dudley, Jr., *Encyclopedia of American Architecture*, McGraw-Hill, 1980.
- Withey, Henry F., and Withey, Elsie Rathburn, *Biographical Dictionary of American Architects (Deceased)*, New Age Publishing, 1956.

## Periodicals

*Journal of the Society of Architectural Historians*, March 1970.

## Online

- "Jenney, William Le Baron," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (January 18, 2001).
- "William Jenney," *World of Invention*, <http://www.galenet.com> (January 18, 2001).
- "William Le Baron Jenney," *American Decades CD-ROM*, <http://www.galenet.com> (January 18, 2001).
- "William Le Baron Jenney," *Dictionary of American Biography*, <http://www.galenet.com> (January 18, 2001).
- "William Le Baron Jenney," *International Dictionary of Architects and Architecture*, <http://www.galenet.com> (January 18, 2001). □

# John II

**John II (1455-1495) of Portugal, sometimes called "the Perfect Prince," ruled during a crucial period in European history that marked the start of the Age of Exploration. From his ascension to the throne in 1481 until his death fourteen years later, John II's royal treasury financed numerous expeditions that mapped out the African coast. Convinced that India lay on the other side of Africa, he even sent explorers overland. To the Portuguese, he was a much loved regent who curbed the power of the nobles, maintained peace with Spain, and became a great patron of Renaissance art.**

John II was named after his great-grandfather, who secured Portugal's independence in the 1380s and founded the House of Aviz royal line. By the time of his arrival in May of 1455, alliances with other European royal lines had given the Aviz family English, French, and Spanish blood. His father, King Alfonso V, was even cousin to the ruling English monarch, Henry VI. Queen Isabel, however, died when John and his older sister Joana were still very young, and both grew close to their aunt, Filipa, an artist and scholar who wrote the first extant poetry by a Portuguese woman.

John was provided with an education suitable for a royal, which included fluency in Latin and a knowledge of



science and art. He was betrothed to his cousin in a politically advantageous match, and married Leonor, of the powerful Braganca line, in January of 1471. He was 15 at the time, and his spouse just 12. Later in 1471, he won his knighthood, as was the Aviz tradition, in battle with his father in Morocco. Subjugation of the Moors, who had occupied Portugal after 700 C.E. for a few hundred years and still held part of Spain, was a preoccupation with the Aviz dynasty, and this was the third foray across the Straits of Gibraltar by his father alone. In August, their forces took a seaside fortress, Arzila, and the city of Tangier surrendered.

## Mapped Coast of Africa

The year 1471 was also an important one in the annals of exploration, for Portuguese navigators, mapping out the coast of Africa, crossed the Equator for the first time. A 1454 papal decree granted the Portuguese throne sovereignty over this area, and explorers had been planting wooden crosses along the West African shores since. They also held the Azores Islands by the time of John's adulthood, which had become a grazing ground for large herds of Portuguese cattle, and the island of Madeira was producing sugar cane that Portugal exported to the rest of Europe.

In 1474, Alfonso gave John control of the Guineas, the large area situated east of the horn of Africa. It contained rich fisheries, black pepper, and ivory, and reports returned from traders about hairy, human-like animals who lived in trees there and could not be caught. A son with Leonor, named Alfonso in honor of his grandfather, was born in

1475. That same year, the monarch granted John full authority in Portugal before he departed to do battle at Toro against the Castilian empire of Spain. The widowed Alfonso had become enamored of a dispossessed princess, and went to war on her behalf. It was at his father's court at Toro that John met Ana de Mendoca, and a child, Jorge, resulted from their romance.

### Reined in Noble Class

For a time, John commanded troops for his father, but the venture was a disastrous one, and Alfonso abdicated his throne to his son in September of 1477. He was proclaimed king at the royal palace at Santarem on November 10, 1477. His father disappeared to a Franciscan monastery, and the war simmered on until the Treaty of Alcocovas concluded it in 1479. Two years later his father died in 1481 at Sintra, and John formally became ruler of Portugal.

John assembled his first Cortes at Evora in November of 1481. The Cortes was a meeting of the clergy, the *homens bon* ("good men") who led Portugal's *concelhos*, or free boroughs, and the noble class, who were known as *fidalgos* ("filhos de Algo," or sons of somebody). No laws were passed at a Cortes, which only the king could call, but debates were held and complaints heard. The *fidalgos* were descendants of the Visigoths and enjoyed great prestige; under the preoccupied Alfonso V, they grew enriched and emboldened. They attempted to influence the courts, demanded increased tribute of wine and corn, and encroached upon the rights of the *concelhos*. At the first Cortes, the new king, determined to curb these abuses, had his advisors draw up a new oath of allegiance for the *fidalgos*, and compelled them to take it. The Duke of Braganca, whose family had enjoyed privileges since the 1440s as descendants of John I, was particularly incensed.

### Convinced India Lay to the East

Meanwhile, the new regent looked to expand his empire in other places. On December 12, an expedition set sail to establish a fortress and trading post in the Gulf of Guinea at Elmina. This was known as Sao Jorge da Mina, named after the king's favorite saint, George. It was the first European colony in equatorial Africa, and the gold mine there enriched John's royal treasury enormously. It allowed the king to fund further expeditions, and Portuguese explorers began taking large granite pillars with them to plant in the ground instead of wooden crosses. Called *padraos*, the pillars featured the Aviz coat of arms as well as the bronze cross of the Order of Christ, the knightly order that emerged from the disbanded Knights of the Templar after the Crusades. John, as ruler, was master of the secret Order, and many of the navigators and sea captains who explored for Portugal belonged to it.

In 1482, John sent Diogo Cao and the first of the *padraos* to find the end of the African coast. At the time, it was thought that the continent perhaps extended all the way to the Arctic regions. Cao was unsuccessful in his goal, but he did find the mouth of the great Congo River, which was unlike any ever seen by a European, and a populous kingdom there. After meeting with its king, Cao left some Portu-

guese behind and returned to Portugal with a delegation of Africans, who fascinated John. They were given lavish quarters and fêted at state banquets. But internal problems troubled the king during this same year: it was suspected that the Duke of Braganca had made contact with the Castilian royal family in preparation for a possible move against Portugal. The king was informed, and had the duke, Fernando II, arrested. He was sentenced to death and executed for treason in 1484.

John continued to send ships out to find the end of Africa. Finally, in 1488, the Portuguese Bartolomeu Dias rounded the Cape of Good Hope and reached the other side of Africa. Lacking provisions to continue, he returned to Portugal with the news that a passage to India had been found. Since the time of the Crusades and Marco Polo, trade with the Orient had brought spices, silks, and other exotic goods into Europe. However, these goods traveled overland a great distance, through the desert of the Middle East and through treacherous lands; taxes and highway robbery made them prohibitively expensive by the time they reached Portugal and the end of the European continent. If Portugal could find the sea route, they might profit handsomely from the trade.

### John II and Columbus

There are theories that Christopher Columbus was actually a well-born Portuguese, not an Italian, and was part of John's elaborate ruse to keep the Spanish monarchs-Ferdinand and Isabella, whose marriage united Castile and Aragon-from discovering the route to India and claiming it for themselves. Most historians agree that Columbus first tried to interest John in his expedition across the Atlantic, but that the king was supposedly uninterested, and so Columbus went to Spain for funding instead. The alternate theory holds that Columbus was sent to Ferdinand and Isabella to convince them that the riches of India could be reached by sailing west. Far from being the misguided navigator that popular myth holds, historians concede that Columbus was a learned man, like many of the Portuguese seafarers, and may have been a member of the Order of Christ as well. Many in the Order were well aware that a large land mass lay on the other side of the Atlantic. A member had sailed to an island off the coast of Brazil as early as 1438, and the Portuguese knew that Basque fishermen from northern Spain made regular forays to the cod fisheries near Newfoundland.

When Columbus returned to Europe from conquering the Caribbean islands of the Bahamas, the Dominican Republic, and Haiti for Spain, he met first with John in Lisbon. There followed negotiations between Portugal and Spain over territorial rights in the New World. To Portugal, according to a 1480 continuation of the Alcocovas treaty called the Treaty of Toledo, was reserved the Cape Verde islands, "and any other lands that are found or conquered below the Canary Islands and the west of Guinea." Columbus's discoveries lay south of the Canaries, and so negotiations with Spain followed. In 1493 Pope Alexander VI resolved the dispute. The dividing line between what Spain and Portugal might explore and claim was to be west of the

Azores; Spain's share was to the west, while territory on the eastern side of the line was Portugal's. This meant that John—whose famed grand-uncle Henry the Navigator had concluded that India was on the other side of Africa—was granted the continent of Africa as well as the Orient.

### A Triumph of Diplomatic Trickery

The full Treaty of Tordesillas, signed on June 7, 1494 between John and the Spanish monarchs, set the dividing line another 370 leagues to the west of the Archipelago of Cape Verde, which assured Portugal of rights over Brazil, too. But there would be few years left in his life to enjoy these triumphs. His son and heir, Alfonso VI, had fallen from a horse at Santarem, and died in the hut of fishermen a few years before. John's illegitimate son Jorge became heir to the throne, and this caused marital tension between him and Isabella.

In October of 1495, the king fell ill and died within a week. Near his death, John decreed that his cousin, the duke of Beja, should succeed him. His successor was called Manuel the Fortunate, and he ruled until 1521. During his reign, John's foresight for expansion bore full fruit for Portugal. Its overseas empire expanded terrifically: just three years after his death, Vasco da Gama's ships reached India. Brazil was formally claimed in 1500, the Indian coastal kingdom of Goa captured in 1510, and a port in China, Macao, was ruled as a colony of Portugal from 1557 to 1999, outlasting even the world's most famous colony, the British-held Hong Kong.

John left a legacy as a benevolent ruler. He took in Jewish refugees from Spain's famous 1492 expulsion, and founded what was the most modern medical facility in the world at the time, All Saints Hospital in Lisbon in 1492. In 1498, his widow Leonor founded a charity to aid the poor and cure the sick, the Brotherhood of Our Lady of Mercy, also known as Misericordia. As a testimony to his influence, it was John's Castilian foes who nicknamed him *El Principe Perfecto*, or the Perfect Prince.

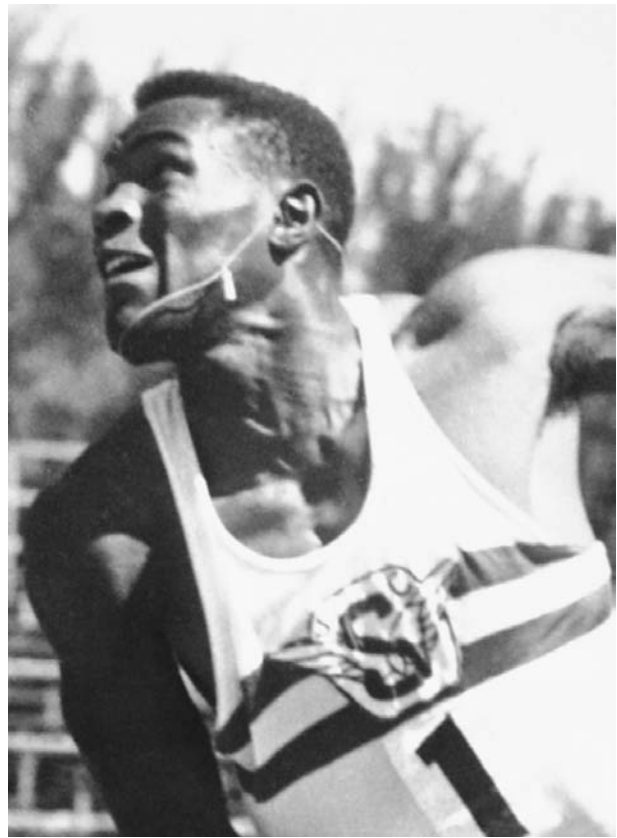
### Books

Barreto, Mascarenhas, *The Portuguese Columbus: Secret Agent of King John II*, translated by Reginald A. Brown, St. Martin's, 1992.

Sanceau, Elaine, *The Perfect Prince: A Biography of the King Dom Joao II*, Livraria Civilizacao-Editora, 1959. □

## Rafer Johnson

**Rafer Johnson (born 1935) won the Olympic decathlon in 1960 with a record-breaking score of 8,392 points. The decathlon winner, according to tradition, is regarded as the best all-around athlete in the world.**



Rafer Johnson was an outstanding all-around athlete, as proven by his record-breaking win of the Olympic gold medal for the decathlon at the 1960 Olympics in Rome, Italy. As captain of the American Olympic Team, he bore the U.S. flag proudly in the opening ceremonies of the games that year and was the first African American to assume that special honor. He spent many years before and after his Olympic triumph spreading the message of peace as an international ambassador of goodwill, and in 1984 he received the distinctive honor of lighting the Olympic flame at the games in Los Angeles, California.

From his birth in 1935 until age two, Rafer Lewis Johnson lived in the large home of his paternal grandparents in Hillsboro, Texas, along with his parents and five aunts and uncles. There was no indoor plumbing or electricity. The family moved briefly to Oklahoma to pick sugar cane for one year. Upon their return to Texas when Johnson was three years old, the family settled in the Oak Cliff area of Dallas. He spent his summers at the home of a maternal aunt.

During the six years that the family remained in Dallas, Johnson attended N. W. Harlee School near the Trinity River in Dallas. He was an excellent student even in his youth, enthusiastic and dedicated. His social life revolved around the local Baptist church that he attended along with his family.

The Johnson family moved from Texas to California in 1945 when the future decathlete was nine. Their father, Lewis Johnson, secured work in the Oakland shipyards until

the end of World War II. The family then moved deep into the San Joaquin Valley where Lewis Johnson sought work as a farm laborer once again. Life on the West Coast took the family from Chowchilla to Madera, and briefly down to Fresno. The family lived in makeshift housing and Rafer Johnson picked cotton along with his mother, Alma Gibson Johnson, two sisters and two brothers, while Lewis Johnson worked as a foreman on the cotton-picking crew. Young Rafer picked hundreds of pounds of cotton per day on weekends and during vacations from school and worked also at odd jobs. By 1946 Johnson's family had settled permanently in the valley town of Kingsburg, where his father worked for the railroad. In Kingsburg the Johnsons lived in a housing tract, called "section houses," built so close to the railroad tracks that the earth shook violently with every passing train.

Johnson was still a young boy in grade school when he suffered a debilitating injury while playing recklessly on the conveyor belt outside a food packing plant. In a terrible accident his left foot became stuck in the rollers, which pulled the sole from Johnson's foot. The foot became infected and healed only after a slow and painful recuperation. It was his left foot that tore, which would become his lead foot in track and field racing. Even as a superior athlete in adulthood, Johnson maintained that the pain of that injury remained a constant presence, even after the injury healed.

In California Johnson attended integrated schools. Unlike his earlier life in Texas there was little talk of racism in California, and Johnson felt akin to his lighter skinned peers. He attended Roosevelt Elementary School where his leadership qualities shone even as a youth. He was elected president of the student body in grade school. In high school he was an all-A student, president of his sophomore class and student body president during senior year. Additionally, he was a member of the California Scholarship Federation and other extracurricular groups.

As an athlete for the Vikings of Kingsburg Joint Union High School, Johnson earned 11 school letters, captained three high school athletic teams, and distinguished himself in four sports altogether, swinging baseball bats so hard that he broke several. He played on three all-league basketball teams and was a member of the all-state football team in twelfth grade. Johnson excelled in track and field, where he derived a feeling of elation from the uncomplicated non-contact sports of running, jumping, and throwing. "There is no pro future in track, that's true. But there is a stimulating present," he said and added, "I loved every sport I played, but I was most passionate about track and field."

With the support and encouragement of a caring high school track coach, Johnson gained stamina and turned his natural ability into athletic skill. His first competition after high school ended in a third place showing for Johnson. The experience whet Johnson's taste for competition, and he set a goal—to qualify for the Olympics scheduled for Melbourne, Australia, in 1956.

## Collegiate Athlete and More

Johnson, who aspired to become a dentist, enrolled at the University of California in Los Angeles (UCLA). When the school offered Johnson his choice of a football scholarship or an academic award, he accepted the more lucrative and less restrictive academic scholarship. At UCLA he joined the Air Force Reserve Officer Training Corps and pledged Pi Lambda Phi fraternity; he was, in fact, the first African American to pledge a national fraternity at UCLA. He joined the Campus Crusade for Christ and eventually chaired the UCLA chapter of that organization. He found time also to play basketball for UCLA during the 1958-59 season, and he ran for student body president in 1959.

Johnson's track coach at UCLA, Elvin "Ducky" Drake, supported Johnson in his Olympic quest. Drake coached Johnson to a third-place finish at the 1956 Olympic Trials. Yet Johnson secured a place on the U.S. Olympic track and field team only to revive an old knee injury two weeks later while competing at the decathlon trials at Wabash College in Crawford, Illinois. Regardless, he won the trials and went to Melbourne, Australia, for the games. Johnson, who won the decathlon with ease at the Pan Am Games in Mexico City in 1955, was a popular favorite to win the 1956 Olympic decathlon, but the injury to his take-off leg caused swelling, which aggravated the injury. He left Melbourne with a silver medal, although he spent the subsequent months in rehabilitation and therapy following surgery to his knee.

Johnson was a man of dynamic spirit, and he put recuperation time to good purpose. He refreshed his faltering grade point average at school and spent the summer of 1957 on a goodwill tour arranged through the U.S. Department of State. The 89-day tour took him to Hong Kong, the Holy Land, and other parts of Africa, the Near East, and the Mediterranean countries. He returned to track and field competition mid-year in 1958 and won the Kingsburg Invitational Decathlon. He then went to the AAU decathlon in Palmyra, New Jersey, followed by the first-ever U.S.-U.S.S.R. dual track meet, held in Moscow. There Johnson broke the world decathlon record.

When Johnson returned from Moscow he received the World Trophy for North America from the Helms Athletic Foundation. Pi Lambda Phi established an annual fraternity award in his honor, and the National Association for the Advancement of Colored People (NAACP) honored him as well. On January 5, 1959 *Sports Illustrated* proclaimed Johnson as the sportsman of the year.

## Hard Road to Olympic Gold

A serious car accident in 1959 resulted in damage to Johnson's spinal cord and lower back and caused him to miss both the AAU decathlon and the Pan Am games that year. After seven months of painful recuperation, Johnson began jogging. Slowly he resumed running and sprinting training. One month prior to the 1960 Olympic trials at the AAU decathlon in Eugene, Oregon, Johnson accelerated his recuperative retraining schedule to include jumps. Again in 1960, as in 1956, Johnson qualified for the Olympic team. He went to the games in Rome, Italy, as captain of the U.S. team and carried the American flag at the opening ceremony.

nies. It was a poignant moment for Johnson, as he was the first African American in the history of the modern Olympics to receive that honor.

Johnson won the gold medal in the decathlon that year with a record-breaking score of 8,392 points and earned for himself the distinction of being the world's best athlete. Following his Olympic gold medal victory, he received the Associated Press Athlete of the Year award, the California Athlete of the Year Award for the second time, and endless other citations. His life was documented with Mike Wallace who narrated a television special produced by David L. Wolper, and Johnson also appeared on *This Is Your Life*. Years later, Johnson's childhood home of Kingsburg named a junior high school after him. He was touched by the hoopla and noted in his autobiography that, "If a gold medalist today were to receive as much attention as I had for six straight years, he would already be a wealthy man."

### Post-Olympic Years

During the months following the 1960 Olympics, Johnson's earlier inclination toward dentistry ebbed. He received numerous offers to play professional football and basketball, but accepted instead a contract to make films with Twentieth Century Fox. Among his film credits, he appeared with Woody Strode in *Sergeant Rutledge* and with Frank Sinatra in *None But the Brave*. He appeared in films with Bob Hope and Elvis Presley and in two Tarzan movies. Johnson accepted television roles on *Dragnet*, *Six Million Dollar Man*, and *Alfred Hitchcock Presents* and served as commentator for NBC for the 1964 Olympics in Tokyo, Japan. In the mid-1960s he anchored the sports news for the ABC affiliate in Los Angeles, and he appeared on *Mission: Impossible* and *Daniel Boone*. He appeared in a staged documentary about black pioneers for the Public Broadcasting System (PBS) called *The Black Frontier* and a subsequent PBS film called *Soul Soldier*, about the Buffalo Soldiers of the U.S. 10th Cavalry.

Later in the 1960s Johnson accepted a position with Continental Telephone as an affirmative action consultant out of Bakersfield, California. He rose through the executive ranks during the 1970s to become vice president of personnel.

### Goodwill Ambassador

Also during the 1960s Johnson became affiliated with an international goodwill group called People to People. After spending considerable effort in establishing chapters of the group on college campuses nationwide, he settled into a post in charge of the organization's West Coast office in Los Angeles, California. He worked also with youth programs under the auspices of the California State Recreation Commission.

In light of his celebrity status and because he was an African American, he used the clout of his great popularity to further social causes, including fair housing and equal opportunity in the entertainment industries. He worked with the Urban League, with the NAACP, and with James Meredith's national voters' mobilization of blacks in Mississippi in 1966. Additionally, he was affiliated with San Fernando

Valley Fair Housing Counsel, and the Voter Registration Program.

When Johnson received the People to People Award as Athlete of the Year following his gold-medal win in Rome in 1960, he met the late U.S. attorney general Robert F. Kennedy at the awards affair. A friendship ensued that spawned Johnson's involvement in a number of Kennedy-sponsored public projects, among them the Peace Corps and the Special Olympics. In 1968 Johnson served as an official delegate for the Kennedy presidential ticket, although the honor turned tragic on June 5, 1968 when Robert Kennedy was assassinated following the California presidential primary. Johnson, who witnessed the murder firsthand, assisted in arresting the assassin's flight and retrieved the murder weapon. He was a pallbearer at the funeral and testified at the murder trial. In the years that followed, Johnson was a frequent escort to Kennedy's widow for political junkets and other public affairs.

Johnson maintained many organizational affiliations throughout the 1970s and 1980s, including the Close-Up Foundation on which he served as a board member. He was involved with the Hershey Track and Field Youth Program, the National Amateur Sports Development Foundation, the National Recreation and Park Association, and the Athletic Advisory Panel of the U.S. State Department, as well as the American Red Cross and others.

### More Glory Days

On December 18, 1971, Johnson married Elizabeth "Betsy" Thorsen, a middle school teacher in Orange County, California. The couple had two children: Jennifer, born in 1973; and Joshua, born in 1975. The family moved to Sherman Oaks, California, in 1973.

Twenty-four years after his gold-medal victory, Johnson relived his Olympic glory days by running the final lap of the opening ceremonies relay and lighting the Olympic torch for the 1984 Olympics in Los Angeles, California. In 1990 he was elected to the National High School Hall of Fame, and in 1992 he received the Humanitarian Award from Free Arts for Abused Children. In 2000 Johnson realized a unique dream, and what he called his greatest moment, when he watched his own daughter compete in the Olympic games in Sydney, Australia.

### Books

Johnson, Rafer, *The Best That I Can Be: An Autobiography*, Doubleday, 1998.  
*Notable Black American Men*, Gale Research, 1999.

### Online

"From Rags to Sport Riches," *ESPN.com*, <http://espn.go.com/sportscentury> (December 14, 2000).  
 "Olympic Champion Rafer Johnson," September 14, 2000, [http://sportsillustrated.cnn.com/olympics/news/2000/09/14/head\\_games\\_rafer\\_johnson/](http://sportsillustrated.cnn.com/olympics/news/2000/09/14/head_games_rafer_johnson/) (December 14, 2000).  
 "Rafer Johnson," <http://www.webpak.net/~hallfame> (March 23, 2001). □



## Walter Johnson

**Most experts consider Walter “Big Train” Johnson (1887-1946) to be the greatest pitcher in baseball history. Both feared and respected, Johnson combined a dominating fastball with a generous spirit. Unlike most pitchers of his era, he refused to knock down opposing batters with inside pitches and was a model of gentlemanly refinement both on and off the field.**

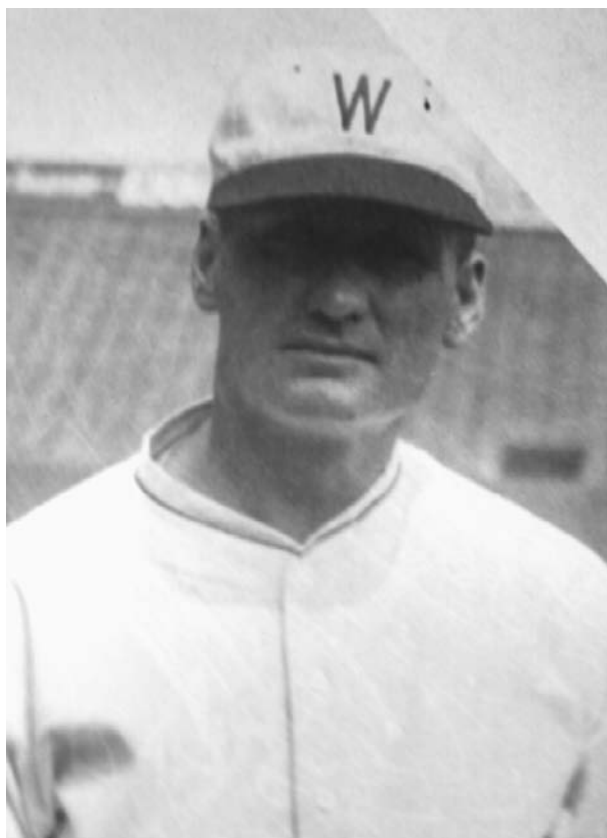
**T**he 6-foot-1, 200-pound Johnson won 416 games in his 21 seasons from 1907 to 1927 and compiled a remarkable 2.17 earned run average. He spent his entire career with the lowly Washington Senators, eventually leading the perennial losers into the World Series in 1924 and 1925. Johnson won 20 or more games in 12 seasons and set the all-time career mark for shutouts with 110. After his playing days ended, he managed the Senators from 1929 to 1932 and the Cleveland Indians from 1933 to 1935. He was among the first five players elected to the National Baseball Hall of Fame in 1936.

### From Semipro to Star

Johnson's parents, immigrants from Sweden, were farmers who first settled in Ohio, then traveled by covered wagon to Kansas. Walter Perry Johnson was born on November 6, 1887 in Humboldt, Kansas. In 1901, the family moved to Orange County, California, hoping to earn a better living working in the oil fields. There, Walter attended Fullerton High School and starred on the baseball team. After graduating, he played baseball briefly in Tacoma, Washington, then moved to Weiser, Idaho, and got a job with the Weiser Telephone Company. For \$75 a month, he dug holes for telephone poles and pitched for the company's semipro team.

Johnson flung the ball with a sidearm delivery that was so deceptive that his fastball seemed to come out of his hip pocket and rocket past the batter. Luckily for hitters, he also had pinpoint control. Word of Johnson's remarkable pitching feats filtered east, through the reports of a traveling cigar salesman who praised the kid's fastball in reports sent to major league teams. One reporter wrote: "He throws so fast you can't see 'em, and he knows where he is throwing, because if he didn't, there would be dead bodies all over Idaho." The Senators sent an injured catcher, Cliff Blankenship, to scout him. Blankenship signed Johnson to a contract and he joined Washington in August 1907, never having played minor league ball. The Pittsburgh Pirates had wanted to sign him, but refused to guarantee his \$9 train fare back home if he didn't make the team. Johnson signed for \$350 a month, a \$100 bonus and the train fare—and that proved to be the best investment the Senators ever made.

Johnson was 19 when he began pitching for the Senators. In his big-league debut against Detroit, on August 2, he lost, 3-2. But Ty Cobb was so impressed that he told Tigers manager Frank Navin: "Get this kid even if he costs you



twenty-five thousand dollars. That's the best arm I've ever seen. He's so fast it scared me." Navin refused. Cobb later said: "All he did for the next twenty years was beat Detroit."

During Johnson's first three seasons, he lost 48 games and won only 32. But his talent and stamina were obvious from the start. In 1908, he shut out the New York Highlanders (later known as the Yankees) three times in four days, allowing only 12 hits. He won two more games against the Philadelphia Athletics in the next four days, giving him five victories in eight days. Legendary sportswriter Grantland Rice soon labeled Johnson "The Big Train," because his fastball had the power and speed of a locomotive. His teammates called him "Barney," after racecar driver Barney Oldfield. That was because Johnson was as reckless and uncontrolled behind the wheel as he was totally in control on the mound.

In 1910 Johnson was the Senators' opening day starter. Before the game he caught a ceremonial "first pitch" from President William Howard Taft, starting a tradition of presidential "first pitches" at Washington openers. Johnson won the game with a one-hit shutout. He would go on to win nine openers in front of four different presidents, seven of them shutouts, and started 14 opening games in all. His last, in 1926, was a 15-inning shutout.

In 1910, Johnson sported a 1.35 earned run average, led the league with a remarkable 38 complete games in 42 starts, struck out a league-high 313, and won 25 games. In 1912, he had another fantastic season for the Senators,

winning 32 games, losing only 12, and leading the league in earned run average with 1.39 and in strikeouts with 303.

In 1913, at the age of 26, Johnson turned in probably the most dominating season by any major league pitcher in history. "The Big Train" won 36 games, lost 7, had a miniscule 1.09 earned run average, and struck out 243 batters in 346 innings. Johnson completed 11 shutouts and threw 56 consecutive scoreless innings during one stretch. No pitcher ever again won 36 games in a season. For his efforts, Johnson won a new Chalmers automobile as the American League's Most Valuable Player.

From 1910 to 1916, Johnson had seven consecutive seasons of 25 wins or better. His earned run average never rose above 2.30 in any of his first 11 seasons in the major leagues. Johnson led the league in strikeouts in 12 of his 21 seasons, including eight years in a row from 1912 through 1919. Five times he led the American League in earned run average, six times in wins, and six times in complete games. In 1916 he did not allow a home run in 371 innings pitched, a record that will never be broken, because pitchers no longer pitch more than 300 innings in a season. On May 11, 1918, he pitched an 18-inning, 1-0 victory over Chicago.

### The Gentlemanly Dominator

Most great pitchers of Johnson's era relied on the spitball. But Johnson felt the spitter, which at that time was perfectly legal, was unfair. Johnson's right arm acted like a pendulum, whipping his fastball past stunned batters. Cobb said his fastball "looked about the size of a watermelon seed and it hissed at you as it passed."

Tigers outfielder Sam Crawford said Johnson was such a fluid, effortless pitcher that he was like a pitching machine. "He had such an easy motion that it looked like he was just playing catch," Crawford told author Lawrence Ritter. "That's what threw you off. He threw nice and easy—and then, swooch, it was by you." There were no radar guns in the days when Johnson pitched, so there is no way of comparing his speed to latter-day fireballers such as Nolan Ryan, but many baseball experts believe Johnson threw harder than anyone in history.

Johnson wasn't just frighteningly fast; he was uncannily accurate. He had such pinpoint control that he averaged less than two walks a game for his career. Johnson also was an excellent athlete and a complete player. He fielded his position almost flawlessly, compiling the best fielding percentage and most assists of any pitcher in major league history. And as a hitter, he could also be formidable. In 1925 he batted .433, the highest average ever by a pitcher.

In a time when baseball was a rowdy sport, Johnson was admired by friend and foe alike for his unflagging sportsmanship. He was just as graceful off the field as on the mound—a refined gentleman who stood out among his boozing, wild-living teammates and opponents. Johnson never drank, smoked, or used profanity.

### Won for the Underdogs

Johnson completely dominated batters through the 1919 season, which marked the end of the so-called "dead-

ball era." But the Senators rarely were a winning team. The victories Johnson might have amassed with a better team would have brought him much closer to Cy Young's record of 511 wins. In the 279 games Johnson lost during his career, his team was shut out in 65 of them. In 27 games, Johnson lost by a score of 1-0. He also won 38 games by the same 1-0 score. Johnson holds the record both for 1-0 victories and 1-0 losses.

Throughout Johnson's career, many better teams made overtures to obtain him. The most serious offer came after the 1914 season, when Chicago of the upstart Federal League offered him \$25,000 per season for three years. Johnson was earning a \$12,000 annual salary at the time. Washington matched the offer, and Johnson stayed loyal to the woebegone Senators for the rest of his playing days.

In the last eight years of Johnson's career, as Babe Ruth broke home run records and baseball changed to a power-hitting game, Johnson had only two 20-win seasons. His strikeout totals declined markedly as pitchers became less dominant and he entered the waning years of his career. But his determination to win never flagged. On July 1, 1920, Johnson pitched a 12-inning no-hitter, beating Boston 1-0.

In 1924, Johnson again was named the league's Most Valuable Player, leading Washington to a rare appearance in the World Series. During the series, Johnson started two games and lost twice to the New York Giants, but his team stayed alive and forced a seventh and deciding game. With the seventh game tied in the eighth inning, the Senators brought in Johnson as a reliever. Though he was working on only one day's rest, Johnson pitched four scoreless innings and the Senators won in 12 innings. Even his opponents were impressed. "The good Lord just couldn't bear to see a fine fellow like Walter Johnson lose again," said Jack Bentley, the losing pitcher for the Giants.

In 1925, Johnson had 20 wins against only seven defeats and the Senators returned to the World Series. Johnson won his first two starts against the Pittsburgh Pirates, allowing a total of one run. However, he lost the final game, 9-7, when his teammates' errors led to four unearned runs, and the Pirates beat the Senators to win the world championship.

In 1927, Johnson was struck by a line drive during spring training and broke his leg. He tried to pitch wearing a leg brace, but without much success, and he retired after the season. His career 2.17 earned run average ranks seventh among all major league pitchers. He ranks second on the all-time list in victories, third in innings pitched (5,923) and fifth in complete games, with 531. Johnson's 3,508 strikeouts set a new record which stood for 50 years; by the end of the century his career strikeout total ranked seventh.

After his playing days ended, Johnson remained in baseball. In 1929, he became a manager with the Senators. Washington won more than 90 games in three of Johnson's four seasons at the helm but never finished in first place. Johnson then managed the Cleveland Indians from 1933 through 1935. He returned to Washington as a radio broadcaster in 1939.

In 1936, Johnson was one of five players, known as "the Five Immortals," who were the first inductees to the National Baseball Hall of Fame. The others were Ty Cobb, Babe Ruth, Honus Wagner and Christy Mathewson.

In his later years, Johnson dabbled in farming and politics. After his Hall of Fame induction, he retired to his farm in Germantown, Maryland. In 1938, he was elected Montgomery County commissioner. In 1940, he ran for the United States Congress as a Republican, narrowly losing. In April 1946, he was felled by a brain tumor. He died on December 10, 1946, in Washington.

### Books

Davis, Mac, *Hall of Fame Baseball*, Collins/World, 1975.  
Sullivan, George, *Pitchers: Twenty-Seven of Baseball's Greatest*, Atheneum, 1994.  
Thomas, Henry, *Walter Johnson: Baseball's Big Train*, University of Nebraska Press, 1995.  
*The Baseball Encyclopedia*, Macmillan, 1997.

### Online

"Walter Johnson," <http://members.aol.com/stealth792/johnson/johnson.html>.  
"Walter Johnson," *Total Baseball*, <http://www.totalbaseball.com/player/j/johnw102/johnw102.html>. □



## Raul Julia

**Suave, elegant, and incredibly versatile, Raul Julia (1940-1994) was among the most critically respected stage and screen actors of his generation. Though perhaps best known for his role as Gomez Addams in the *Addams Family* films of the 1990s, Julia starred in more than 100 productions since 1964, the year he left his native Puerto Rico for the United States. Julia was also a tireless humanitarian who used his celebrity status to draw attention to causes he supported.**

**R**aul Julia was born Raul Rafael Carlos Julia y Arcelay in San Juan, Puerto Rico, on March 9, 1940. The son of upper-middle-class Roman Catholic parents, Julia was the oldest of four children. His father, Raul, was a North American-educated engineer who in 1947 had made a successful (if not exactly lateral) transition to the restaurant business; the elder Julia's eatery, La Cueva del Chicken Inn (The Chicken's Cave Inn), became known not for its numerous chicken dishes, but for its savory mainland export: pizza.

The success of La Cueva del Chicken Inn (which in 2001 was still in operation), and the resulting economic stability of the Julia family, ensured young Julia an above-average education. His early schooling at the Colegio Espiritu Santo de Hato Rey came from North American nuns; it was from these nuns that Julia began to learn English. Julia spent high school immersed in the rigorous

classical curriculum of the Jesuits at Colegio San Ignacio de Loyola de Rio Piedras. He briefly studied at the Fordham University School of Law in New York; and, in 1964, he received his degree from the University of Puerto Rico.

After graduating from college, Julia faced a difficult decision: to follow his parents' wishes by continuing to pursue a career in law; or to follow his heart by pursuing a career in the theater. From as early as age five, Julia had been bitten by the acting bug. Although he would be officially "discovered" at age 24 by the American actor Orson Bean, Julia gave his debut performance, as the Devil, in a first-grade play. "I came onstage and I sort of let go and started having a fit," he told *Cigar Aficionado* magazine in 1993. "My parents thought, 'Oh, my God! What's wrong with him? He's possessed or something.' All of a sudden, I stood up and started saying my lines. From then on, that was it. I knew there was something special about the theater for me, something beyond the regular reality, something that I could get into and transcend and become something other than myself."

Though they didn't approve of his decision to enter the theater, Julia's parents didn't discourage their son from pursuing his dream. In 1964, like Jose Ferrer, Rita Moreno, and other notable Puerto Rico natives before him, Julia left his homeland to begin life as an actor in New York City. His parents supported him financially for the first year, but, as Julia told *Cigar Aficionado* in 1994, "I made the mistake of telling them, 'I don't need you anymore.' I was making \$500 a week playing in *Bye-Bye Birdie* at the Dallas state fair, and

I'm saying to myself, 'I'm set.' Boy, was I sorry." As the financial support from his parents dried up, the paid acting jobs followed suit. Back at home in New York, Julia found himself borrowing money from a roommate and eating scraps to survive. But the industrious actor refused to sit passively: He worked as a Spanish instructor, sold magazine subscriptions, and even took a course to sell department-store pens before, in the late 1960s, his acting career took a great leap forward.

### From Stage to Screen: Broadway and Beyond

Though Julia had already been gaining recognition for smaller roles off Broadway, a 1968 production of *The Cuban Thing* found the actor making his first appearance on a Broadway stage. From there, he said in 1994, "It was like a progression of things. I did one thing. People saw me. Then I'd do another thing. I got more recognized." In 1972 he received the first of his four Antoinette Perry Award (Tony Award) nominations, for his role as Proteus in the musical adaptation of William Shakespeare's *Two Gentlemen of Verona*. Throughout the 1960s and 1970s he worked closely with director and producer Joseph Papp, the renowned New York Shakespeare Festival founder who worked to bring both Shakespearean classics and modern works to the general public. Julia appeared in more than a dozen Papp productions, including the 1976 revival of Bertolt Brecht and Kurt Weill's *The Threepenny Opera*, for which he and the director both received 1977 Tony Award nominations. Papp, who died in 1991, once said of Julia, "He was always outrageous in his acting choices. He's larger than life all the time when he's on the stage. He doesn't mind falling flat on his face doing something dangerous." Remembering Papp in 1993, Julia said, "We became like father and son. He saw what I could offer; he didn't look at my ethnic background. He was a great man with a great vision."

Julia's stage performances revealed an actor with incredible range. He was equally comfortable in comedies, in dramas, and in musicals; and though he retained his Puerto Rican accent throughout his lifetime, he never allowed himself to be pigeonholed as an exclusively "Latin actor." He earned a reputation among directors and producers as a tireless performer, one whose exhaustive character research and consummate professionalism marked him as a model talent. Whether he was playing Dracula (1978), Othello (1979, 1991), or Mack the Knife (1976), Julia injected his stage roles with an enigmatic presence that stretched across cultural lines.

Julia was vocal about his disregard for television. Nevertheless, throughout the 1970s he accepted a few minor TV roles, appearing on *The Bob Newhart Show* and the soap opera *Love of Life*, and playing the handyman Rafael on the children's show *Sesame Street*. Although Hollywood seemed to be the logical next step in his career (previously he had appeared in a handful of TV movies), Julia was hesitant to commit to the big screen. "I didn't resist [the movies], but I wasn't eager to get into them, either," Julia said in 1994. "I was [in New York]. I was happy doing

theater. I was even offered some things that I didn't really feel were right for me for a lot of money, more money than I was making in the theater. Even Joe Papp, toward the end, was saying, 'Raul, I know you're committed to the theater; you're committed to the New York Shakespeare Festival, but, you know, think about doing movies, too.'"

Papp's advice proved to be sound. Julia made his first North American film appearance in 1969; and though he continued to appear both on and off Broadway, by the mid-1980s he had moved almost exclusively from the stage to the screen. The movies dramatically increased Julia's public profile, yet he preferred to take smaller roles that he found to be closer to his heart. For his co-starring role as the South American political prisoner Valentin Arregui in 1985's *Kiss of the Spider Woman*, he received a Golden Globe Award nomination. In 1989, he played the lead role in *Romero*, the true story of the assassinated Salvadoran Archbishop and political activist Oscar Arnulfo Romero. Writing in the *Chicago Sun-Times* in 1989, film critic Roger Ebert described Julia's Romero as "an interesting one, restrained and considered. His Romero is not a firebrand but a reasonable man who cannot deny the evidence of his eyes and his conscience."

During his lifetime Julia appeared in more than 40 films, among them *The Eyes of Laura Mars*; *Frankenstein Unbound*; *Presumed Innocent*; *The Rookie*; *Street Fighter*; and *Mack the Knife*, in which he reprised his 1976 stage role alongside thespian Richard Harris and The Who singer Roger Daltrey. But it was not until 1991 that he would play his most famous role, as the eccentric patriarch Gomez Addams in the film adaptation of the 1960s television series *The Addams Family*. Both *The Addams Family* and its sequel, *Addams Family Values*, were box-office smashes: The dark, eccentric comedies benefited both from creative screenplays and from exceptional casting (Julia, Anjelica Huston, Christopher Lloyd, Christina Ricci). Even though Julia would win three major film-industry awards for his 1994 role in the HBO production *The Burning Season: The Chico Mendes Story*, he would never eclipse his role as the dark, dashing, and devilish Gomez Addams.

### In Art as in Life: Raul Julia, Humanitarian

Julia gave one of his final screen performances as the lead in *The Burning Season: The Chico Mendes Story*. His character, Chico Mendes, was a martyred South American environmental activist and union leader who was assassinated in 1988 during his fight to keep Brazil's rainforests intact. For Julia, himself a longtime human- and environmental-rights activist, the role of Mendes was an especially beloved one. Together with his wife, the actress Merel Poloway Julia, and their two sons, Raul Sigmund and Benjamin Rafael, Julia contributed both time and money to The Hunger Project, a New York City-based organization dedicated to eradicating world hunger. He told author David Ellis, a longtime friend and the originator of the textbook series *Becoming a Master Student*, "My commitment to end hunger inspires my acting. When I'm tired disgusted, bored,

or just don't feel like it, I remember that the more successful I become, the more of a difference I can make."

Julia also donated his time and his name to other causes, including at-risk-youth mentoring, HIV/AIDS education and prevention, and human rights in Latin America. He was a member of the Latino/Hispanic cultural organizations *Hola*, *Nosotros*, Miriam Colon's Puerto Rican Traveling Theatre, and the National Council of La Raza. Both *Nosotros* (founded in 1970 by the actor Ricardo Montalban) and the National Council of La Raza honored Julia with awards for promoting a positive image of Hispanic culture. He was also chair of the Joseph Papp Celebrity Coalition for Racial Harmony, and a board member of the New York Shakespeare Festival, the New York Council for the Humanities, the Breakthrough Foundation, and the National Theatre of the Deaf. In June 1993 the New York Shakespeare Festival presented Julia with the fourth annual Susan Stein Shiva Award for his ongoing work in theater.

Sadly, Julia would not live to accept one of his final, most prestigious film-industry awards: a best-actor Emmy for his role as Chico Mendes. On Monday, October 24, 1994, following complications from a stroke, Julia passed away at North Shore University Hospital on Long Island, New York. News of Julia's death came as a surprise to the actor's fans; Julia had reportedly been battling terminal stomach cancer for more than a year, but he had not gone public with the news of his illness. He received a state funeral, at which thousands of Puerto Rican citizens paid their respects, and was buried alongside seven relatives at an ornate family plot in San Juan.

Accepting for her husband of 28 years at the 1995 Emmy Awards, Merel Poloway Julia said, "I hope that you will always keep him in your heart as I will always keep him in my heart." In a 1995 entertainment column for the Web site *Addicted to Noise*, critic Michael Goodwin lamented Julia's passing, remarking that the actor was "one of the last great movie stars—as opposed to merely talented film actors like Tom Hanks. [May he] rest in peace."

While video has allowed for the survival of Julia's acting legacy, those who remember the actor's philanthropic work have worked to keep his humanitarian efforts alive. The youth leadership program Earth Train established a home base in the 1,200 acres of Puerto Rican rainforest known as the Raul Julia Mountain Rainforest. In June of 1996, a new elementary school in the Bronx, New York City, was christened the Raul Julia Micro Society Dual Language School; and in May of the same year, a wing of El Nuevo Teatro Puerto Rico was dedicated in Julia's name. In 1994, The Hunger Project established the Raul Julia Ending Hunger Fund, appointing Julia's widow as director in 1999, and presenting the annual Raul Julia Global Citizen Award to actor-humanitarians such as Susan Sarandon (1999), Jeff Bridges (2000), and Edward James Olmos (2001). In 1997, inspired by Julia's work, The Hunger Project expanded its operations into Latin America.

### Books

- Cruz, Barbara C., *Raul Julia: Actor and Humanitarian (Hispanic Biographies)*, Enslow Publishers, Inc., 1998.  
 Perez, Frank and Ann Weil, *Raul Julia (Contemporary Hispanic Americans)*, Raintree/Steck-Vaughan, 1996.  
 Steffoff, Rebecca, *Raul Julia (Hispanics of Achievement)*, Chelsea House, 1994.

### Periodicals

- Cigar Aficionado*, Winter 1993/94.  
*Elle*, November 1987, p. 142.

### Online

- "Raul Julia Online," <http://www.geocities.com/Hollywood/Set/4596>.  
 "The Hunger Project—The Raul Julia Ending Hunger Fund," <http://www.thp.org/rj>.  
*Puerto Rico Herald*, <http://www.puertorico-herald.org/issues/vol4n06/Profilejulia-en.shtml> (February 11, 2000). □

# K

## Natalie Kalmus

**Natalie Kalmus (1883-1965) played a key role in the development and promotion of the Technicolor film process.**

Kalmus was born Natalie Mabelle Dunfee in 1883 (some sources say 1878 or 1892) in Norfolk, Virginia, the daughter of George Kayser Dunfee and his wife. As a child, she moved to Boston, Massachusetts, where she spent her youth. Kalmus sometimes worked as a model, but was primarily interested in art, which she studied at Stetson University in Deland, Florida.

### Married Herbert Kalmus

On July 23, 1902, Kalmus married Herbert T. Kalmus, the first marriage for both. She continued to pursue her studies in art at the Boston School of Art and Boston's Curry School of Expressionism while her husband obtained his undergraduate degree. He graduated in 1904 from the Massachusetts Institute of Technology (MIT). After his graduation, the couple moved to San Francisco where Herbert Kalmus owned part of the University School and served as principal. He sold out his interest in 1906.

In 1905, the couple went to Europe, primarily living in Berlin, Germany, and Zurich, Switzerland. Herbert Kalmus had a fellowship from MIT to earn his Ph.D. Natalie Kalmus pursued her studies in art at the University of Zurich. When the couple returned to the United States in 1906, they moved back to Boston.

### Beginnings of Technicolor Process

Upon their return, Herbert Kalmus taught physics and conducted research at MIT through the early 1910s, then at Queens University in Ontario, Canada. During their years in Canada, Kalmus continued to study art, while her husband directed a government lab, doing research in electrochemistry and metallurgy. During this time period, Herbert Kalmus began experimenting with the creation of color film. At the time, all movies were black and white. Occasionally color would appear in films, but primarily as a tint placed by hand on the film. This process was very expensive and labor intensive.

In 1912, Herbert Kalmus developed an early version of Technicolor. He formed the Technicolor Company, which was incorporated as the Technicolor Motion Picture Corporation in 1915. Kalmus served on the governing board of the company. Technicolor's first lab was a railway car in Boston. This early process was imperfect, involving two colors that were difficult to project. Because of her looks and coloring, Kalmus was often used as a scientific model to access the on-going success of the process. Despite problems, Herbert Kalmus used the primitive Technicolor process in the production of his movie, *The Gulf Between* (1917), which his wife also worked on. They hoped that this film would attract the growing film industry's attention, but the problems proved too numerous and the cost too prohibitive.

### A Secret Divorce

While continuing to pursue their common dream of a workable Technicolor process that could be sold to Hollywood, the Kalmus's marriage was falling apart. The couple secretly divorced in 1921, though they continued to work on the development of Technicolor together. There were continued problems with funding and with trying to con-



vince Hollywood executives that Technicolor was both financially feasible and workable.

Kalmus and her husband made another significant film with their refined two-color process, *Toll of the Sea* (1922). This film was co-produced by Joseph M. Schenck and was one of the only full-length color movies using this early version of the Technicolor process to make money in the 1920s. While problems with projection remained, the relative success of *Toll of the Sea* convinced Hollywood that using Technicolor had possibilities. Technicolor began being used for certain sequences in some Hollywood films, though not whole pictures. While *Gold Diggers of Broadway* (1929) used the two color process and made money, most Technicolor films still lost money.

In 1927, the Kalmuses and Technicolor operations moved to Hollywood, where more funding was available. In the late 1920s, Herbert Kalmus devised a three-color process that solved many of the problems of two-color Technicolor. He continued to perfect the three-color process through the early 1930s, when he came up with a special camera that photographed three colors on three separate film strips.

### Worked as Color Expert

Kalmus worked tirelessly to sell the technology to Hollywood executives. In the late 1920s and early 1930s, early three-color Technicolor was primarily used in animated and live action shorts. As Technicolor started to catch on, Kalmus promoted herself as a top color expert for Tech-

nicolor productions beginning in 1928. In all productions using Technicolor, she was in charge of color in sets, clothing, and make-up, and related issues of lighting and editing. Kalmus also did some cinematography on early Technicolor pictures, making her the first woman cinematographer to work in color. In addition, Kalmus trained others in the use of Technicolor, including those in foreign countries.

When the Technicolor three-color process became perfected in the early 1930s and was regularly used in features, Kalmus took credit as "color consultant" on all Technicolor films. She controlled how the color looked and was used, and only she was so credited through the late 1940s.

The Technicolor process required considerable expertise to use. Kalmus wanted to ensure Hollywood's continued interest in this somewhat intimidating process, and devised the Technicolor Advisory Service in 1932. This package deal was sold at a flat rate to production companies. In addition to Kalmus's color consulting services, the package included the equipment, specially trained cameramen, art directors, make-up artists, and costume, set, and prop designers, and lab processing. Kalmus helped productions use color in appropriate, simple ways that added texture to the films instead of overwhelming them. She promoted the language of color and the art of modifying it. According to Fred E. Basten, in his book *Glorious Technicolor*, Kalmus said "The principles of color, tone, and composition make a painting a fine art. The same principles will make a colored motion picture a work of art."

The first full-length Technicolor feature using the three-color process was *Becky Sharp* (1935). Kalmus went on to consult on some of the greatest movies produced in Hollywood, including *The Wizard of Oz* (1936) and *Gone with the Wind* (1939). She helped negotiate a seven-year contract with Walt Disney for use of Technicolor in animation. In addition, Kalmus traveled extensively to consult on Technicolor projects in other countries, including England for *Wings of the Morning* (1936). She handled contractual arrangements between the movie studios and Technicolor. Kalmus was well paid for her demanding work, making a salary in the mid-\$60,000 range. As studios and filmmakers became increasingly familiar with the Technicolor process, Kalmus's work as a consultant was sometimes resented as an intrusion. On occasion she was sent away from the set. By the late 1940s, this situation reached a climax as the patent on Technicolor expired in 1948. In that year, her name was struck from association with Technicolor, perhaps as a result of a pending lawsuit.

### A Bitter Struggle

In 1948 Natalie Kalmus filed a lawsuit against her former husband, claiming half of his assets, when it seemed likely that he was about to re-marry. Both Natalie and Herbert Kalmus had continued to let others think they were still married and shared homes in California and Massachusetts. In the suit, she pointed to their living situation as well as the fact that she had played a significant role in the Technicolor business as proof for her case. The judge ruled against her, upholding the 1921 divorce. After she moved

back to Massachusetts in 1948, she tried to get the 1921 divorce vacated, but again was denied. She did receive some compensation in an annual pension of \$11,000 and \$7500 in alimony per year. Kalmus already held a significant amount of Technicolor stock. Herbert Kalmus did remarry and controlled Technicolor until his retirement in 1959.

After Kalmus returned to Massachusetts, she was essentially retired. The expiration of Technicolor's patent meant that the company's monopoly lasted only until 1950. Technicolor was gradually supplanted by a Kodak color stock that was introduced in 1950. The Kodak stock was cheaper and easier to use. Though Technicolor gradually went out of vogue, Kalmus's contributions ensured that color films came to dominate the industry. She died on November 15, 1965, in Boston. In her obituary in the *New York Times*, Kalmus was quoted as having said that in her Technicolor work, she was "playing ringmaster to the rainbow."

### Books

Acker, Ally, *Reel Women: Pioneers of the Cinema 1896 to the Present*, Continuum, 1991.

*American National Biography: Volume 12*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.

Basten, Fred E., *Glorious Technicolor: The Movies' Magic Rainbow*, A.S. Barnes and Company, 1980.

*The Cambridge Dictionary of American Biography*, edited by John S. Bowman, Cambridge University Press, 1995.

*Dictionary of American Biography: Supplement Seven, 1961-1965*, edited by John A. Garraty, Charles Scribner's Sons, 1981.

Katz, Ephraim, *The Film Encyclopedia*, HarperPerennial, 1998.

### Periodicals

*Los Angeles Times*, December 4, 1998.

*New York Times*, November 18, 1965.

*Washington Times*, December 6, 1998.

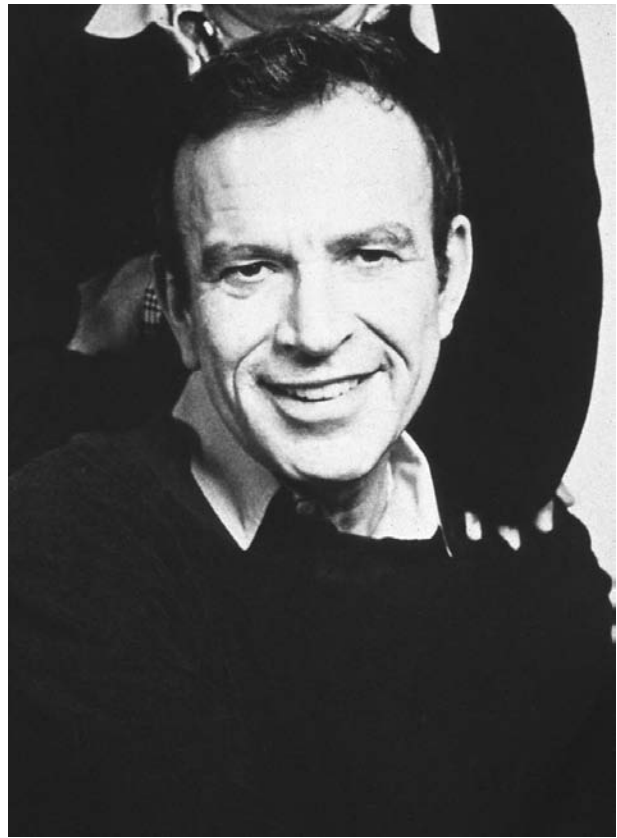
### Online

"Natalie Kalmus: The Selling of Color," *The Film 100*, <http://www.film100.com/cgi/direct.cgi?v.kalm> (February 9, 2001).

"Red, Green and Blue: Short history of AMPS' Sustaining Member-Technicolor," *Technicolor History*, [http://www.amps.net/newsetters/issue28/28\\_Technicolor\\_History.htm](http://www.amps.net/newsetters/issue28/28_Technicolor_History.htm) (February 9, 2001). □

## John Kander

**John Kander (born 1927) is a composer who has produced award-winning work for theater, film, and television. He is best known for his collaborative efforts with lyricist Fred Ebb. For almost 40 years the partners have produced hits for Broadway, such as *Cabaret*, *Chicago*, and *Kiss of the Spider Woman*. In television they are best known for their musical productions with actress, singer, and dancer Liza Minnelli.**



John Harold Kander was born on March 18, 1927 in Kansas City, Missouri to Harold and Berenice (Aaron) Kander. He was exposed to music at an early age. Kander believed that a bout of tuberculosis as a baby, which had kept him isolated from other people, had actually helped him develop his sense of sound. At age six he began taking piano lessons from a woman in the neighborhood. Kander spent many evenings with his parents and brother playing and singing.

Kander's formal musical training began at Oberlin College. While still a student he composed his first theater scores for *Second Square* and *Opus Two* in 1950 and *Requiem for Georgie* in 1951. In that same year Kander received his Bachelor of Arts degree from Oberlin. He went on to attend Columbia University where he earned a Master of Arts degree in 1954. During the summers of 1955 to 1957 he worked as the choral director and conductor of the Warwick Musical Theatre in Rhode Island. Kander began to work steadily as a pianist in 1956 when he landed a job for the pre-Broadway run of *The Amazing Adele* and *An Evening with Beatrice Lillie* in Florida.

### The Big Break

Kander believed that his big break in New York came by accident. He went to a club in Philadelphia after seeing a performance of *West Side Story*. By chance he happened to meet the pianist who asked Kander to substitute for him while he went on vacation. The stage manager for *West Side Story* then asked Kander to play the auditions for her next



show *Gypsy*. During the auditions Kander met the choreographer, Jerry Robbins, who then suggested that Kander actually write the dance music for the show in 1959. After that experience he wrote dance arrangements for *Irma la Douce* in 1960.

Kander made his Broadway debut in 1962 with a score for the musical *A Family Affair*, which was produced at the Billy Rose Theatre. While the show was not a success, it nonetheless led to future successes for Kander. The producer of this show, Harold Prince, would work with Kander again. A year later, in 1963, Kander was introduced to lyricist Fred Ebb by the legendary music publisher Tommy Volando. Ebb had been writing songs for nightclub acts and television shows. He had also had an unsuccessful Broadway debut with *Morning Sun*. Kander and Ebb began to work together and their first song, *My Coloring Book*, was nominated for a Grammy award.

### Broadway Success

Kander and Ebb's first theatrical collaboration, the *Golden Gate* never opened on Broadway. However, the score convinced Harold Prince, the producer from *A Family Affair* (1962), to hire the pair for his next production called *Flora, the Red Menace*. The show opened at the Alvin Theatre in 1965. While it was not a hit, the experience solidified the team of Kander and Ebb. The show was the Broadway debut for the young Liza Minnelli, who would also work with Kander and Ebb again.

Kander and Ebb worked with Harold Prince the following year on the production that brought the pair fame. On November 20, 1966 *Cabaret* opened at the Broadhurst Theatre and ran for 1,166 performances. The story about a relationship between a German cabaret performer and an American writer in pre-Nazi Berlin was based on the book *Berlin Stories* by Christopher Isherwood and the play *I Am a Camera* by John Van Druten. The show won the 1966 Antoinette Perry (Tony) Award for best musical and Kander and Ebb won for best score. In 1972 *Cabaret* was adapted to film starring Liza Minnelli and won several Oscars. The play was revived at the Imperial Theatre in 1987 with some of the original cast returning to their same roles. It was revived again in 1998 when it won another Tony for best revival.

After the success of *Cabaret* the partnership of Kander and Ebb was strengthened and they continued to work together on Broadway. In 1968 they wrote the music for *The Happy Time*, produced at the Broadway Theatre, and for *Zorba*, produced at the Imperial Theatre. In 1971 the team wrote music for *70, Girls, 70* at the Broadhurst Theatre.

Their next big Broadway success came in 1975 with the help of Bob Fosse and *Chicago*. This musical was based on a 1926 play written by Maurine Dallas Watkins, a reporter for the *Chicago Tribune*. It was a story about a chorus girl who murdered her husband and then used the ensuing trial to boost her show business career. The show opened on June 3, 1975 at the 46th Street Theatre and ran for 898 performances. It starred Gwen Verdon, Chita Rivera, and Jerry Orbach and included the popular songs *All That Jazz* and *Razzle Dazzle*. While the musical was nominated for 11 Tony awards, it did not win any because of the over-

whelming success of *A Chorus Line*. However, the show was revived again in 1997 and won six Tony awards, including best revival, best choreography, and best direction.

Kander and Ebb continued their collaboration with *The Act* in 1978. They received their second Tony award in 1981 for *Woman of the Year*. That production won three other Tony awards, including one for actress Lauren Bacall. In 1984 the duo worked on *The Rink* for the Martin Beck Theatre, which starred Liza Minnelli and Chita Rivera. While *The Rink* did not do well on Broadway, Kander considered it one of his favorite musicals because the songs were very emotional.

Success returned to Kander and Ebb with *The Kiss of the Spider Woman*, a play based on the novel *El Beso de la Mujer Arana* by Manuel Puig about two men in a Latin American prison. The show was produced in Toronto, Canada in 1990 and then at the Shaftesbury Theatre in London in 1992. It made its Broadway debut on May 3, 1993 at the Broadhurst Theatre where it ran for 906 performances. Kander and Ebb won a Tony award for best musical score and actress Chita Rivera also won for her role. The show also won a New York Drama Critics award for best musical.

Kander and Ebb's next two productions were not as critically acclaimed. In 1997 they wrote the music for *Steel Pier*, a play about a dance marathoner during the depression. In 1999 they wrote the music for *Over and Over*, a play based on the book *The Skin of Our Teeth* by Thornton Wilder. In 2000 Kander and Ebb were working on a new musical together called *The Visit* based on a play by Friedrich Durrenmatt.

### Film and Television Scores

Kander's career has not been limited to theater. He has written scores for several films. These include: *Something for Everyone* (1969), *A Matter of Time* (1976), *Kramer vs. Kramer* (1979), *Still of the Night* (1982), *Blue Skies Again* (1983), *Places in the Heart* (1984), *I Want to Go Home* (1989), and *Billy Bathgate* (1991). He also collaborated with Ebb for one of their most famous accomplishments, *New York, New York* (1977). The duo also wrote music for *Cabaret* (1972), *Funny Lady* and *Lucky Lady* (1975), and *French Postcards* (1979).

Kander and Ebb also collaborated on music for several television specials. In 1974 they won an Emmy award for their work on Liza with 'Z' and the soundtrack also won a Grammy award. They won another Emmy in 1993 for *Liza Minnelli in London, Steppin' Out*. The partners also worked with Minnelli on *Goldie and Liza Together* (1980), *Standing Room Only: Liza in London* (1986), *Liza Minnelli: A Triple Play* (1988), and *Liza Minnelli Live! From Radio City Music Hall* (1992). Additionally, the duo created music for Shirley MacLain's *Gypsy in My Soul* (1976), *Baryshnikov on Broadway* (1980), *Breathing Lessons* (1995) and *The Boys Next Door* (1995). Kander and Ebb also wrote music for two Academy Awards presentations in 1988 and 1993.

### Awards and Impact

In addition to his Tony, Grammy, and Emmy awards, Kander has received other public acknowledgements for his

contributions to music. He received honorary doctorate degrees from Oberlin College in 1988 and Niagara University in 1994, where he is also a guest lecturer. In 1996 he received the President's Award from the Society of Stage Directors and Choreographers. In 1998 both Kander and Ebb were Kennedy Center Honorees and in 2000 they were awarded the Oscar Hammerstein Award for Lifetime Achievement in musical theater by the York Theatre Company of New York City.

For almost four decades Kander and Ebb have been writing music together for theater, film, and television. Their collaboration is a true partnership. As Kander explained, the two always work together in the same room at the same time when they are writing. In a February 1997 article in *American Theatre*, Marilyn Stasio wrote that "The two artists who do not always agree with each other have nevertheless maintained a perfect balance in their work. They complement each other as Kander's lyricism sweetens Ebb's wit and Ebb's cynicism toughens up Kander's raging romanticism."

While the two artists have been successful in many endeavors, they have left the biggest impression on Broadway. As Kander stated in a February 1997 article with Marilyn Stasio in *American Theatre*, "if you're going to write on a canvas of some size, the Broadway theatre is still the only place that offers you that opportunity." They have created a unique style of musical theater that is characterized by youthful joy and romanticism. In an April 1997 article in the *New York Times*, Ethan Mordden wrote, "Mr. Kander and Mr. Ebb celebrate the Big Break, the American love of show biz, making it, performance. Their musicals may be set in Germany, Greece, or South America, may defy Fascism or flirt with death. But at the center of their art lies a love of the talent-take-all wonder of entertainment."

## Books

*Broadway Song and Story: Playwrights/Lyricists/Composers Discuss Their Hits*, edited by Otis J. Guernsey, Dodd, Mead, and Co., 1985.

## Periodicals

*American Theatre*, February 1997, p. 10.  
*New York Times*, April 13, 1997, p. 4.  
*Variety*, September 27, 1999, p. 157.

## Online

"John Kander," <http://www.niagara.edu/theatre/faculty/kander.html> (February 17, 2001).  
 "The Kennedy Center Honors," <http://kennedy-center.org/honors/history/honoree/kander-ebb.html> (February 17, 2001).  
 "The Music of Kander and Ebb: Razzle Dazzle," [http://www.wnet.org/gperf/features/html/meet\\_meet.html](http://www.wnet.org/gperf/features/html/meet_meet.html) (February 17, 2001). □



## Edmund Kean

**Considered one of the greatest Shakespearean actors of the nineteenth century, Edmund Kean (1789-1833) restored authenticity to the Bard's works, where others had seen fit to change and even censor them. His performances and his life soon became legendary, but heavy drinking brought a premature end to his career.**

Because there is no record of Kean's birth, the exact date is open to debate, but the best estimate places it on March 17, 1789 in London. He was the illegitimate son of Ann Carey, an actress, and Edmund Kean, an actor and apprentice surveyor. The senior Edmund Kean committed suicide at age 22, when his son was only three years old. His mother was not around, and the boy was cared for by a Charlotte Tidswell.

Tidswell was also an actress, a bit player at the Drury Lane Theatre Company. She had been the mistress of the child's uncle, Moses Kean, a London entertainer and ventriloquist. It is believed that the death of Moses Kean may have led Edmund Kean Sr. to commit suicide.

At the time she took on the responsibility of looking after young Edmund, Tidswell had also been the mistress of the Duke of Norfolk. She was unable to make use of that connection to get ahead, but she was nevertheless ambi-

tious for the boy. It was she who instilled the desire to become an actor in Kean (he first appeared in a play in 1793 at age four), but she was less successful at her attempts at discipline. By age 15, Kean was on his own, a young man whose only professional desire was to create a life in the theater for himself.

### The Provincial Actor

In 1804, Kean went to Sheerness in Kent, and joined the Samuel Jerrold Company, where he was initially paid 15 shillings a week. He spent a year there, treated like the prodigy he probably was, before joining a theater company in Belfast that was directed by the influential Michael Adkins. In Belfast, he had the opportunity to observe some of London's better actors (who toured the provinces during the summer), but he had less opportunity to act. The frustration of his apprenticeship in the theater would mark Kean's life over the next nine years, ultimately leading to his alcoholism.

Perhaps the one bright spot during his time in the Belfast company was when the prominent English actress Sarah Siddons performed and Kean had a bit role. Later in life, he managed to fabricate their brief contact into an anecdote that reinforced his legend as a hard drinker.

By 1806 Kean was back in London, at the Haymarket Theatre where, at Charlotte Tisdale's recommendation, he had secured another junior position. Kean lasted only a few months at the Haymarket. His already outsized ego would not permit him to understudy a fellow actor, Alexander Rae, who was only a few years older than him and who, feeling the power of the lead actor, insulted the diminutive Kean.

As a result Kean left once again for Kent, where he joined the company of one Mrs. Baker at Turnbridge Wells. He spent a year there before returning to Jerrold's company. With Jerrold, he once again enjoyed lead roles. This time Kean probably would have stayed longer with Jerrold (he left early in 1808) except he found himself in trouble with a townsman (he had seduced the man's wife) and was forced to leave just ahead of a vengeful mob. His next stop was Gloucester.

### Stormy Marriage

One of the members of the Gloucester company was Mary Chambers, originally from Ireland, with whom Kean fell in love almost immediately. They had a whirlwind courtship and married on July 17, 1808. Soon, Kean, his new wife, and his sister-in-law, Susan, joined a theatre company in Cheltenham.

The Keans would have two sons: Howard, born in 1809, who died at the age of four; and Charles, born in 1811, who went on to become a distinguished actor himself, and who married the actress Ellen Tree.

By all accounts, most notably his wife's, the Kean marriage was an unhappy one. During the early years of the marriage, Kean was struggled to make a living in the provinces. The family, especially during the two years between Charles' birth and Howard's death, was dangerously close to extreme poverty.

### A Star Is Born

The turning point in Kean's career came in 1814, when he appeared as Shylock in *The Merchant of Venice* at Drury Lane. It wasn't just a great performance, but an innovative one. Kean was too short to match the era's ideal for the dramatic actor, as set by the tall, stately John Philip Kemble. Kean's ingenuity was to recognize what his own talents were and to make use of them.

The character of Shylock, for example, was a perfect role for Kean's short stature, expressive eyes, and rich voice. The real innovation came in how Kean chose to play the role, as a dark, twisted, evil person, rather than a comic one, which stage tradition had dictated until that time. Kean's performance was sensational and it prodded a London theatre world seemingly ready for change. From then on Kean's life in the theater was secure.

Kean quickly proved himself a master at portraying Shakespeare's classic villains, such as Iago, Macbeth, and Richard III. He also won rave reviews for his Othello and Hamlet. Kean, of course, didn't limit himself to Shakespeare; he also undertook such roles as Barabas in Marlowe's *The Jew of Malta* and Sir Giles Overreach in Massinger's *A New Way to Pay Old Debts*. Yet Shakespeare, especially the villains, remained for Kean the signature of his career.

In the age of romanticism, Kean was a romantic actor of the first degree. Kean's public persona also fit the bill as he strove to remain foremost on the London stage. Yet the mixture of ego, professional will, insecurity, sensitivity, and alcoholism soon made him a popular target for the London press. Kean remained London's leading dramatic figure for the next 19 years, and in his prime he earned £10,000 a year.

### Conquered North America

Kean made his New York debut in 1820 in the role of Richard III. He also performed in Philadelphia, Baltimore, and Boston, where he created a scandal by walking out on what he thought was a nearly empty theater and refusing to return for *Richard III*. This didn't sit well with the Bostonians who thereafter roasted Kean in the press. Yet his sojourn in the United States was largely successful and other North American tours followed on the heels of this success.

Around 1825, Kean's already bad public reputation had undergone further damage when an adulterous affair was made public by the angry husband, a politician who promptly brought a lawsuit against the actor. Kean lost the suit, and his reputation was damaged. But for the most part, he remained popular in North America.

It was in 1826, during a run in Quebec, Canada, where perhaps the strangest event in Kean's legendary career unfolded. During one of his Quebec performances, a group of Huron Indians, were in the audience. Afterward Kean met with them, expressed his admiration for their tribe and his desire to abandon his European heritage.

The Hurons were so taken with Kean that they decided to make him a member of their tribe. In fact, in a ceremony attended by four Hurons as well as some of Kean's Canadian

acquaintances, Kean was made a chieftain and given the new name, Alanienouidet. Afterward Kean went to the Huron village to live, and would have stayed indefinitely except his Canadian friends, perhaps fearing for his safety and almost certainly his sanity, removed him from the Huron community. Subsequently, Kean spent some time in an asylum.

For relaxation, when he wasn't enjoying the London nightlife, Kean retired to his Scottish estate. In 1824, he had purchased a house and property from the Marquess of Bute. The house was called Woodend and its isolation offered Kean a welcome contrast to theater life. As was his charming way, he made friends among the local population, even throwing fireworks parties. However, his wife was not so enthused about the place. This, coupled with more affairs by Kean, led to the end of their marriage.

### Last Years

The incident with the Huron Indians made it clear that drinking was affecting Kean's mind, yet he still continued to appear on stage. During the 1827-28 season, he appeared at Covent Garden, which was managed by Charles Kemble, John Philip Kemble's younger brother. Though his physical powers were waning-Kean was often ill from too much drink-he seldom displeased the public. Yet it took more of an effort to prepare himself for each performance.

In 1828 he traveled to Paris to act in the Odeon Theatre (with the Odeon's company of English players) but illness and fatigue impaired his performance, and the French were cool toward him. He returned to the English provinces, but settled into Bute for the summer and early autumn.

When he did return to Covent Garden in October of 1828, he was worse than when he left; his performances were uneven. Finally, on January 12, 1829 as he was preparing for a performance of Richard II, Kean collapsed. It was evident even to him that he needed a long rest and he agreed with Kemble to return to Covent Garden for the 1830-31 season.

Kean then returned to Bute, where he had been enjoying a new woman in his life, Ophelia Benjamin. He referred to her as Mrs. Kean, but theirs was anything but a love match. The young Irish woman more or less took over Kean's life, isolating him from his few remaining friends and estranging him from his son, Charles. His isolation became more apparent when he returned to London in November of 1829. His purpose was to assist Charles Kemble to stave off bankruptcy by performing free of charge, but he soon found that Kemble didn't really need his help-Kemble's 18-year-old daughter, Fanny, had practically made Covent Garden solvent single-handedly.

Kean was now on the outside looking in, especially when he became the center of a controversy by deciding to return to Drury Lane rather than play Covent Garden on the nights Fanny Kemble was not available. Kemble was the new toast of the London theater world and Kean was vilified by the press for his perceived selfishness.

Kean persisted at Drury Lane that season, but he eventually returned to Covent Garden, the location of his final

performance. It was a staging of Othello that also starred his son Charles, who had re-established friendly relations with his father. Kean's final performance was on March 25, 1833 with Kean playing Othello to Charles's Iago. Kean collapsed on stage and later died on May 15, 1833. With his death an era had passed.

### Books

Playfair, Giles, *Kean*, E.P. Dutton and Co., 1939.

### Periodicals

*Times Higher Education Supplement*, November 21, 1997.

### Online

"1826-Edmund Kean among the Hurons," *Shakespeare.about.com website*, <http://shakespeare.about.com/gi/dynamic/offsite.htm?site=http%3A%2F%2Fwww.canadiantheatre.com%2Fk%2Fkeanhuronsdoc.html> (December 11, 2000).

"Edmund Kean," *freespace.virgin.net website*, <http://freespace.virginnet/andrew.walters2/edmund.htm> (December 11, 2000). □

## John Harvey Kellogg

**John Harvey Kellogg (1852-1943) revolutionized the American diet by inventing flaked breakfast cereals first known as Wheat Flakes and Corn Flakes. An avid health reformer, skilled surgeon, and physician, Kellogg's extensive writing and lecturing contributed to a new emphasis on the importance of a healthy diet, adequate exercise, and natural remedies near the end of the nineteenth century.**

Kellogg was born on February 26, 1852, in Tyrone Township, a rural community within Livingston County, Michigan. He was the fourth of the eight children that survived infancy born to John Preston, a farmer, and Ann Janette (Stanley) Kellogg. Before Kellogg turned one year old, his parents joined the Seventh-day Adventist movement and moved their large family, which included five children from John Preston Kellogg's first marriage, to Jackson, Michigan. About three years later, the Kelloggs relocated to Battle Creek, Michigan, the headquarters for the newly formed Adventist Church in 1863. In fact, a portion of the profit from the sale of the Kellogg farm funded the transfer of the Adventist publishing venture from Rochester, New York, to Battle Creek. The Adventists evolved from the mid-nineteenth-century religious sect called the "Millerites," who were known for predicting the exact date of Christ's return. Co-founded by James and Ellen G. White, the Adventists also focused on the second coming of Christ, emphasizing the health and purity of their communities as a means of preparation.



### Developed Interest in Health

Kellogg's early formal education was inconsistent. Helping his father, who then operated a small grocery store and broom factory, was more important than school. Nonetheless, he supplemented his learning by reading a great deal on his own. When Kellogg was 12 years old, James White, serving as the first Adventist publisher, began teaching him the printing business. For four years Kellogg apprenticed in the Adventist publishing house. During this time, Ellen G. White, the church's acknowledged prophetess, began publishing articles on health reform. As Kellogg set the type for White's articles, which stressed healthy living as a religious duty of all Seventh-Day Adventists, he became very interested in issues of health and hygiene. Along with reading White's views, Kellogg also studied early health reformers Sylvester Graham and Larkin B. Coles. As a result he began his life-long fascination with health and diet, focusing on natural remedies, preventative medicine, and vegetarianism.

### Medical Training

Kellogg planned to become a school teacher, and at the age of 16, he taught for a year in Hastings, Michigan. However, he soon felt the need for more formal training. After finishing high school in Battle Creek, he entered the teacher training program at Michigan State Normal College in Ypsilanti in 1872. In the same year Adventist leaders, who were strongly critical of conventional medicine, became

convinced that the church needed professionally trained doctors to affirm their views. Consequently, they chose several promising young Adventists, including Kellogg, to attend a five-month course at Dr. Russell Trall's Hygeio-Therapeutic College in Florence Heights, New Jersey. Although Kellogg rejected Trall's nontraditional medical theories, the experience opened his eyes to a career in the field of medicine and health reform. With encouragement from the Whites, Kellogg pursued a formal degree in medicine. After one year at the University of Michigan Medical School, Kellogg enrolled in Bellevue Hospital Medical College in New York City. He graduated in 1875 and returned to Battle Creek.

### The Battle Creek Idea

In 1873 while still a student, Kellogg became James White's chief editorial assistant for Adventist *Health Reformer*, a monthly publication on health and dietary habits. In the next year Kellogg took over as editor, a position he held for the remainder of his life. Along with publishing articles and editorials in *Health Reformer*, whose name he changed to *Good Health* in 1879, Kellogg also began a career as a prolific writer of health propaganda. In 1874 he published a cookbook and *Proper Diet for Man*, which advocated vegetarianism. Published in 1877, *Plain Facts about Sexual Life* was the first text to address the topic of sex directly and sold over one half million copies. By the turn of the century, Kellogg, always suspicious of drugs and traditional medicines, developed his theory of hydrotherapy as a superior form of medical treatment. In 1901 he published *Rational Hydrotherapy*, which became a standard text in the field of medicine for several decades. In all, Kellogg wrote over 50 books and countless articles. He also lectured widely, arguing for the benefit of his health reforms.

Calling his dietary theory the Battle Creek Idea, Kellogg encouraged a diet void of all meat, sparing use of eggs, refined sugar, milk, and cheese, and complete abstinence from alcohol, tea, coffee, tobacco, and chocolate. His total health regimen, which he later termed "biologic living," included regular exercise, lots of fresh air and sunshine, correct posture, sensible clothing, and an intake of eight to ten glasses of water daily. He also came to believe that daily enemas kept the intestines clean and free from disease. According to Ronald M. Deutsch in *The New Nuts Among the Berries* (1977), "Dr. Kellogg soon added a new dimension to health reform, and one which foreshadowed our own day. For until his entry upon the scene, wearing medical whites—his suit, shirt, tie, shoes, hat, etc., were all white—foodism had been based upon religious and philosophic intuition. Vegetarianism and whole grain advocacies had been born of inspiration. But John Harvey now set out to give these ideas scientific support." He determined that oysters were covered in germs, boullion was basically poisonous, coffee harmed the liver and most likely caused diabetes, and tea was the primary cause of insanity. Thus, based on both scientific and religious reasons, dietary intake should be limited to primarily nuts, grains, legumes, and fruit.

## The San

In 1876 Kellogg agreed to take over the Western Health Reform Institute, an Adventist venture founded ten years earlier in Battle Creek to provide natural medical remedies. With only 20 patients, the Institute was about to close its doors when Kellogg took over. After changing the name to the Battle Creek Sanitarium, Kellogg set about to transform the institute into the most famous health retreat of its time. By the turn of the century the Battle Creek Sanitarium, known as The San, had grown to 700 beds. Kellogg enticed some of the most famous and powerful people in the United States to his health institute. In all, over 200,000 patients were treated at The San, including Henry Ford, John D. Rockefeller, Harvey Firestone, J. C. Penney, and C. W. Barron. During his early years at The San he also pursued his interest in surgery, and traveled to Europe several times to study surgical techniques. Over the course of his career, he performed some 22,000 operations, introduced important antishock methods and postoperative exercises to prevent complications, and claimed a record of 165 abdominal surgeries without a fatality. He served on the Michigan State Board of Health from 1878 to 1891 and from 1911 to 1917.

In 1879 Kellogg married Ella Eaton, of Alfred Center, New York. The relationship was much more of a partnership than a marriage. Believing that sex bred evil diseases, especially in men, Kellogg was determined to live a celibate life, and the two maintained separate bedrooms through their marriage. Although they had no children by birth, the Kelloggs were foster parents to 42 children, several of whom they adopted. Because most household chores were attended to by young Adventists in training at The San, Kellogg's wife, who held a college degree in domestic science, was free to spend her time pursuing her interest in dietary experimentation alongside her husband.

## Invention of Flaked Cereal

In his efforts to invent a supremely sound and healthy diet, Kellogg developed numerous new food products. In 1877 he created a multigrain biscuit that was then crumbled, called *Granola*. However, he was later forced to change the name after being sued by Dr. James Caleb who had previously marketed a similar product, *Granula*. Kellogg also developed such products as peanut butter (so that patients with poor teeth could consume nuts), meat substitutes, and a grain version of coffee. His legendary invention of breakfast cereal came about after he became convinced that indigestion and tooth decay were caused by insufficient chewing. Accordingly, he began requiring his patients to start each meal by slowly and thoroughly chewing a piece of *zweibach*, a hard German twice-baked bread. When a patient complained that chewing the *zweibach* broke one of her teeth, Kellogg set about to find a solution. He needed a dry crisp grain product that could be chewed safely. In 1894 in the experimental kitchen, Kellogg, assisted by his younger brother Will Keith who served as The San's business administrator, invented wheat flakes. After accidentally forgetting about a batch of boiled wheat for several days, the brothers pushed the dried dough through rollers and then

scraped flakes off the rollers. They discovered that, once baked, the wheat flakes were quite tasty.

Although Kellogg intended to use his new invention for chewing exercises, The San guests soon realized that the wheat flakes were even better with milk. The popularity of the product, known first as *Granose* and later as *Toasted Wheat Flakes*, soon spread and in the first year, Kellogg sold over 100,000 pounds of cereal. The brothers later applied the same flaking process to corn and rice. Although highly successful, the Kelloggs were not the first to market dry cereal. In 1893 Henry D. Perky of Denver, Colorado, developed a machine that shredded wheat, which he appropriately named Shredded Wheat. After the success of Toasted Wheat Flakes, numerous imitators flooded the market with new versions of breakfast cereals. Although most failed, some, including former San patient Charles W. Post, created lasting products that competed for the cereal market. Nonetheless, profits from cereal sales along with book sales made Kellogg, who took no salary as superintendent of The San, a wealthy man, and funded the elaborate 20-room home in which the Kelloggs resided. However, as his wealth and popularity grew, Kellogg's difficulties both with his brother Will and Adventist leader Ellen White began to increase.

## Conflicts Arise

Will, often known as W. K., Kellogg, never had a very good relationship with his older brother. According to Benjamin Kline Hunnicutt in *Kellogg's Six-Hour Day* (1996), "Famous for his energy and untiring work, John Harvey cultivated the image of superman, dictating to secretaries for eight hours at a stretch, performing operations through the night, conspicuously working at meals and on trains. John Harvey expected W. K. to live up to this myth, and berated him for being lazy if he stole some time at home." When Post began making millions of dollars through aggressive advertising and free giveaways, W. K. wanted to develop a similar large-scale advertising campaign. When his elder brother said no, W. K. began looking for ways to take control of the company. Because of his notorious frugality, John Harvey had convinced employees to accept lower pay along with stock in the cereal business, now known as the Kellogg Toasted Corn Flake Company. W. K. secured financing from a wealthy St. Louis insurance broker and quietly began buying stock. By 1906, he controlled the company. The exchange led to bitter court battles and bad feelings between the brothers that lasted throughout their lifetimes.

Although he had received strong church support during the first 20 years as superintendent of The San, by 1895 Kellogg was being increasingly criticized by White and other Adventist leaders who felt Kellogg had veered away from the church's mission. Having established the health institute as a place for Adventists to regain their health, Adventists objected to Kellogg's admission policy. He accepted only the most elite guests and rejected the common patient or anyone whom he believed was too sick. As he became more interested in the medical reasons why certain foods were bad for one's health, church leaders questioned his faith, since the Adventist diet was determined by the infallible

visions of prophetess White, not scientific evidence. There was also concern that Kellogg was hoarding the profits from The San and his cereal ventures to fund medical projects at the expense of evangelical efforts to expand the church.

### The San Closed

The tensions peaked in 1907. Kellogg was expelled from the Adventist church, and the Adventist headquarters was moved to Washington, D.C. Although he maintained control of *Good Health* and The San, he was forced in 1910 to merge the American Medical Missionary College in Chicago, a school he formed in 1895 to propagate biologic medical techniques, with the University of Illinois Medical School. The San continued to prosper throughout the 1920s, accommodating some 1,200 patients during its peak. However, the institute's finances were overextended by a building project in 1927. With the onset of the Great Depression at the beginning of the 1930s, the number of guests at The San was greatly reduced, and by 1938, Kellogg closed the doors to the once famous sanitarium, now \$3 million in debt. The inexhaustible Kellogg continued to pursue new projects; however, he developed acute bronchitis in 1942 and died of pneumonia on December 14 of the same year in Battle Creek at the age of 91.

### Books

- Deutsch, Ronald M. *The New Nuts Among the Berries*. Bull Publishing, 1977.
- Garrahy, John A., and Carnes, Mark C. *American National Biography*. Oxford University Press, 1999.
- Hunnicut, Benjamin Kline. *Kellogg's Six-Hour Day*. Temple University Press, 1996.
- Lender, Mark Edward. *Dictionary of American Temperance Biography*. Greenwood Press, 1984.
- World of Invention*. edited by Bridget Travers, Gale Research, Inc., 1994.

### Online

- "John Harvey Kellogg," *Dictionary of American Biography, Supplement 3: 1941-1945*. American Council of Learned Societies, 1973. <http://www.galenet.com> (December 15, 2000). □

## William Kidd

**Captain William Kidd (c. 1645-1701) was one of the most notorious pirates in history. He sailed the coast of North America, the Caribbean, and the Indian Ocean, plundering ships. To this day, rumors persist that he left behind a great treasure.**

Not much is known about Kidd's origins or early life, which is not unusual, since few records were made of people of common birth in the 17th century. Even after he became famous, no one thought to write down any information about his youth or his parentage. At the time of Kidd's execution, the pastor of the prison where he was held noted that the prisoner was a Scot about 56



years of age. Other than that, no verifiable facts are known, but a long-standing tradition holds that Kidd was the son of a Presbyterian minister and that he was born in Greenock, Scotland, about 1645.

Greenock is a port town, and anyone raised there would have seen ships come and go from the docks. Kidd evidently found the life of a sailor more interesting than following in his father's footsteps. The first records of his life date from 1689, when he was about 44 years old and was a member of a French-English pirate crew that sailed in the Caribbean. Kidd and other members of the crew had mutinied, ousted the captain of the ship, and sailed to the English colony of Nevis. There they renamed the ship the *Blessed William*. Kidd became captain, either the result of an election of the ship's crew or appointment by Christopher Codrington, governor of the island of Nevis. Kidd and the *Blessed William* became part of a small fleet assembled by Codrington to defend Nevis from the French, with whom the English were at war. In either case, he must have been an experienced leader and sailor by that time. As the governor did not want to pay the sailors for their defensive services, he told them they could take their pay from the French. Kidd and his men attacked the French island of Mariegalante, destroyed the only town, and looted the area to the tune of 2,000 pounds Sterling.

### No Honor among Thieves

Shortly after his conquest of Mariegalante, Kidd and the crew of the *Blessed William* joined the British navy in a

battle against French warships. Many members of Kidd's crew considered this a dangerous waste of time since there was no treasure to steal on the enemy warships, and they turned against him. Kidd explained that they were working for the British and therefore obligated to help the Royal Navy, but his words fell on deaf ears. When he rowed ashore while his ship was anchored at Nevis, his crew stole the ship, as well as Kidd's 2,000-pound fortune.

Governor Codrington provided Kidd with another ship and gave him leave to hunt down his disloyal crew. Kidd sailed from Nevis intending to do just that, but once at sea he changed his mind and instead sailed to New York. At the time a British colony, New York was in open revolt against the British. Loyal to the crown, Kidd offered to carry guns and ammunition for the British, who were trying to assert their authority over the colony. In reward for his loyalty, the provincial assembly gave him 150 pounds and praised his efforts.

While in New York, Kidd met Sarah Bradley Cox Oort, a woman married to John Oort, a rich gentleman who owned several docks, as well as what is now Wall Street. Two days after John Oort's mysterious death, Kidd and Sarah Oort applied for a marriage license. Although no one discovered the truth behind John Oort's death, some historians believe Kidd killed him—perhaps with the aid of Sarah.

Sarah Kidd inherited her ex-husband's fortune, and Kidd gained control over it. Suddenly he was a very rich man, with land, docks, and a ship called the *Antigua*, which he was given while in the Caribbean. He loved his wife and the two daughters she brought with her to the marriage. While he could have retired from the sea, Kidd remained restless.

### Privateer with King William's Blessing

In the spring of 1695 Kidd and his friend Robert Livingston came up with a scheme. Marauding pirates were constantly disrupting English shipping traffic. To solve this problem it was decided that Kidd would sail to pirate-infested waters and take pirates into custody. He would then "recover" the booty the captured pirates had plundered from other ships, and would divide it among Kidd and Livingston's several investors, who would include King William of England. King William would enthusiastically support this plan, because the pirates were cutting off England's shipping and because he would receive a cut of the profits. The key, Kidd and Livingston knew, was to leave untouched English ships but to prey only on those of other countries—particularly Portugal, France, and Spain. Under this scheme, they could continue to enjoy a life of piracy while remaining protected by the official sponsorship of the King of England.

King William was enthusiastic about this idea and, according to an essay posted on the *Discovery.com* Web site, granted Kidd power to apprehend "pirates, freebooters, and sea-rovers, being our subjects or of other nations associated with them." If they resisted, Kidd was authorized to use force against them. He was also given permission to take French ships, because at the time, En-

gland and France were at war. However, he was not allowed to attack English ships, or those of allies of England.

By August 1696 eight partners had signed on to the venture, including the king, who would receive ten percent of the profits. The partners contributed to the venture and purchased a ship, the *Adventure Galley*, for 6,000 pounds. The ship was outfitted with 30 cannons and was altered to sail more quickly. In February of 1697 Kidd left Plymouth, England, with a crew of 80 men, and set sail for Madagascar, a hotbed of pirate activity.

It remains uncertain whether Kidd intended to take any ship he wanted, or whether he seriously intended to prey only on ships owned by enemies of England. To his dying day he denied ever intending to become a true pirate. After arriving in the Indian Ocean, however, he soon became known and feared by other captains.

### Murder of Robert Moore Signaled Downfall

A discontented crew member named Robert Moore complained about Kidd's commission to attack only non-English ships, arguing that the captain and crew would have earned more plunder if Kidd had been more aggressive. The two fought, and Kidd finally picked up a wooden bucket and smashed it over Moore's head, killing the sailor instantly. The murder did little to improve Kidd's popularity among his ship's crew, and to regain their esteem he tossed aside his reluctance to attack English ships. From this point on, any ship on the open sea was fair game. Kidd and his crew sailed continuously, scarcely ever putting in to port for repairs, and eventually the *Adventure Galley* was close to sinking. Too worn to be of any further use, the pirate ship was run aground. The pirate captain transferred his booty and possessions to the *Quedah Merchant*, which he had captured.

### King Ordered Kidd's Death

By this time, English sea captains who had escaped Kidd's predation had begun complaining to their king about the scourge of piracy in the Indian Ocean. King William ordered Kidd, to be put to death if caught, although he never admitted that it had been under his commission that the pirate had first begun his activities. Kidd was eventually apprehended and imprisoned in Boston, in the colony of Massachusetts, where he had sailed after leaving the Indian Ocean. After languishing in a colonial jail, Kidd was transferred to England and jailed in Newgate Prison, a notoriously filthy and pestilential place. As Robert C. Ritchie wrote in *Captain Kidd and the War against the Pirates*, "the very special nature of Kidd's circumstances brought him to a terrible sentence, discharged in awful conditions; although his health was frequently poor, his constitution, long attuned to the rough life at sea, kept him alive."

### Trial and Conviction

In the spring of 1701 Kidd was finally brought to trial for piracy and the murder of the sailor Moore. His trial began on May 8, 1701, and was over the next day. Accused prisoners had to defend themselves, and were only brought



to trial if the prosecutors were sure they would be convicted. Kidd, as expected, was rapidly convicted, although he protested that he was not a pirate—he had been carrying out the terms of his commission to take any ship that was not English, and he asserted that he had only plundered French ships. Of Moore's death, Kidd maintained that he had not intended to kill the seaman, but had struck him in the heat of anger.

Kidd was scheduled to be executed for his crimes against England on Friday, May 23, 1701. Late in the afternoon on that date, two horse-drawn carts arrived to take him and other prisoners to the gallows. The prisoners were accompanied by officials in a symbolic parade, and were followed by a crowd of curious onlookers who yelled at the condemned, in turn offering them liquor and cursing at them. Kidd was already drunk at this point, a disappointment to Paul Lorrain, the prison pastor, who hoped that the noted pirate would repent and confess his guilt. Although drunk, Kidd was coherent enough to give a final speech, in which he blamed others for his fate and said the only thing he was sorry about was leaving his wife and children.

When the hangman attempted to hang him, the rope broke, and Kidd fell to the ground, stunned but still alive. The hangman picked him up and made a new rope ready. Meanwhile, Lorrain once again pleaded with Kidd to repent, and this time the clergyman was successful—at least according to Lorrain's later report. Pastor and condemned man prayed together for a short time before the hangman completed his work, thus putting an end to Kidd's pirate career. Afterward, Kidd's body was strung up along the banks of the Thames River in London, a warning to others who might consider taking up a life of piracy. His abandoned ship, the *Adventure Galley*, remained in the shallow water of the harbor of Ile Sainte Marie for many years, her decaying form visible to other ships passing by. Eventually she rotted, her remains filtering beneath the shifting sands, and was forgotten for over 300 years.

### Search for Kidd's Lost Treasure

After Kidd's death a story circulated that he had left a vast treasure behind. Searches were conducted all over the world, in every place that he touched shore. In the 19th century, companies were formed for the express purpose of searching New York's lower Hudson River valley for signs of this pirate gold. Even into the 21st century such searches continue.

In 1999 treasure hunter Barry Clifford began a search for the *Adventure Galley* in Ile Sainte Marie, Madagascar. He had discovered the remains of the *Whydah*, the only authenticated pirate ship then known to be in existence, off the coast of Massachusetts in 1984. One of the first signs of the lost wreck was a pile of stones, metal, and porcelain; the porcelain turned out to be remnants of Ming vases made between 1666 and 1722, the time when Kidd roamed the seas. Existing historical records verified that Kidd's ship would have held such cargo. Also found were rum bottles, ship fittings, and cannon. In addition, the wreckage was in the right place. At Kidd's trial, one of his crew had described the location where the ship had been run aground. This was the only place in Ile Sainte Marie that fit.

On June 22, 1999, a member of Clifford's expedition found two gold coins that might have come from Kidd's ship. According to *Discover.com*, pirate experts hypothesized that, although Kidd transferred some of his booty from the *Adventure Galley* to the *Quedah Merchant*, he might not have been able to retrieve every last gold piece from the leaky and flooded hold. The coins discovered by Clifford fit what is known about Kidd's last attack, which was on a ship sailing from the East Indies: one of the coins was Islamic, the other Ottoman. While the evidence indicated that the ship may have been Kidd's, it was by no means conclusive proof. Expedition members were forced by the Malagasy government to leave the country before conclusive evidence could be uncovered. However, as Clifford was quoted as saying by *Discover.com*, "Everyone who has ever walked a beach from the Dominican Republic to Maine has looked for the pirate treasure of Captain Kidd. Daniel Defoe thought about Kidd's treasure when he wrote about pirates [under the pseudonym Captain Charles Johnson] and Robert Louis Stevenson wrote about it in *Treasure Island*. Now we have done it. We may have touched Kidd's treasure."

### Books

Johnson, Captain Charles, *A General History of the Robberies and Murders of the Most Notorious Pirates*, Lyons Press, 1998.  
Ritchie, Robert C., *Captain Kidd and the War against the Pirates*, Harvard University Press, 1986.

### Online

"Diving for Captain Kidd's Lost Ship," *Discovery.com* Web site, <http://www.discovery.com> (December 20, 2000). □

# L

## Marie LaChapelle

**French obstetrician Marie Louise LaChapelle (1769-1821) introduced many innovations to the management of childbirth, especially in the cases of difficult labor. She attended thousands of births and produced a massive three-volume book describing her observations and recommendations. Her book went through several editions and was an important resource for teaching the art of delivering a baby with minimal interference by the attendant.**

For what little has been written in English about the life of Marie LaChapelle, history is mainly indebted to Kate Campbell Hurd-Mead, M.D., whose 1938 work, *A History of Women in Medicine*, devoted portions of seven pages to describing LaChapelle's life and accomplishments.

### Born in Troubled Times

Marie Louise LaChapelle was born in Paris in 1769. The eighteenth century was a tumultuous time in French history. The country was engaged in wars throughout much of it, culminating in the huge upheaval of the French Revolution (1789-99). Revolutionary activities centered on Paris, where people had endured years of high taxes and recurrent food shortages.

The practice of medicine at the time was very primitive, ranging from outright neglect of poor patients to frequent bloodletting in the case of the wealthy. (Bloodletting, the treatment of choice for nearly every condition, including pregnancy, was the removal of an arbitrary quantity of blood using instruments, leeches, or both.) Midwives at-

tended most births. Their talents and training varied widely. Convinced that France's infant mortality rate was too high, King Louis XV initiated measures to try to lower it in the mid-eighteenth century. Midwives were sent into the countryside to instruct peasant women in the art of childbirth. Laws were gradually passed to regulate health care practitioners. The laws excluded women from the practice of every kind of medicine except obstetrics. However, women were not allowed to receive a degree designating them as doctors of obstetrics. Instead, the laws prescribed a rigorous and expensive three-year apprenticeship for aspiring midwives who chose to apply for the training. Nina Rattner Gelbart described the eighteenth-century French midwife's qualifying exam as "a hair-raising test administered by a panel composed of the king's first surgeon or his lieutenant, a number of Paris surgeons, various deans of the medical faculty and royal surgical school, four sworn midwives of Paris and receivers, provosts, class masters, and council members. An intimidating ordeal, an awesome rite of passage" and one that was ignored by the vast majority of practicing midwives of the time.

LaChapelle's mother was a licensed midwife. Apparently known to history only as Madame Duges, she had learned the craft from her own mother and also received instruction from her husband (LaChapelle's father), a French health officer who had some knowledge of obstetrics. Madame Duges then finished her training at La Maternite. According to Hurd-Mead, Madame Duges was appointed "medico-legal midwife" to the local courts and prison. (In addition to assisting at births, midwives were often called upon to testify in court, settling such questions as whether a girl was still a virgin, or whether a dead baby died in the womb or was killed after birth.) From that position Madame Duges went to the Hotel Dieu, a famous hospital of Paris devoted to the care of the poorest of the poor. Hospital



conditions of that time were generally very bad, but the conditions at Hotel Dieu were reportedly among the worst. Its maternity ward lodged four or more girls or women in each soiled bed, delivery rooms were open to any and all passersby, and germs were freely passed from patient to patient. Puerperal (childbed) fever was common. Puerperal fever is an infection of the birth canal that occurs following delivery of a baby; symptoms include headache, muscle aches, appetite loss, rapid heartbeat, and abdominal pain. By some estimates, as many as ten percent of mothers who delivered babies in eighteenth-century Parisian hospitals died of the fever.

Madame Duges cleaned up and reorganized the maternity ward at the Hotel Dieu. She taught her craft to other aspiring midwives and probably to some male doctors of obstetrics as well. Madame Duges also wrote several instructive books on the topic of delivering babies, and she was instrumental in making the Hotel Dieu a major center for the teaching of labor and delivery methods.

### Intensive Training as Midwife

As a girl, LaChapelle was her mother's frequent companion and learned from her the trade of midwifery. In 1792 she married a surgeon by the name of LaChapelle, but he died only three years later. Thereafter, she devoted herself full-time to her profession. Upon her mother's death in 1797, LaChapelle took over as head of the maternity department at the Hotel Dieu. When she tried to introduce reforms to the practice of obstetrics and gynecology, LaChapelle ran

afoul of the renowned Dr. Baudelocque, who taught obstetrics at the hospital. Although he admired her work, Baudelocque did not agree with some of her methods and ideas. Over LaChapelle's protests, he favored the frequent use of instruments to hasten labor, especially forceps, which were used to extract the baby from the womb. Baudelocque did not believe that puerperal fever was contagious and that unnecessary onlookers at a birth frequently carried the disease from patient to patient. (In fact, the contagiousness of puerperal fever was debated well into the nineteenth century. Today, doctors agree that a risk factor for the development of puerperal fever is repeated vaginal examinations with unsterilized equipment during labor. The custom of allowing large numbers of unnecessary people in the delivery area has been abandoned since LaChapelle's day.)

Despite the obstacles LaChapelle faced in implementing her obstetric innovations, France and especially Germany were considered fairly enlightened when it came to women practicing in certain areas of medicine. And according to Eric v. d. Luft, "Female students of midwifery in the mid-nineteenth century in Germany received a level of medical education superior to that which was offered to female medical students in the same era in America." At some point LaChapelle went to Heidelberg, Germany, to study under the great obstetrician, Franz Naegele, for whom Naegele's Rule is named (still in use today, it is a way of calculating a pregnant woman's expected date of delivery). Upon her return to Paris, LaChapelle set about organizing a maternity and children's hospital at Port-Royal de Paris, the Hopital de la Maternite (formerly a prison). There she continued to introduce new techniques in patient care and attempted to modernize the training of midwives.

But old customs die hard, and LaChapelle had little success in convincing other birth attendants to change the practices she opposed. According to Hurd-Mead, she was more successful in introducing new labor management techniques, including "the immediate repair of a torn perineum [the area between the anus and the posterior part of the external genitalia], and in cases of placenta praevia [an abnormal positioning of the placenta that causes it to precede the child at birth, usually causing severe maternal bleeding] she insisted upon quick dilation of the os uteri [mouth of the uterus] with tampons and the extraction of the infant by version [turning], thus saving the lives of both mother and child." She invented a technique for repositioning a fetus that eliminated the need for forceps. She also compiled statistical tables based on her observations that were helpful in settling questions about pregnancy and labor.

### Master Work Published After Her Death

LaChapelle died of stomach cancer in 1821. She left behind one daughter (a Roman Catholic nun) and a portrait of herself. According to Hurd-Mead, the portrait showed "an attractive woman in a Gainsborough hat trimmed with ostrich plumes. She wears a ruffled collar, immense puffed sleeves, an absurdly small waist, and an elaborate gown with beautiful laces."

LaChapelle's master work was published in three volumes over a four-year period beginning in 1821. It was called *Pratique des Accouchemens, ou Memoirs et Observations choisies, sur les points les plus importants de l'Art; Par Mme. Lachapelle, sage-femme en chef de la maison d'Accouchement de Paris* (Childbirth Practices, or memories and choice observations on the most important points of the art, by Madame Lachapelle, midwife and head of the Paris childbed house). According to Hurd-Mead, the book opposed and annoyed the great Baudelocque in several respects. In volume one, LaChapelle "classified the positions of the fetus better than he did, reducing his 94 positions to 22. She insisted that instruments should be used as little as possible, and never for the mere sake of shortening labor. She showed how to insert forceps deftly. In all her 40,000 cases she interfered with nature in only 1.73%, using forceps only 93 times, version 155 times, symphysiotomy twice, and Caesarian section but once." Volume two described her most unusual cases and the treatment she had employed, and volume three dealt with the then-new operation of symphysiotomy, a surgical procedure to bring about an immediate dramatic increase in the size of the pelvic outlet to permit delivery of a baby. LaChapelle's book became an important resource in the training of midwives throughout Europe.

### Books

Gelbart, Nina Rattner, *The King's Midwife: A History and Mystery of Madame du Coudray*, University of California Press, 1998.

Ogilvie, Marilyn Bailey, *Women in Science: Antiquity Through the Nineteenth Century: A Biographical Dictionary With Annotated Bibliography*, MIT Press, 1986.

Hurd-Mead, Kate Campbell, *Women in Medicine: From the Earliest Times to the Beginning of the Nineteenth Century*, Hadam Press, 1938.

### Online

Luft, Eric v.d., Ph.D., M.L.S., "Mid-Nineteenth Century Attitudes Toward Women Physicians: Reflections on Elizabeth Blackwell and the 150th Anniversary of Women in Medicine," <http://www.upstate.edu/library/history/cppblackwell.html> (January 15, 2001).

"Modern History Sourcebook: Oliver Wendell Holmes (1809-1894): Contagiousness Of Puerperal Fever, 1843," <http://www.fordham.edu/halsall/mod/1843holmes-fever.html> (January 14, 2001). □

## Rene Laennec

**Rene-Theophile-Hyacinthe Laennec (1781-1826), the French physician hailed as the father of thoracic medicine, forever transformed the diagnosis of chest disease through his invention of the stethoscope. His creative genius and tireless dedication to medicine have resulted in much of our modern day understanding of pathology.**



**R**ene Laennec's contributions to the medical world were many. His commitment to keen listening (perhaps inspired by his training as a flutist) and careful observation of the patient allowed him to recognize diseases like pneumonia that had been previously overlooked or misdiagnosed, and were historically deadly. His most classic publication is a book entitled *De l'Auscultation Mediate (On Mediate Auscultation)*, also referred to as the *Treatise*. Although he was most famous for his discovery of "mediate auscultation" (a term he coined, referring to the use of an instrument, or mediator that allowed one to hear sounds within the human body), Laennec also published thousands of pages and gave hundreds of lectures reflecting his lesser-known findings. Among other things, he showed the existence of the skin tumors we know as melanomas, described the role that organ tissues play in disease, named the liver disease we now know as cirrhosis, and showed that tuberculosis was marked by lesions called tubercles that could be found in any of the body's organs. Ironically, despite his vast knowledge and unfailing commitment to the study of disease, Laennec was himself a victim of the "white death" of tuberculosis, and died at the age of 45.

### Britanny, The Early Years

Rene Laennec was born to Michelle and Theophile Laennec in the Breton country town of Quimper, France on February 17, 1781. During his early childhood he suffered the loss of his mother to tuberculosis, and was sent off by his father to live with various family members. In a small way, this period of his life mirrored the tumult of the approaching

French Revolution. Only six years old at the time of his mother's death, the young Laennec (along with his brother, Michaud) was soon placed in the care of an uncle, Dr. Guillaume Laennec. The man who raised the young boys in the nearby town of Nantes was a dedicated caregiver and highly respected doctor at the Hotel Dieu. He encouraged and influenced his nephew's life and medical studies, which started at the age of 14.

Living in Nantes during the last decade of the 18th century placed Laennec in the heart of the land of revolution. As Paul Kligfield, M.D. wrote in *The American Journal of Medicine*, "His childhood in Nantes was spent amidst the turbulence of the [French] Revolution and subsequent chaos of the [Reign of] Terror, and Laennec pursued his early academic studies in the shadow of a nearby guillotine." From his window, the young student probably witnessed 50 out of the 3,000 executions that occurred in Nantes. Despite the grim reality of a nation in upheaval, Laennec successfully continued his diligent schooling, and decided to make medicine his profession. He did briefly consider a career in engineering and might have been swayed by his father's encouragement towards more prestigious endeavors than becoming a physician, but his admiration for his uncle as well as his deep interest in nature drew him towards medicine. One wonders if his mother's deadly illness and the sight of so many beheadings might not also have motivated his choice. Laennec studied chemistry and physics, Greek, Latin, art, dancing, and even learned how to play the flute—a talent which may have had a pivotal role in his future discovery of the stethoscope.

Laennec was a painfully gaunt, diminutive man (his full height was 5'3"). The first signs of his physical weakness appeared in the spring of 1798, when he was 17. His studies and hard work were taking their toll, and he suffered from a prolonged fever accompanied by exhaustion and difficulty breathing. He finally recovered from the illness with a strong determination to follow his calling as a healer. He spent the next few years taking small jobs, treating those who had been wounded during the French civil war, and finally got his break in April of 1801 when his father gave him 600 francs. It was then that he began his 200-mile walk to Paris. The ten exhausting days on foot were a small price to pay for Laennec, who was on his way to realizing his dream.

### Paris, Student Days

Upon his arrival in Paris, Laennec wasted no time enrolling as a medical student in the city's finest hospital, the Charite. There he began working with the greatly renowned teacher, Jean-Nicolas Corvisart, who went on to become the emperor Napoleon Bonaparte's personal physician in 1804. Corvisart's approach to medicine was radically objective, focussing on observing diagnostic signs and discovering their relationship to disease. Laennec's training was marked by the principle, "Read little, see much, do much." He was often found in the dissecting room during post-mortem examinations or on daily rounds with his teacher. His fervent work paid off, and he was honored with two highly coveted distinctions. First, he was invited by his

instructors to join the Societe d'Instruction Medicale (in which students critiqued one another's clinical and autopsy work) and then he passed the selective examination that allowed him entrance into a medical training program for special students at the Ecole Pratique.

In 1802, when he was 21, Laennec started publishing important scientific papers on a variety of topics, including one on peritonitis (inflammation of the abdominal cavity's lining) that Nuland referred to as, "an epochal contribution." In 1803 he was honored by the government with First Prize in Medicine and Sole Prize in Surgery. Laennec continued to suffer from shortness of breath, an indication of progressing tuberculosis, which the young medical student attributed to asthma. Despite his sickness, or ironically because of it, he continued with his relentless work, teaching private classes on pathology in which he first defined the tubercle as the small lump whose presence signified the existence of tuberculosis. Laennec's successes continued one right after another, and his doctoral thesis on the relationship of the ancient Greek Hippocratic doctrine to practical medicine was accepted in 1804. He was elected to the Societe de l'Ecole de Medecine, formerly the Royal Society of Medicine, and became an editor and contributor to the esteemed *Journal of Medicine, Surgery, and Pharmacy*. The time had come for Laennec to begin developing his own private practice. Then, in 1810, Laennec's life was shaken by the death of yet another loved one who had succumbed to tuberculosis. This time it was his brother Michaud. The disease seemed to pervade every aspect of the young physician's life, yet he still denied the fact of his own illness even when he began experiencing chest pains.

### Invented the Stethoscope

After a couple of years of building his private practice, Laennec was finally offered an academic post in 1816. He had been waiting for a prestigious institution to accept him as a physician, but he instead found himself situated at Hospital Necker—a small facility with a poor reputation. It was there, however, that Laennec was to make history through his invention of the stethoscope. In his *Treatise*, Laennec described the pivotal moment thus, "In 1816, I was consulted by a young woman labouring under general symptoms of diseased heart, and in whose case percussion and the application of the hand were of little avail on account of the great degree of fatness. The other method just mentioned [the application of the ear to the chest] being rendered inadmissible by the age and sex of the patient, I happened to recollect a simple and well-known fact in acoustics, and fancied, at the same time, that it might be turned to some use on the present occasion." Laennec's recollection alluded to the way in which sound is amplified when transmitted through certain solid objects. He proceeded to roll up a quire (24 sheets of paper) into a cylindrical tube and place one end of it to the woman's chest. He wrote, "[I] was not a little surprised and pleased to find that I could thereby perceive the action of the heart in a manner much more clear and distinct than I had ever been able to do by immediate application of the ear."

He named the new instrument “stethoscope,” based on the Greek words *stethos* (meaning chest) and *skopos* (observer). Usually, however, Laennec referred to it simply as *le Cylindre*, and made a more permanent wooden version that was designed to come apart into two segments. As Sherwin B. Nuland stated in his book *Doctors: The Biography of Medicine*, “Here was a tool that taught the healer that [s]he could separate the objective evidences of his [or her] own senses from the subjective responses of a sick person, and that [s]he could do it while the person was still living.” In the autopsy room, Laennec could see the abnormality that was responsible for the sounds he had heard.

Laennec’s embarrassment at the prospect of getting too close to the female anatomy of an attractive young woman may have motivated his invention at that moment, but he had long since been aware of another method of physical diagnosis which preceded and set the stage for his discovery of mediate auscultation. In 1761, the Austrian physician, Leopold Auenbrugger described percussion for the first time in his *Inventum Novum*. The text was a brief pamphlet that was translated into French and popularized by Laennec’s own teacher, Corvisart, almost 30 years later. Auenbrugger invented the thumping technique which doctors use to determine whether the underlying area of either the chest or abdomen holds a hollow or solid structure. His background as an innkeeper’s son (tapping on beer kegs to see how full they were) and a musician gave him the necessary knowledge and experience with resonance, pitch, and tonal quality to understand how to tap out the differences in tissue density. Auenbrugger’s story of inventing percussion is not unlike Laennec’s. Both men found creative methods of diagnosis by employing their highly trained ears in order to gain a clearer picture of the body’s interior.

### Final Accomplishments

Following his great discovery, in 1819 Laennec published the famous *Treatise*. In it, he described the results of experiments he had done with the stethoscope. The two-volume work, which was received with mixed reviews, was often sold along with the new instrument. Soon Laennec’s teachings were widely known and had gained respect all over the Western world. Unfortunately, Laennec was unable to enjoy the accomplishment of his widely acclaimed masterpiece in good health. The writing of the book had fully exhausted him, and a month before publication he was forced to resign his hospital post and give up his practice. Laennec left Paris and arrived on October 8, 1819 at the small family estate in the Breton countryside called Kerlournec. He spent two years living the life of a country squire: taking walks and horseback rides, providing medical care to neighboring farmers, going to church, and practicing his Breton speech.

In November of 1821, Laennec’s highly driven nature got the better of him once again, and he found himself back in Paris, resuming his old life as a physician and academic. A series of huge professional successes followed. Within a year he was appointed sole professor of medicine and royal lecturer at the College de France. In 1823 he was elected a full member of the Academy of Medicine, and in 1824 he

became a knight of the Legion of Honor. He moved his clinical work to the Charite, the hospital where he had been a medical student, and became a highly reputed teacher, not unlike his mentor, Corvisart. He was largely responsible for making Paris the world’s hub of medical study, as hundreds of international students gathered at the Charite in order to attend lectures, work with him in the autopsy room, and make hospital rounds.

### Returned to Brittany

Laennec’s physical well-being was rapidly deteriorating along with his increased fame. On December 16, 1824, at the age of 43, he married the widow Jaqueline Argou, who had previously been his housekeeper. Less than a year later, she was pregnant, and Laennec was excitedly planning for his first child. Only a few months into the pregnancy, however, Mme. Argou lost the baby. This hard blow, along with the added stress of creating the second edition of his *Treatise*, was too much for Laennec to handle. On April 20, 1826 he drew up his will after being diagnosed by his nephew, Meriadec Laennec, who heard the fateful sounds of tuberculosis by using Laennec’s stethoscope. He left Paris for the last time on May 30 when he returned home to beloved Brittany.

During his last days Laennec had added a codicil to his will, bequeathing his stethoscope, which he referred to as, “the best part of my legacy,” to his nephew. Like so many he had known and loved, Laennec was killed by tuberculosis—a disease which he understood like no physician before him. Regardless of his ever-present sickness, he dedicated his life to knowledge and healing. His Uncle Guillaume once told him, “Our calling is like a set of chains that one must carry at all hours of the day and night.”

### Books

*Dictionary of Scientific Biography*, Volume 7, Charles Scribner’s Sons, 1973.  
Nuland, Sherwin B., *Doctors: The Biography of Medicine*, Knopf, 1988.

### Periodicals

*American Journal of Medicine*, February 1991, p. 275.  
*Chest Surgery Clinics of North America*, February 2000, p. 9.  
*Journal of Family Practice*, Vol. 37, No.2, 1993, p 191.

### Online

“Rene Laennec,” *A and E Network Biography*, <http://www.biography.com> (January 31, 2001). □

## Stephen Langton

**Stephen Langton (died 1228) served as England’s Archbishop of Canterbury, the highest ecclesiastical office in the land. He played an important role in events surrounding the fabled Magna Carta, signed by the English king in 1215. Though the document specified certain rights to England’s landed aristoc-**

**racy, it is sometimes heralded as the first formal declaration of human rights in history.**

Little is known about Langton's life outside of his writings on theological matters and his tenure as an emissary between his onetime foe, King John, and the English barons. Not even a portrait of him survives. He was thought to have hailed from Lincolnshire, in the north of England, and was likely born in the mid-1150s. His father, Henry, possessed a small manor home and some property there, where ancestors from Denmark had likely settled some 200 years earlier. Around Lincolnshire at the time of Langton's youth were several famous monasteries and abbeys, and he came of age during a period of strife between the church and monarch in England. Henry II, who ruled from 1154 to 1189, named his chancellor, a layman, as head of the church in England. Thomas a Becket, however, came to oppose Henry's increasing thirst for power, and fled to the Continent for a time. Before he left, he hid in the Lincolnshire area, and was sheltered by the monks of the Gilbertine order. The quarrel was mended for a time, but supporters of the king murdered Becket in Canterbury Cathedral in 1170. All of this occurred during Langton's childhood.

Both Langton and his brother Simon opted to become members of religious orders. He later wrote that his decision to enter a monastery scandalized his father. Langton served as prebendary at York for a time—a member of clergy who receives a stipend—and went to Paris around 1181. He studied there among the loose coalition of masters and pupils at what would become the famed Université de Paris, then taught there himself until 1206. During his student days he befriended an Italian cleric, Cardinal de Conti, who would later play an important role in his life. At the time, Paris was the Western world's most renowned center of learning, and was especially famed for theologians continuing the work of early Christian scholars, who formulated the principal doctrines of the faith. Paris was a small city at the time, mostly situated on the Île de Paris, and during the entire 25 years of his stay there, Langton could hear the noises of the workers who built the Notre Dame cathedral. Langton's tutor, Peter the Chanter, wrote critically of the grandiosity and expense of this church.

### Contributed to Modern Bible

Langton earned a doctorate in arts and theology from Paris, and began delivering what were termed *questiones*, or lectures on theological or moral problems. He also wrote extensively on the Bible. An important Vulgate, or common edition, appeared from the Université de Paris theologians during the thirteenth century, and Langton worked on the project himself. He is credited for dividing the books of the Bible into chapters. The Paris Vulgate served as the standard version for the next two centuries, and the first printed—not hand-copied, as was the method in Langton's day—editions of the bible from Johann Gutenberg's press were based on this revision. The chapter divisions he devised were still in use eight centuries later.

Langton penned theological treatises and discourses on the topics of heaven, hell, transubstantiation, and prayer. Answering the question of whether the devil sins with all his might, Langton wrote: "The devil wishes to be either good or bad. If the former, when he does evil he must feel the sting of a biting conscience, that is to say, *synderesis*; and authority says that *synderesis* is extinct in the devil. If he wishes to be bad, he wishes to deserve punishment and so to be punished. It may well be that the devil is so obstinate that he wishes to be bad and yet does not wish to be punished."

### Appointed Archbishop

During the course of his career in Paris, Langton and his questioners, along with extensive commentaries he wrote on books of the Old and New Testaments, brought him such renown that he became known as "Stephen with the Tongue of Thunder." He was summoned to Rome by Pope Innocent III, the former Cardinal de Conti, who recognized in Langton an ally in his battle with the new king of England. The favorite, but youngest son of Henry II, John was given lands in France, the earldom of Gloucester, and the lordship of Ireland, which caused resentment among his brothers. When the eldest succeeded to the throne in 1189 as Richard I (the Lionhearted), John promised to remain in France. But he conspired against his brother, attempting to seize the throne while Richard was away on a Crusade to the Holy Land. In the spring of 1199, Richard died and John ascended to the throne.

During his reign, John became embroiled in a dispute with the church over the throne's right to appoint bishops. It was a dispute that stretched back to the time of Thomas a Becket. John had a formidable foe in Pope Innocent III, who was consolidating the church's political power at this time after a noticeable decline of the Holy Roman Empire. After the death of the archbishop of Canterbury in 1205, the king and the English clergy failed to come to an agreement on an acceptable successor. The Pope favored Langton, and named him a cardinal priest of St. Chrysogonus in 1206. The following spring, he was elected the archbishop of Canterbury by the monks of Christ Church in a vote at which Innocent was present. He was consecrated on June 17, 1207.

### Stalemate Kept Him in France

The move deepened the crisis between John and Rome. The king barred the new archbishop from entering England, and then began demanding revenues from churches, monasteries, and other religious institutions. In response, Innocent placed England under an Interdict, which prohibited Mass, marriages, and even church bells from ringing, beginning in March of 1208. The following year, hoping to end the stalemate, Langton sailed to Dover and sent word to the throne that he would negotiate with the king there. John, however, refused to travel farther than Kent, and Innocent then excommunicated the king in November of 1209. Meanwhile, in domestic matters, John was encountering opposition from his barons, who resented the increase in taxation necessary to finance an ongoing war with France.

In 1199, 1201, and 1205, John promised his barons certain rights, but continued to ask them for more money.

For several years Langton lived in Pontigny, a Cistercian monastery in Auxerre. Historians know that during this period his father, Henry of Langton, was forced to flee to Scotland, because he feared trouble from the king or his agents. By 1212, John was planning an incursion into France to regain lands he had lost to its king, Philip II, in 1204. Worried that the French would ally with the Pope against him and invade England, John decided to make peace with Innocent. In November, he agreed to recognize Langton as the archbishop of Canterbury. In May of 1213, John symbolically surrendered his crown to Pandulf, the papal legate, who then returned it to him with the church's blessing at Ewell, near Dover.

### Told Barons of Historic Precedent

Langton arrived in England in July of 1213. He and the other prelates met with John at Winchester, and absolved him from the order of excommunication. Problems between John and the barons continued, however, and the archbishop soon became involved as well. A 1212 plot to murder or at least desert the king in a battle with the Welsh came to light, and Langton forced John to provide a fair trial for the accused barons. In August of 1213, he delivered a sermon at St. Paul's Cathedral in London before an assemblage of barons and clergy. That same day, he allegedly met in private with some of the barons and revealed that during his studies in Paris, he learned of a charter from the year 1031, written on the occasion of Henry I's coronation. In it, the king granted the barons specific liberties.

With this legal precedent in mind, the barons created a new document, called the Unknown Charter because historians did not know of its existence until 1893. John balked at signing it, and the barons contemplated using force. Langton became the intermediary between the king and barons, and strongly discouraged the use of violence. Meanwhile, John's campaign against France had gone badly, and civil strife arose in England. Outright war erupted in May of 1215, and rebels captured London. After negotiating with them, the king met with the barons at a site called Runnymede, on the Thames River in Surrey, on June 19, 1215. There he signed their Magna Carta, or Great Charter. By this time, Langton had sided with the king against the barons, and was serving as his commissioner. It is thought that Langton, nevertheless, played a key role in the document's original drafting, and likely authored the first clause that granted the church and its bishops full ecclesiastical freedom. His is the first signature of witness on the document.

### First Statement of Rights

The Magna Carta formed the basis of English constitutional law by limiting the powers of the crown, enshrining feudal rights, and guaranteeing the freedom of the church. Other clauses formally recognized the customs of the towns, and stated that both subjects and communities had certain rights that the king could not encroach upon. Other areas of the document confirmed the validity of a trial by

jury and idea of habeas corpus—that a person must be brought before a court in person to determine if the detention is lawful.

The Magna Carta, despite the historical myth surrounding it, had a short life span. Other barons refused to accept it, and John appealed its terms to the Pope, who was now firmly on his side in the war against the barons. Innocent issued an order of excommunication for the barons, but Langton refused to publish it. His former ally in Rome then suspended him. John died the following year, and his son Henry III, not yet of majority, inherited the throne. Langton was reinstated to his Archbishopric in 1218. His role in forcing the removal of the papal legate in 1221 served to give his office of archbishop at Canterbury even more independence, for the absence of the representative from Rome made Langton *legatus natus*, or legate in his own right. In 1222, he authored a set of constitutions that formed the basis of English ecclesiastical law, and were still used by the courts seven hundred years later. In 1225, the Magna Carta was reissued, and seventeenth century alterations like the Petition of Right and the Habeas Corpus Act helped make it more than a just a document that confirmed feudal privileges. The U.S. Constitution contains several phrases that are clearly linked to it. Langton died in Sussex in July of 1228. He was buried at the Canterbury Cathedral.

### Books

Dickinson, Patrick, *A Durable Fire*, Chatto and Windus, 1962.  
Powicke, F. M., *Stephen Langton: Being the Ford Lectures Delivered in the University of Oxford in Hilary Term 1927*, Barnes and Noble, 1965. □

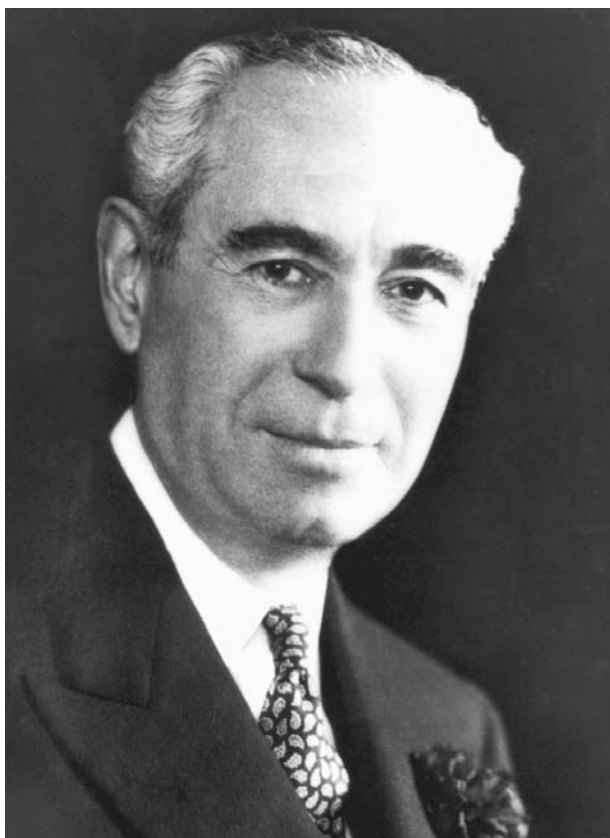
## Albert Lasker

**Albert Lasker (1880-1952) was a prominent advertising executive during the first half of the 20th century. During his 40-year tenure with the Chicago-based Lord and Thomas, Lasker built the company into the largest advertising agency in the United States. Through his innovation and leadership, he helped to usher in the new age of modern advertising.**

**A**lbert Davis Lasker was born on May 1, 1880, in Freiburg, Germany, the third of eight children born to American parents Morris and Nettie Heidenheimer Davis Lasker, who were both of Jewish and German descent. When Lasker was old enough to travel, the family returned to its home in Galveston, Texas, where Lasker spent his youth.

His father was a successful businessman and served as president of several banks. Morris Lasker loved his family, but his demanding personality and high expectations of his children, especially Albert, were tempered by few displays of affection. As a result, Lasker's childhood was a mixture of privilege and disappointment. Though he could never com-





pletely satisfy his father, Lasker felt a deep bond with him that lasted throughout his life.

During his days in elementary school Lasker was only an average student. Although not academically inclined, Lasker was a high achiever. When he was just 12 years old, he started his own newspaper, the *Galveston Free Press*. The four-page weekly was written, edited, and published by Lasker. With the motto "advertise and make good," Lasker sold advertising space to local merchants. Over its yearlong run, the paper turned a profit of \$15 a week. At the age of 13 he closed down the *Galveston Free Press* and took a job as a reporter for the *Galveston Morning News*, impressing his superiors by obtaining an exclusive interview with socialist leader Eugene Debs by posing as a telegraph messenger. In high school Lasker served as editor of the school magazine and helped his father with bookkeeping duties.

### Journalism or Advertising?

After graduating from high school, Lasker worked briefly for the *New Orleans Times-Democrat* and the *Dallas News*. He returned to Galveston with his mind set on pursuing a newspaper job in New York City, a decision his father firmly opposed. Finally, Lasker agreed to a compromise with his father: Lasker would spend three months in Chicago, working at Lord and Thomas, an advertising firm with whom his father had done business. If Lasker was not content after three months, his father would allow his son to travel to New York. At 18, Lasker went to work at Lord and

Thomas sweeping floors and cleaning up for ten dollars a week.

Lasker had every intention of appeasing his father, enjoying Chicago, and then heading for New York when his three-month stint was complete. However, during his first month in Chicago, he lost \$500 in a craps game. Afraid to face his father and without money to pay the debt, Lasker convinced one of his bosses, Ambrose Thomas, to advance him \$500 in salary. Thomas agreed, but Lasker had to stay at Lord and Thomas to pay off his advance. By this twist of fate, Lasker became tied to Lord and Thomas—a relationship that would last over 40 years. Rather than becoming a newspaperman, Lasker instead became one of the leading names in advertising.

### Advertising Success

For a time Lasker continued to work as an office boy. When a salesman resigned, Lasker implored Thomas to let him take over the man's territory until a replacement was found. Working on the road in Ohio, Indiana, and Michigan, Lasker excelled in his new position. Within three months, he brought in more than \$50,000 in new business.

Traditionally, businesses wrote their own advertisements and then paid advertising agencies a ten percent commission for placing the ad. Convinced he could improve advertisements, Lasker approached the Wilson Ear Drum Company with a new offer. He proposed that the company allow Lasker to supply ad copy for an increased commission of 15 percent. He also guaranteed an increase in sales or a refund of the additional five percent. The client agreed. Lasker employed a friend in the newspaper business to write the ad. The new slogan "You Hear! When you use Wilson's Common Sense Ear Drums" was such a success that the company increased its spending at Lord and Thomas from \$36,000 a year to more than \$240,000.

By 1901 Lasker was making a name for himself within Lord and Thomas, doubling his original salary to \$5,000 a year. In the same year he met and fell in love with Flora Warner. The two married and had three children. The following year Lasker doubled his salary once more, to \$10,000. Along with turning the firm's attention to writing copy for the first time, Lasker also contributed to the growth of the company and the industry by pushing for a new emphasis on recording advertising results. In 1900 a "record of results" department was created and the agency began to keep a tally of sales provided by its 600 clients. For the first time the agency could track which ads worked and which ads failed to produce. Lasker had often pondered why some ads succeeded and others did not. Now, if an ad did poorly in a variety of newspapers and magazines, the firm changed the copy. If an ad performed well in some publications but not in others, the client could cut its placements accordingly.

### Became a Partner

From early on, Lasker had his eye on becoming a partner in Lord and Thomas. In 1904, after Lord retired, Lasker, who was by then making \$50,000 a year at age 24, bought a quarter share of the company. As a partner, Lasker

could turn his attention to his primary interest, copy writing. Although he never wrote advertising copy himself, he had a keen sense of what he wanted. Believing that the advertising business depended on the quality of the copy, Lasker created the first in-house copy writing department. He hired talented writers and paid them at four times the rate of other agencies. In return, he expected results. Those who did not produce seldom remained long at the firm.

Lasker's ideas about advertising copy were influenced by a writer named John E. Kennedy. According to a classic story told in the advertising world, one day in 1904 Lasker received a note from Kennedy, who was waiting in the lobby. The note said that Lasker did not know what advertising was and if he wanted to know, he should let Kennedy tell him. Intrigued, Lasker sent for Kennedy, who sold Lasker on a definition of advertising as "salesmanship on paper." Kennedy believed that an advertisement should say what a salesperson would say in a face-to-face conversation. Instead of flowery language and pretty pictures, the ad should offer reasons why the customer should buy the product. Kennedy's "Reason Why" approach instantly appealed to Lasker, who hired Kennedy as his top writer.

With Lasker in charge of editing all copy and offering ideas for campaigns, Lord and Thomas grew to be the largest advertising firm in the United States. When Lasker acquired another part of the agency after Thomas's death in 1906, Lord and Thomas was billing \$3 million annually. By 1912, when Lasker became sole owner of the firm, that amount had doubled to \$6 million, and the firm had offices in New York, Toronto, Paris, London, San Francisco, and Los Angeles.

### Complex Personality

Lasker was charming and persuasive and loved having power. According to Stephen Fox in *The Mirror Makers: A History of American Advertising and Its Creators*, "Whether speaking or in a brief moment of listening, he radiated a vibrating aura of vitality, of childlike curiosity and bubbling humor, and an unarguable certainty that he was the dominant figure in the most important business in the world." At the same time, he was emotionally unstable at times, suffering at least three nervous breakdowns, the first in 1912. Like his father, he was demanding and ruthless toward those who failed to meet his high expectations. Every few years he would fire a portion of his staff, leaving those who remained in constant fear of the next firing spree.

Under Lasker's leadership, Thomas and Lord acquired many large accounts. After securing Sunkist Growers, Inc., as a client, Lasker popularized the idea of drinking orange juice. In 1911, Lasker, along with one of his writers, created a Palmolive dish soap campaign that soon made it the leading brand. Lasker was also responsible for the advertising accounts of Van Camp's, including its canned pork and beans; Goodyear Tires, the "1900" Washer Company, and the Quaker Oats Company.

Lasker had several interests outside of advertising. He purchased a major share of the Chicago Cubs, built a golf course on his property, and played a regular game of poker with friends. Beginning in 1918 he was involved with poli-

tics for several years, first coordinating the publicity for several Republican candidates and then becoming an advisor to Warren G. Harding's campaign for president. He also directed the U.S. Shipping Board for a time, but he did not particularly enjoy the work. When he learned that Lord and Thomas was no longer the largest ad agency in the country, he returned to advertising full time and resumed direct control of daily operations.

### Secured Big Accounts

Lasker rebuilt the company into the nation's top agency by developing the advertising campaign that made Kimberly-Clark products Kotex and Kleenex leading sellers. He landed his largest account in 1923 when he took over the American Tobacco Company's Lucky Strike campaign. Lasker had noticed that women were discouraged from smoking in public. Seeing an almost completely untapped group of buyers, Lasker set about to change public opinion. Using advertisements featuring famous women smoking, Lasker was able to break the social taboo. Women began to smoke in unprecedented numbers, and Lucky Strike was the brand they most often chose, making it a top seller and earning Lord and Thomas millions of dollars.

In 1926 Lasker acquired the Radio Corporation of America (RCA), which operated the National Broadcasting Company (NBC). As a result, Lasker pioneered the use of radio as an advertising medium, and within two years Lord and Thomas held over 50 percent of all advertising accounts aired on NBC radio.

After surviving the Great Depression of the 1930s, Lasker's world was shaken in 1936 by the death of his wife, Flora. She had been a semi-invalid most of their married life due to earlier bouts of typhoid fever and phlebitis. He retired for a time from Lord and Thomas in 1938, then met and married actress Doris Kenyon. The marriage ended in divorce within a year. Lasker then married businesswoman Mary Woodard Reinhardt and returned to the helm of Lord and Thomas once more. However, just two years later, the 62-year-old Lasker decided to retire for good. He placed the company in the hands of his three senior executives, and on December 30, 1942, Lord and Thomas became Foote, Cone, and Belding. Lasker, having made a tremendous impact on the development of the modern advertising age, died of cancer on May 30, 1952.

### Books

*American National Biography*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.  
Applegate, Edd, *Personalities and Products: A Historical Perspective on Advertising in America*, Greenwood Press, 1998.  
Fox, Stephen, *The Mirror Makers: A History of American Advertising and Its Creators*, William Morrow and Co., 1984.

### Online

"Albert Davis Lasker," *Dictionary of American Biography, Supplement 5: 1951-1955*. <http://www.galenet.com> (January 18, 2001).  
"Albert Lasker," *Gale Encyclopedia of U.S. Economic History*, <http://www.galenet.com> (January 18, 2001).

"Lasker, Albert Davis," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (January 18, 2001). □

## Jesse Lasky

**The most powerful man in Hollywood during the heyday of the silent film, Jesse Lasky (1880-1958) was a pioneering movie mogul who co-founded Paramount Studios. A studio executive known for being prolific, Lasky was credited with producing more than 350 motion pictures between 1921 and 1930. He continued making films for several decades after that as an independent producer.**

Lasky was one of the men responsible for putting Hollywood on the map. In 1913, he formed a production company with Cecil B. DeMille and Samuel Goldfish (later known as Samuel Goldwyn). The Jesse L. Lasky Feature Play Company had a big hit with its first film, DeMille's western epic *The Squaw Man*, and its success jump-started the southern California film industry. For many years after that, the likeable Lasky showed he had the knack for turning out profitable pictures.

### Hollywood's Founding Fathers

Lasky was the descendant of German immigrants. His grandparents crossed the United States in a covered wagon and settled in California. He was born in San Francisco in 1880 to Sarah (Platt) and Isaac Lasky. The family moved to San Jose, where Jesse attended high school and learned to play the cornet. He acquired some business skills by helping out in his father's store.

As a young man, Lasky dipped his toes in several possible careers. He learned show business by being an assistant in a traveling medicine show, the popular western U.S. entertainment of the late nineteenth and early twentieth centuries. For awhile he was a newspaper reporter.

After his father's death, his destitute family raised \$3,000 to send Lasky to join the gold rush in Alaska. But instead of gaining a fortune, he lost all his money. He paid his return fare by playing cornet at a nightclub where miners threw coins and sacks of gold dust at dancing women. Lasky next moved to Hawaii, where he became a popular band-leader.

Returning to the U.S. mainland, he teamed up with his sister Blanche, who also played cornet, and they formed a touring vaudeville act. Lasky eventually turned from performing to promoting short plays and other vaudeville acts. As a booking agent operating in New York City, he became wealthy despite losing \$110,000 bringing the French musical *Foilies Bergiere* to New York City. In 1912, after years in vaudeville management, Lasky set up a restaurant in New York, but it failed and he lost \$100,000.

Meanwhile, Blanche Lasky had met and married Goldfish, who changed his name a few years later in an attempt



to downplay his Jewish ancestry. Goldfish and Lasky teamed up with DeMille, then a struggling but ambitious young director, and founded the Jesse L. Lasky Feature Play Company with an initial capital investment of \$20,000. Despite the name, Lasky was vice-president of the company and Goldfish was president.

The trio decided to shoot their first film in Los Angeles, a place where no movie had ever been made. The company set up a production studio on Sunset Boulevard. At the time the area was rural, with few amenities. But DeMille's ambitious picture would change all that. The remarkable success of *The Squaw Man*, the first fictionalized western to establish a mass following, turned Hollywood into the center of American film production. During the town's formative years as a movie capital, Lasky and his partners played a key role.

In 1916, the company merged with Adolph Zukor's Famous Players, a group which had a well-oiled distribution network, to form Famous Players-Lasky. Zukor was a formidable money-raiser, on good terms with West Coast businessmen, and he competed with Lasky and Goldfish in a complicated power struggle for control of the new company. Meanwhile, DeMille was happy turning out ever-more-lavish films, and the corporation prospered. Zukor eventually became president and Lasky was named vice-president in charge of production. Goldfish, upset by Lasky's alliance with Zukor, left the group; he would go on to found MGM Studios. After a few more mergers, the Famous Players-Lasky Company became Paramount, which

would be a major force in filmmaking for the rest of the century and into the next.

### Studio Kingpin

From 1916 through 1932, Lasky was in charge of Paramount's productions in both Hollywood and New York. Under his guidance, the studio cranked out hit after hit. Lasky also pioneered a near-monopolistic distribution method, which ensured his company's success. For a theater owner to show a Paramount film, the exhibitor had to agree to book all the studio's productions for an entire year. By 1921, Paramount dominated the field of film distribution, running the first national movie advertising campaigns and showing its movies in more than 11,000 theaters in the United States. The company owned several hundred theaters, including the three largest in New York and two of the largest in Los Angeles. Control of theaters in key cities meant the studio could effectively freeze out competitors.

Despite his ruthless business methods, Lasky was a well-liked man in Hollywood. He encouraged his directors to be independent and rarely interfered with their creativity. As Paramount consolidated its dominant position in the American film industry, it began luring the biggest stars of the silent film era from other studios, or, in some cases, discovering them and giving them their starts. By the early 1930s, the roster of Paramount recruits included Mary Pickford, Rudolph Valentino, Marlene Dietrich, Gary Cooper, Gloria Swanson, Fatty Arbuckle, Mae West, Carole Lombard, the Marx Brothers, W.C. Fields, Claudette Colbert and Maurice Chevalier.

Lasky and Zukor also attracted directors, who were impressed by the big budgets that DeMille commanded for his famous epics of the era, such as *The Ten Commandments* and *The Covered Wagon*. From Germany came directors Ernst Lubitsch and Josef von Sternberg. Top writers groomed at Paramount during the 1920s and early 1930s included future writer-directors Billy Wilder and Preston Sturges.

In 1927, Lasky's worth was estimated at \$20 million, an enormous sum in those days. On his estate in Hollywood he had built the first tennis court and swimming pool in town. He was the epitome of a movie mogul.

### A Change of Fortune

Everything changed at Paramount in 1932. The company's key investments in the stock market evaporated in the wake of the Wall Street meltdown. The Great Depression hit Lasky especially hard. His personal stock holdings were all but wiped out. A belt-tightening was inevitable in order for Paramount to survive. For their poor management of the company's investments, Zukor and Lasky were both disciplined. Zukor, who had assumed a more important role than Lasky in the company, remained as the president, but Lasky was forced out of the studio. The company declared bankruptcy but eventually reorganized as Paramount Pictures in 1935.

Lasky joined Fox Studios and for three years produced films for that studio, including *The White Parade*, which was nominated for an Academy Award for the best film of

1934. In 1935, Lasky was again the odd man out after Fox merged with Twentieth Century Pictures, headed by mogul Darryl Zanuck. Lasky briefly formed a partnership with the savvy silent film star Mary Pickford, called the Pickford-Lasky Corporation. Lasky then moved on to United Artists, where he produced two more films, and next signed up with RKO Pictures, where he lasted a year.

The career of the once-most powerful man in Hollywood had deteriorated so quickly that by the late 1930s Lasky began working as a radio producer, taking charge of a talent show. He had lost almost his entire fortune. In 1941, however, Lasky made a comeback. Director Howard Hawks and actor Gary Cooper, an old friend of Lasky, signed onto a project that Lasky had been trying to get produced for some time. The film was sold to Warner Brothers. A patriotic war story named *Sergeant York*, it became a critical and commercial success.

Following the success of *Sergeant York*, Lasky made several more films for Warner Brothers, including *The Adventures of Mark Twain* in 1944 and *Rhapsody in Blue*, a biography of George Gershwin, in 1945. These three films—among many others that he produced—reflected his undying belief in the virtues of the American democratic system and its ability to produce high achievers out of common men.

After 1945, Lasky returned to RKO and produced films such as *The Miracle of the Bells* in 1948. In 1950, he moved to MGM, the studio founded by his first partner, Goldwyn.

Moviemaking was in Lasky's blood. His marriage to Bessie Ginzberg in 1909 produced a daughter, Bessie Dorothy Lasky, and two sons. The sons both went on to succeed in the movie business. Jesse Lasky Jr. became a screenwriter, working mainly in westerns and adventure films. Among his credits were *Union Pacific* and DeMille's 1956 remake of *The Ten Commandments*. His brother William, 14 years younger, became an assistant director.

In the waning years of his life, Lasky was hounded by tax collectors. All the years of uncertain employment had exacted their toll. He owed so much in back taxes to the federal government that he could never again hope to succeed financially. In 1957, he returned at last to Paramount, the studio he had helped to establish, and he was trying to finance a new movie project when he died in January 1958.

Lasky's career is difficult to assess in critical terms. As a mogul at Paramount, he produced hundreds of films, including many that were famous and memorable, but it is impossible to know which of those he personally had a hand in. As an independent producer after 1932, Lasky had few notable successes except for *Sergeant York*. That film was nominated for an Academy Award for Best Picture in 1941, but did not win, and no Oscars ever were bestowed on Lasky.

Clearly, Lasky left a lasting impression on Hollywood in the studio system he helped to create. But beyond that, there might never have been a Hollywood as it is known to moviegoers worldwide were it not for the enterprising spirit of Jesse Lasky.

## Books

- Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.  
 Smith, John M., and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.  
 Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

## Periodicals

- Architectural Digest*, April 1996.  
*Dearborn Independent*, November 3, 1921.

## Online

- "Jewish Heroes and Heroines in America," Florida Atlantic University Libraries, <http://www.fau.edu/library/br111.htm>  
 "Jesse L. Lasky," Mr. Moody, [http://www.mr-moody.com/goldenboy/whoswho/lasky\\_j.htm](http://www.mr-moody.com/goldenboy/whoswho/lasky_j.htm).  
 "The Producer, the Distributor, the Exhibitor, *Baring the Heart of Hollywood*," [http://www.cinemaweb.com/silentfilm/bookshelf/26\\_bar\\_2.htm](http://www.cinemaweb.com/silentfilm/bookshelf/26_bar_2.htm). □

# Nicolas Leblanc

**Nicolas Leblanc (1742-1806) was a French surgeon and chemist who discovered how to manufacture soda from common salt. The "Leblanc process" was key to making soap, glass and other products from soda ash.**

Nicolas Leblanc was born on January 6, 1742, in Ivoy-le-Pre, France. His father, a minor official at an iron works, died in 1751. Leblanc was sent to Bourges to live with Dr. Bien, a close family friend. Under the influence of his guardian, Leblanc developed an interest in medicine. When Bien died in 1759, Leblanc enrolled at the Ecole de Chirurgie in Paris to study medicine.

Graduating with a master's degree in surgery, Leblanc opened a medical practice. He married in 1775, and the couple's first child followed four years later. Unable to provide adequately for his family on the medical fees he obtained from his patients, Leblanc in 1780 accepted a position as the private physician to the household of the Duke of Orleans, later known as the revolutionary figure Philippe Egalite.

During this time, the study of chemistry was becoming more popular. Leblanc, having obtained financial stability in a position that allowed him a substantial amount of free time, began conducting experiments. He started with the study of crystallization, primarily because the material required for the experiments was inexpensive. In March 1786 he sent his results to the Academy of Sciences, which recommended that Leblanc "consider the formation of a complete collection of crystallized salts" and that this research be supported by the government. However, because of the turmoil that followed the French Revolution, the Academy was dissolved before its recommendations could be followed.



In 1794 the Committee of Public Instruction offered to support Leblanc's research. However, the chaotic social situation again kept Leblanc from getting his work on a solid footing. Eventually, the Committee on Public Instruction did manage to get public funds to underwrite the publication of Leblanc's crystallization research, detailed in the 1802 work *De la Cristallotechnie*.

Jean Darcet, the chair of the chemistry department at the College de France, became aware of Leblanc's research in 1786 and suggested Leblanc work on the problem of the production of pure nickel. Not published until 12 years later, the results were relatively insignificant and inconclusive; however, the work is evidence of Leblanc's early interest in industrial chemistry.

## The Soda Crisis

Of much greater importance was Leblanc's next project: the creation of soda from non-organic sources. At that time, the main source for soda was wood ashes, and the wood supply in industrial Europe was diminishing. As a result, most of the sodium carbonate that the French glass, textile, and soap industries needed was imported from Spain, at a substantial price. Other markets, such as Russia and North America, were too distant and shipping costs too high to provide a practical solution.

Although soda was already being industrially produced from salt, the process was neither efficient nor cost-effective. The development of an inexpensive method of preparing soda from sea salt—the cheapest and most obvious

source—became a national imperative for France. In 1783 King Louis XVI ordered the Academy of Sciences to offer a reward for the invention of an economical method of decomposing sea salt on a large scale. Although the Academy was dissolved before any prize was awarded, the contest was surely an important factor in Leblanc's decision to turn his attention to soda.

### Developed the Leblanc Process

Leblanc began his study of the development of sodium carbonate around 1784. After making some progress, Leblanc approached the Duke and requested his financial support. The Duke agreed on the condition that Darcet, a longtime consultant to the Duke, be included in the process. Leblanc was allowed to set up a laboratory at the College of Paris, and Darcet assigned J. Dize, his assistant, to collaborate with Leblanc.

The process by which Leblanc developed sodium carbonate is not known, nor is the exact date. Most likely the method was developed in 1789 after several months of work in the laboratory. After numerous attempts and partial failures, Leblanc eventually succeeded in isolating soda crystals by fusing sulfate, coal, and limestone. In its final incarnation, the method, which became known as the Leblanc process, produced sodium carbonate by first exposing sea salt to sulfuric acid, and then converting the product to soda by calcinating (heating at a high temperature) with limestone and charcoal.

Once the process was established, Leblanc turned his attention to producing soda. He and Dize went to London, where the Duke had been sent as a result of rising political tensions, to discuss the necessary steps. An agreement reached on March 27, 1790 among Leblanc, Dize, and Henri Shee, the Duke's steward, stipulated that Leblanc submit a complete description of the process, which would be certified by Darcet. Dize also submitted his invention of a method for manufacturing sal ammoniac, a complementary process to the production of soda. In return Leblanc and Dize were to receive 200,000 livres to pursue the development of a profitable business of soda production.

In 1791 Leblanc applied for a patent. According to Ralph E. Oesper in the *Journal of Chemical Education*, a board of examiners reported: "Having carefully examined the method employed by said M. Leblanc for producing soda by the large-scale decomposition of sea salt, we acknowledge that the invention is new and very superior to all that up to now have come to our knowledge as regards to economy, speed and certainty of the method as well as regards to the abundance and purity of the products. We believe that the discovery of M. Leblanc for political and economic reasons merits the encouragement of the French nation, and that the secret of his discovery should be well guarded." Leblanc was granted a secret patent on September 25, 1791, which gave him the sole right to the process for the next 15 years.

### Soda Plant at St. Denis

A manufacturing plant was built in St. Denis, a small village located four miles outside of Paris, and production

began. With a production rate of between 500 and 600 pounds of soda every day, the soda works had sales totaling 420,000 livres by the spring of 1794. However, the unstable political times brought devastating changes to Leblanc's operation. First, there was a critical shortage of potash (previously the primary source of soda), because it was needed to produce gunpowder, so the French government instructed all soda manufacturers to disclose plant production levels, processes, and sales. Leblanc was ordered to reveal the secrets of his invention. Second, Leblanc was further hampered by the arrest of the Duke, known during the Revolution as Philippe Egalite, and his subsequent beheading on November 6, 1793. The Revolutionary government confiscated all his property, including his interest in the soda plant. In effect, the French government became the chief shareholder of the business.

In the chaos of the revolution, the government suspended production at Leblanc's plant. Even though a review committee highly recommended the operation and commended Leblanc and Dize for their patriotism for revealing the secrets of the process, the French government established soda production at other locations, leaving Leblanc's plant closed. Rather than being allowed to provide his country with soda, Leblanc was ordered to leave the premises, including the house on the factory grounds in which he lived with his wife and children. He received no financial reward for his chemical contribution, nor for his interest in the soda plant. Just months before, Leblanc stood at the threshold of financial success; suddenly he was thrown into poverty.

### The Revolution and Aftermath

Leblanc held several government positions after the soda operation was shut down. Beginning in 1792, he served as the administrator to the Department of the Seine for five consecutive terms, but he received no salary for his work. In January 1794 he secured a salaried position as the commissioner of powder and saltpeter, but the department was dissolved within six months, along with Leblanc's job. In February 1794 he was appointed to the temporary Commission of the Arts, a branch of the Committee of Public Instruction. He was responsible, again without remuneration, for taking an inventory of the contents of properties confiscated by the government, including those facilities left vacant because their owners had been guillotined.

In June 1795, as the Revolution was winding down and France was working to restore normalcy, Leblanc was appointed by the Committee on Public Safety to investigate the steps necessary to rebuild the mining industry. After sending back numerous papers and information from the mining regions, Leblanc was named director of a copper and alum mining operation. Although he was supposed to receive a salary and reimbursement for expenses, he never did. After one year, he returned to Paris in desperate financial straits.

Constantly attentive to chemical processes that could be used in industry, Leblanc began researching the possible use of the ammonia that is released when organic matter is subjected to heat. In time, Leblanc developed the use of

animal waste to create ammonia, which in turn provided a useful fertilizer. After developing a small-scale mechanism that effectively produced ammonia from animal waste, Leblanc petitioned the government for a grant to establish a commercial plant. He also requested an exclusive patent and the sole rights to certain waste facilities. Although none of his requests were honored and his efforts to establish a plant failed, he can be credited with important developments in the study of fertilizers.

Leblanc's troubles continued. He could not find adequate employment. Considering himself to be academically inadequate, he declined a faculty position offered to him by the Ecole Centrale in Alby in 1796. The following year he secured a place on the Council of Conservation, but before his nomination was acted upon, the minister of interior was replaced, and the new director made different appointments. In 1798 Leblanc won an election for the office of second deputy of St. Denis, but the election was contested and the seat was awarded to his opponent. His struggles were exacerbated by a family tragedy: his 16-year-old daughter became suddenly paralyzed and died six months later.

### Failure and Depression

LeBlanc still hoped someday to reopen his soda plant or at least to be compensated for his discovery and investment. The Department of Public Safety finally awarded him 3,000 francs as payment for past services, but Leblanc received only 60 francs. By April 1801 Leblanc had enlisted enough support to persuade the French government under Napoleon to return the factory at St. Denis to him and his partners. Because Shee and Dize were otherwise occupied, Leblanc became the director of the whole operation. Despite his best efforts to revive the factory, Leblanc never reestablished a profitable business. The years of idleness had left the machinery in poor condition, and much of the necessary equipment had been confiscated and removed. Also, because Leblanc's process had become public knowledge, others had opened competing plants.

For several years Leblanc worked diligently to secure funds to revive his operation. Finally in November 1804, arbitrators determined LeBlanc was due payment of 52,473 francs—about \$10,000—from the government. It was far less than he had hoped, and no money was ever paid. Leblanc fell into deep depression. He became withdrawn and morose, and his health deteriorated. On January 16, 1806, he committed suicide in his study by putting a bullet in his head.

Later, Dize, who took the soda plant from Leblanc's family in payment for a debt owed him by Leblanc, made claims that he was the mastermind of the soda process. However, historians agree that Dize, a trained chemist who believed himself a superior scientist to Leblanc, was overstating his role in the development of the process, and that Leblanc should get the most credit for the first efficient, economical method of producing soda.

### Books

- Asimov, Isaac, *Asimov's Biographical Encyclopedia of Science and Technology*, Doubleday, 1964.  
*A Biographical Dictionary of Scientists*, Third edition, edited by Trevor I. Williams, Adam and Charles Black, 1982.  
*The Cambridge Biographical Encyclopedia*, 2nd edition, edited by David Crystal, Cambridge University Press, 1998.  
Daintith, John; Mitchell, Sarah, and Tootill, Elizabeth, *A Biographical Encyclopedia of Scientists*, Volume 2, Facts on File, 1981.  
*Dictionary of Scientific Biography*, Volume 8, edited by Charles Coulston Gillispie, Charles Scribner's Sons, 1973.

### Periodicals

- Journal of Chemical Education*, December 1942; January 1943.

### Online

- "Leblanc, Nicolas," *World of Invention*, <http://www.galenet.com> (February 5, 2001).  
"Nicolas Leblanc," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (February 5, 2001). □

## Rose Hum Lee

**Rose Hum Lee (1904-1964) was a sociologist trained in the famous "Chicago school" tradition of urban sociology, which focused on human ecology, natural history, and the assimilation of ethnic groups into the American mainstream. She built her career on researching Chinese immigrants in America, focusing on how they adjusted to urban life in the United States. Lee was strongly in favor of Chinese Americans leaving their traditions behind to become completely assimilated into the American way of life and she used her own family as an example of how to accomplish this.**

Rose Hum Lee was born in Butte, Montana on August 20, 1904. Her father, Hum Wah Long, immigrated to the United States from the Guangdong province in China in the 1870s. He arrived in California and worked his way to Montana doing various manual jobs such as ranching, laundry, and mining. He settled in Butte, Montana and became a successful business owner of a merchandise store in China Alley. At that time federal law prohibited Chinese women from immigrating to the United States, but Hum's success had allowed him to return to China to find a wife to bring back to America with him. Hum married Lin Fong and the couple had seven children together, of whom Rose Hum Lee was the second oldest.

During the late 1800s hundreds of thousands of Chinese emigrated to America to escape their war-torn country and to profit from either the gold rush in western America or the railroad business. When they could not capitalize on these ventures, many Chinese immigrants became small business owners, opening stores that did not require much

capital, such as laundries or restaurants. By 1870 nearly ten percent of Montana's population was Chinese. The Chinese were heavily discriminated against in Montana. A 1909 law prohibited Chinese from voting, owning property, marrying non-Chinese, or becoming citizens. Violence against Chinese immigrants was also common.

Lee's future was strongly influenced by her mother, an illiterate woman who emphasized education and independence in her children. Lee attended Garfield Elementary School, Washington Junior High, and Butte High School. She and all of her siblings were honor students in high school. When she graduated in 1921 she worked as a secretary and went to a local college for a brief period.

### Return to China

Lee met Ku Young Lee, a Chinese engineering student from the University of Pennsylvania, whom she married. The young couple moved to China and lived in Canton for nearly a decade. Lee worked in a variety of administrative positions in China. From 1931 to 1936 she worked for the Guangdong Raw Silk Testing Bureau. Then from 1936 to 1938 she had two jobs at the National City Bank of New York and the Sun Life Assurance Company. From 1937 to 1938 she added a third job at the Guangdong Municipal Telephone Exchange.

In 1937 the Chinese went to war against the Japanese and Lee worked in the Canton Red Cross Women's War Relief Association, the Overseas Relief Unit, and the Guangdong Emergency Committee for the Relief of Refugees. When the Japanese invaded Canton, Lee aided the resistance by working as a radio operator and translator. Her work in hospitals and orphanages led to her adoption of a daughter. While in China, Lee divorced her husband and then returned to the United States in 1939 with her daughter, Elaine.

### Sociological Training

With her mother's support Lee returned to school to pursue a career as a writer, teacher, and social worker. She put herself through college by working at odd jobs and lecturing about Chinese history and culture. She spoke about Chinese art, culture, customs, and history, as well as the experiences of Chinese immigrants in the United States. Lee would dress and speak American as she presented these lectures and afterwards she would change into a traditional Chinese dress and sell Chinese souvenirs. These engagements allowed Lee to pay for her own education. In 1942 she received her Bachelor of Science degree in social work from the Carnegie Institute of Technology in Pittsburgh. Next she moved to Chicago to start graduate school at the University of Chicago School of Social Work and Administration. She then switched to the sociology department where she earned her Master of Arts degree in 1943. Four years later Lee completed her doctorate from the same program. Her dissertation was on "The Growth and Decline of Rocky Mountain Chinatowns." In this work she used her own family as an example of how Chinese Americans could successfully assimilate to American culture. She took on the

sociological perspective of the "outsider" to study the people and places with which she was most familiar.

Lee's sociological training was strongly rooted in the "Chicago school," which was named for a specific approach to urban sociology which grew out of the University of Chicago in the 1920s and 1930s. One of the methodological techniques promoted by this school was the "natural history." Sociologists used this approach to study urban life, particularly with respect to ethnically segregated urban neighborhoods. Lee was strongly influenced by the work of the prominent urban sociologists Robert E. Park and Louis Wirth. Under their guidance, Lee adapted this approach to describe life in Chinatowns.

### Academic Career

In 1945 Lee joined the faculty of the sociology department at Roosevelt University, a new college in Chicago that promoted ethnic diversity among faculty and students. Upon completing her dissertation Lee wrote an article published in *Social Forces* in 1948 called "Social Institutions of a Rocky Mountain Chinatown" about life in Butte, Montana. She described how Chinese Americans sought to preserve certain social institutions from their homeland. Her next publication in 1949 on "The Decline of Chinatowns in the United States" is considered her most famous article. In this work she continued to pursue the natural history of Chinese American enclaves, particularly their growth and decline. In 1949 Lee also received a grant from the Social Science Research Council to continue her dissertation research on Chinese Americans. She expanded her previous work to include immigrant families in San Francisco. She was especially interested in comparing the established Chinese American families of the Rocky Mountain region to the newer immigrant families just arriving in California. Lee published an article based on this research in 1956 in the *Journal of Marriage and Family Living*.

Her extended research on Chinese Americans eventually led to her most famous book, *The Chinese in the United States of America*, published in 1960. In the introduction to the book Lee wrote, "This volume attempts to portray the social, economic, occupational, institutional, and associational life of the Chinese in the United States of America. The members of that community have often been discussed but seldom understood." This was a comprehensive look at Chinese American immigrants in terms of family life, social organization, religion, politics, health, and social problems. Lee also addressed how Chinese immigrants were treated by Americans and how they viewed themselves as a group.

In this book Lee examined how three different groups of Chinese Americans assimilated to American culture as immigrants. The first group was called "sojourners," those who emigrated to the United States for economic reasons but who planned to return to China. The second group was the "intellectuals" who left their homeland for academic or political reasons and who were affluent enough to live outside of Chinatowns. The last group was the "American-Chinese" who were either born in the United States to Chinese immigrants or who were legal U.S. residents. The



third group most readily embraced the American lifestyle because they planned to make their home in America.

Throughout this book and all of her work Lee was a strong supporter of racial and ethnic assimilation, another characteristic of the Chicago school. In the preface to the book, Lee clearly explained of Chinese immigrants: "Many of them have become so integrated in the societies where they themselves or their ancestors settled that they are indistinguishable from the local population: that is the ultimate ideal to which all Overseas Chinese should aspire." Lee believed that assimilation would be beneficial to Chinese Americans because it would lead to less discrimination. While she appreciated the cultural conflict between generations, Lee nonetheless believed that preserving traditional ways would be detrimental to the Chinese American community. In *The Chinese in the United States of America*, Lee wrote that "The American-born, especially, must resist the pressure of the older Chinese who try to impose Chinese norms, values, and attitudes on them or woo their loyalty by exhortations to 'save the face of the Chinese.' Face-saving covers a multitude of sins."

In 1951 Lee married for a second time to Glenn Ginn, a Chinese American lawyer from Phoenix, Arizona. In the 1950s her career continued to blossom as she became a respected theorist in urban sociology, a growing field in Chicago at that time. She wrote several more articles on various aspects of Chinese life, such as the history of Chinese American relations, Chinese abroad, and Chinese population changes. In 1955 she published her first book, *The City: Urbanism and Urbanization in Major World Regions*. The following year Lee became chairperson of the sociology department at Roosevelt University. She was the first Chinese American woman to head a sociology department in the United States. Three years later she was promoted to full professor.

### Impact on Community and Academia

In addition to her academic work, Lee also wrote two children's plays. In 1945 her play "Little Lee Bo-Bo: Detective for Chinatown" was produced at Chicago's Goodman Theater. She was also an active member of her community, especially concerned with race relations. She was a member of the Chicago Commission on Human Relations, the National Conference of Christians and Jews, and the Hyde Park-Kenwood Community Conference. She was also involved in many professional organizations, including the American Sociological Association, the American Association of University Women, and the Association for the Study of Social Problems.

In 1961 Lee took a leave of absence from Roosevelt University and moved to Arizona with her second husband. She taught at Phoenix College until 1963. Lee died of a stroke in Phoenix on March 25, 1964. While her academic career was fairly short, Lee's work on the Chinese American community influenced several disciplines, including history, sociology, anthropology, and political science. While later researchers did not agree with her views on assimilation, they nonetheless credit her portrayal of the community life of this particular ethnic group. Her work was a classic

example of the Chicago school approach to studying the human ecology of cities and the natural history of people and places.

### Books

- Lee, Rose Hum, *The Chinese in the United States of America*, Hong Kong University Press, 1960.  
*Women in Sociology: A Bio-Bibliographical Sourcebook*, edited by Mary Jo Deegan, Greenwood Press, 1991.  
 Yu, Hunry, *Thinking Orientals: A History of Knowledge Created About and By Asian Americans*, Oxford University Press, forthcoming.

### Periodicals

- Denver Rocky Mountain News*, May 7, 1996, p. 34A; May 24, 1997, p. 70A.

### Online

- "Butte's Far Eastern Influences," <http://www.butteamerica.com/fareast.html> (January 27, 2001).  
 "Rose Hum Lee," <http://www.montana.com/maiwah/rhlee.html.html> (January 27, 2001). □

## Otto Lilienthal

**With the design and construction of his first working glider, Otto Lilienthal (1848-1896) bestowed a sense of viability and respectability on the young science of aviation. Lilienthal flew thousands of flights on gliders he designed based on careful observations of birds. His work directly inspired Orville and Wilbur Wright.**

During the early days of the Industrial Revolution, notions of human flight were ridiculed. Yet Prussian design engineer Otto Lilienthal disregarded the social stigma associated with flying machine inventors and applied himself in earnest to the study of aerodynamic forces and design concepts. His hope was to further the quest to achieve manned flight. During his lifetime he accumulated 20 patents for his machine designs, including four for aviation devices.

His first crude aviation design was a simple pair of wings with which he attempted to gain altitude by jumping from a board. Eventually, Lilienthal achieved flight distances as high as 1,150 feet (350.75 meters) with his more sophisticated gliders. His efforts won international attention, and experts worldwide consulted him for assistance.

Lilienthal died tragically from injuries sustained in one of his flight experiments. Among his notes, lectures, and other writings he left information that proved invaluable to subsequent aircraft designers, including Wilbur and Orville Wright.



### A Tireless Engineer

Otto Lilienthal was born in Anklam, Prussia, on May 23, 1848. Together with his brother Gustav, Lilienthal developed an interest in flying. At any early age, the two boys began to observe the movements of birds to try to understand the mechanisms of flight. In elementary school, Lilienthal's curriculum included bird studies. From 1864 to 1866, Lilienthal studied mechanics at the Regional Technical School in Potsdam.

Lilienthal became a professional design engineer, but aerospace studies remained a hobby and a passion. He spent a year in an on-the-job training program at the Berlin Trade School, then three years at the Royal Technical Academy in Berlin. While still an engineering student in 1867, Lilienthal began to experiment with aerodynamics and human flight. The results of his early experiments, which he later published, proved helpful to others who yearned to fly, even after Lilienthal's death.

As the Franco-Prussian War raged, Lilienthal interrupted his studies and his career in 1870 and enlisted to serve for one year in the Prussian military. He took part in the siege of Paris and got his discharge from the military in 1871. After his military service he was employed as a mechanical engineer at the Weber Company in Berlin. In 1872 he also joined the C. Hoppe machine factory in Berlin as a construction engineer. Lilienthal remained with both companies until 1880. Seemingly indefatigable, he founded a boiler factory the following year, based on machines of his own design. There he manufactured pulleys, sirens, and

other apparatuses in addition to boilers. He pioneered a profit-sharing program for his factory workers in 1890.

Lilienthal married Agnes Fischer in 1878, and they had four children. The eldest, Otto Jr., was born in 1879. Even in fatherhood, Lilienthal's creative bent for invention surfaced, when he invented a set of stone building blocks, called Anker-Steinbaukasten, for his children.

### Early Flight Experiments

Lilienthal subscribed to glider-based theories of flight, so he focused his attention on the shape of the wings in developing his designs for flying machines. His early experiments in 1874 with the forces of air involved kites and other apparatuses of his own design.

In their zeal for flying, Lilienthal and his brother joined the Aeronautical Society of Great Britain in 1873, while bemoaning the lack of such an organization in their native Germany. Lilienthal first lectured at the Aeronautical Society on his observations and theories about bird flight as the basis of aviation. He went on to lecture frequently to that group and many other audiences. After waiting for more than a decade for a German aviation society to form, he was gratified in 1886 to join a Berlin-based navigation group, *Deutscher Verein zur Forderung der Luftschiffahrt* (German Club for Promotion of Airship Navigation). In 1888 and 1889, Lilienthal gave a series of three lectures entitled "The Energy Involved in Bird Flight." On June 2, 1890, he lectured on "The Flight of Birds and Humans through the Warmth of the Sun" to a Prussian business society.

After eight years of maneuvering his aircraft designs through thin air, in 1889 he published a volume containing the data that he had accumulated. Lilienthal called his book *The Carrying Capacity of Arched Surfaces in Sailing Flight*. In it he reported and charted his preliminary findings. That same year he published a manual, *Bird Flight as a Basis of Aviation*, with details of the physics of flight. The book on bird flight was translated into English in 1911. Among his observations he included his own illustrations of birds.

### Strides on Flight Mountain

In 1890, for the first time Lilienthal began to experiment with human passengers in his flying machines. In 1891, with the help of his brother, Lilienthal built his first working glider and tested it at Derwitz/Krilow. After some preliminary hops and jumps, Lilienthal made some design adjustments and shortened the wing span. The aircraft, which was essentially a hang glider, sustained a flight of approximately 80 feet (24.4 meters).

In 1892 an improved and redesigned Lilienthal glider achieved still greater distance. He next built a hill that he called *Fliegeberg* (flight mountain) at Lichterfelde in 1893. Lilienthal used the extended mound as a launch pad for his test flights. At times his glides from Fliegeberg surpassed 150 feet (45.75 meters). That same year he devised his first motor-driven apparatus with flapping wings.

Lilienthal modeled his flying craft after birds and butterflies and constructed the prototypes from wax, cloth, wire, and willow rods. A typical Lilienthal glider design was

comprised of 140 square feet (13 square meters) of monowing surface. Through his studies of birds, he became intent on replicating the flight motions of the seagull, because of its extremely broad wing strokes and its ability to sail on the sea breeze. Also intriguing to Lilienthal was the stork. He said that it "seems to have been created for the purpose of serving as a model for human flight."

Lilienthal's popular "no. 11" model, the most often reproduced of his designs, went into serial production in 1894. As many as eight of these so-called "normal soaring apparatuses" were built. He gave some of his planes as gifts to clients and sold others. Lilienthal recorded with meticulous precision his activities and experiments with manned flight, including many photographs in his documentation.

Lilienthal's goal in his experiments was to comprehend the forces and motions involved in flight. He not only could fly but also could recreate his flights repeatedly with the same apparatus. This display of control was a clear indication that he was not just falling from the air but actually guiding the movement of the aircraft. Lilienthal flew more than 2,500 flights and achieved a maximum flight distance of approximately 1,150 feet (350.75 meters). He designed 18 different gliders, including 15 monoplanes and three biplanes. All were controlled by weight distribution of the passenger. By 1896, the Lilienthal brothers had built a motorized biplane with adjustable wing tips, powered by carbonic acid.

From 1890 through 1895, Lilienthal contributed a number of articles to the journal *Prometheus*, including book reviews and reports. His magazine articles included his practical experiences in soaring and discussed known impediments to successful flying. In 1895, foreign dignitaries intrigued by his aviation projects visited him. Among them were J. Shukowski, a Muscovite aviation expert, and S. P. Langley, a representative of the Smithsonian Institute in Washington, D.C.

In 1896, Lilienthal lectured at the Trade Exhibition in Berlin on June 16; it was his last known lecture. On August 10, 1896, he died in a Berlin hospital from injuries following a crash from an altitude of 50 feet (15.2 meters) on the previous day. The accident occurred when a heat eddy blew him off balance. His glider stalled when he attempted a recovery effort, and the resulting impact from the fall caused a fracture to his spine.

### From Jump to Flight

At the time of his death, Lilienthal had begun to explore the issues of wing stroke. His belief that learning to glide was the natural forerunner to learning to fly was embodied in the opening paragraph of his article "Our Teachers in Sailing Flight," published in *Prometheus*. He wrote: "All perplexities concerning light motors, and speculations on the amount of power required for flying, are relegated to the background by the fact that the power of the wind alone is sufficient to effect any kind of independent flight [as seen by] those magnificent models in flying, those large and heavy birds."

Lilienthal's notion "from jump to flight" is widely regarded as the inspiration for aviation pioneers Orville and

Wilbur Wright. In an article in *Century* in September 1908, the Wright Brothers wrote: "It was not until the news of the sad death of Lilienthal reached America in the summer of 1896 that we gave more than passing attention to the subject of flying. We then studied several pamphlets published by the Smithsonian Institute, especially articles by Lilienthal." The Wrights said that the wing surface shape of their 1901 machine was modeled after a Lilienthal design.

Throughout his experiments and his writings, Lilienthal upheld that flight was not to be realized suddenly by the invention of one single machine. He fostered the notion that a long process of study, and a thorough examination of the axioms of aerodynamics, was imperative to the successful invention of a progressive series of viable flying machines, with each machine proving more capable than its predecessor.

Two of Lilienthal's original flying machines survived into the twenty-first century. One of his "no. 11" gliders is on exhibit at the National Space and Air Museum at the Smithsonian Institute. Another of his planes, a "little biplane," also survived. Lilienthal's first flying apparatus, however, was lost; only replicas remain. In the 1980s, the Otto Lilienthal Museum in his hometown of Anklam opened in honor of the 100th anniversary of his first flights.

### Books

Lilienthal, Otto, *Bird Flight as a Basis of Aviation*, New York, 1911.

### Periodicals

*Century*, September 1908.

### Online

"Otto Lilienthal's Aeronautical Bibliography," *Archives Otto-Lilienthal-Museum Anklam*, <http://home.t-online.de/home/LilienthalMuseum/e4.htm> (February 22, 2001). □

## Anita Loos

**Anita Loos (1893-1981) is most famous for her satirical short story collection *Gentlemen Prefer Blondes: The Illuminating Diary of a Professional Lady*, which became a film phenomenon starring Marilyn Monroe. She was an amazingly prolific writer who turned out more than 150 works including film scripts, short stories, novels, plays, and autobiographical books. "She had the wit of Dorothy Parker, the resourcefulness of Robinson Crusoe, and the endurance of the Sphinx," raved Diane MacIntyre in *The Silents Majority*.**

**A**nita Loos was born April 26, 1893 (some say 1888), in Sisson, California, the daughter of Richard Beers Loos, a theater producer, and Minnie Ellen (Smith),



a graduate of Mills Seminary for Young Ladies of Quality. As a young child, Loos appeared in her father's productions along with her sister Gladys, who died in childhood. Loos later noted in her autobiographical work *Cast of Thousands* that "child actresses at the turn of the century were just as larcenous as they are today." Her brother, Clifford, became a doctor who helped create Blue Cross.

Although Loos rejected a career as an actress, having performed in plays as well as silent movies, show business drew her in. While appearing in a San Diego play, viewing a short movie inspired Loos to give film writing a whirl. In 1913 she dashed a scenario off to the address she found on a film can, signing her letter "A. Loos" to seem older and male, and several weeks later received an acceptance letter from Thomas Dougherty of the American Biograph Company. Along with the acceptance for *The New York Hat* came the promise of \$25 payment. The subsequent film was directed by film pioneer D. W. Griffith and starred Mary Pickford and Lionel Barrymore.

From 1912 to 1916, Loos cranked out more than 100 more film scenarios, mainly for the Biograph Studio, beginning at \$25 each. "By 1916, Loos's price had gone up to \$500 a picture," reported Marsha McCreadie in *The Women Who Write the Movies: from Frances Marion to Nora Ephron*. "In that year, she was given her first movie credit for *Macbeth*, by William Shakespeare and Anita Loos. In typically cheeky fashion, she is reported to have said 'If I had asked, [they] would have given me top billing.' "

Already popular as the author of light comedy and romantic melodramas, Loos, McCreadie wrote, began to build a reputation as a satirist, penning "wisecracking titles" to accompany Douglas Fairbanks' silent films. It was during this time that she met John Emerson, an actor and playwright 20 years her senior who was then working as a director.

### Married

In 1919, Loos married Emerson at Joe Schenck's estate in Great Neck, Long Island. "All the movie bigshots in the New York area were present," Loos wrote in *Cast of Thousands*. "I had set my sights on a man of brains, to whom I could look up," she lamented. "But what a terrible let down it would be to find out that I was smarter than he was."

Loos found her marriage disappointing from the start. "Instead of living happily ever after," she wrote, "John and I set about wrecking each other's lives. Our marriage was both tragic and comic, together with a thousand combinations of the two." The couple collaborated on a number of film projects and two books, *Breaking Into the Movies*, published in 1919, and *How to Write Photoplays*, 1921. Later Loos would claim that Emerson took all of the money and most of the credit for projects, even though his contribution usually consisted of observing from bed as Loos worked.

Despite Loos' unhappiness and Emerson's alleged philandering, the couple remained married until Emerson's death March 8, 1956. "Sometimes I get enquiries (sic) concerning my marriage to a man who treated me with complete lack of consideration, tried to take credit for my work and appropriated all my earnings," Loos wrote in *Cast of Thousands*. "The main reason is that my husband liberated me; granted me full freedom to choose my own companions."

Early in their marriage, the couple grew rich from the booming stock market. Together they traveled to Europe to pursue their dreams of "happily ever after." However, as the marriage soured, so did the U.S. economy. Loos and Emerson went broke in the 1929 stock market crash, and Emerson "was more than grateful to send me back to the easy money of Hollywood, where the golden era of movies was in full swing," Loos wrote. "Although the United States was in the depths of a depression, folks were scrimping on the bare necessities of life in a search for diversion."

### Back to Hollywood

Irving Thalberg of Metro-Goldwyn-Mayer lured Loos back to Hollywood by asking her to craft a script based on a popular novel, *Red Headed Woman*. Loos jumped at the chance, especially since she would earn \$3,500 a week. When she arrived in Hollywood, she learned that several other writers had made failed attempts at writing the script, including her friend F. Scott Fitzgerald. Loos wound up having the magic touch. Her script became a hit film that launched the career of Jean Harlow.

Throughout the 1930s and 1940s, Loos enjoyed a productive and profitable relationship with MGM, for whom she wrote scripts for films including *Susan and God*, which starred Joan Crawford, *The Girl from Missouri*, *San Fran-*

cisco, and *The Women*, based on the play by Clare Booth Luce. In *Cast of Thousands*, she fondly recalled lunches at a café near the studio, where she would spend hours with other MGM writers, plus actors including Spencer Tracy, Clark Gable, Carole Lombard, and Jean Harlow. "We called our hangout the 'Trap' and took the same delight in going there that kids do in playing hooky," she wrote.

### ***Gentlemen Prefer Blondes***

Loos' own career caught fire with the publication of her book of short stories *Gentlemen Prefer Blondes*, which chronicles the story of Lorelei Lee, a gold-digging blonde traveling through Europe. The inspiration came from a fellow train passenger when Loos traveled from New York to Hollywood with a group of film directors and writers. "Accompanying us on that jaunt was a Broadway cutie who was being imported to Hollywood for a screen test," Loos noted in *Cast of Thousands*. Over the course of the train trip, Loos grew more and more irritated by the behavior of the men, who jumped at the woman's every move. Comparing herself favorably to the actress, Loos could only conclude that the men were enchanted by her "quite unnatural" haircolor. "Why did she so far outdistance me in feminine allure?" Loos lamented. "Could her power, like that of Samson, have something to do with her hair?"

The notes Loos scribbled during that trip later evolved into a biting satire starring a magnetic flapper. The piece was published in serial form in *Harper's Bazaar*, sparking a huge leap in sales, and in 1925 as a book, garnering Loos fan letters from fellow authors William Faulkner, Aldous Huxley, and Edith Wharton, among others.

The blazing success of Loos' book had one unusual side-effect. While *Gentlemen Prefer Blondes* earned Loos widespread acclaim, Loos' husband, John Emerson, began to suffer from a mysterious throat ailment. Loos suspected cancer. However, as she wrote in *Kiss Hollywood Goodbye*, she soon learned otherwise. "Dr. Jelliffe went on to inform me the specific reason for [Emerson's] loss of voice," she wrote. "The poor man, suffering agonies over the success of *Gentlemen Prefer Blondes*, had invented a disease as a means of attracting attention. Dr. Jelliffe proceeded to quote from H.L. Mencken that a husband may survive the fact of a wife *having* more money than he, but if she *earns* more, it can destroy his very essence."

The book, which was eventually translated into 14 languages, enjoyed a long life in many forms. The first stage version, produced in 1926, ran on Broadway for 201 performances, and a 1949 musical, which ran for 740 performances, made a sensation out of actress Carol Channing. The film also introduced the popular song "Diamonds are a Girl's Best Friend." Loos also wrote a 1974 version of the stage show, entitled *Lorelei*.

The first film version of *Gentlemen Prefer Blondes* was released in 1928, starring Ruth Taylor as Lorelei Lee. The film was silent except for one sequence. "Little Ruth," Loos wrote in *Kiss Hollywood Goodbye*, took her role so seriously that as soon as the film was finished she married a millionaire named Mr. Zukor and never worked again." A talking version of the film, released in 1953, starred Marilyn

Monroe. Loos followed *Gentlemen Prefer Blondes* with *But Gentlemen Marry Brunettes*, which follows the tumultuous love life of Lorelei's best friend, Dorothy.

### **Colette and Other Associations**

In the late 1940s and early 1950s, Loos began an association with French writer Colette that would result in two successful plays and launch the career of yet another actress. Loos was hired to adapt Colette's book *Gigi* for the Broadway stage, another job that had been unsuccessfully attempted by other writers before Loos came along. The two writers got along famously, and Colette herself chose the actress she wanted to play Gigi when she spotted a striking woman among the extras of a movie being filmed in Monte Carlo. Audrey Hepburn premiered *Gigi* at New York City's Fulton Theater in 1951. Loos later penned a script based on Colette's *Cheri*.

In the 1940s, Loos was asked by her friend, actress Helen Hayes, to write a script that would help her break out of a string of overly serious roles. In response, Loos penned the play *Happy Birthday*, starring a librarian whose entire life is blown open after a few drinks at the local bar. The play premiered on Broadway at the Broadhurst Theater on Halloween 1946 and ran for 564 performances. Later Loos collaborated with Hayes on a book about New York City. *Twice Over Lightly: New York Then and Now* was published in 1972.

In her final books, Loos revisited her years in Hollywood with several autobiographical works. *A Girl Like I*, was published by Viking in 1966; *Kiss Hollywood Goodbye*, in 1974, also from Viking; and *Cast of Thousands*, was published by Grosset and Dunlap in 1977. *Cast of Thousands* is a coffee-table-sized book filled with photographs from Loos' personal life and Hollywood career, accompanied by a steam-of-consciousness narrative and sharp-tongued dishing about her many noteworthy friendships with giants of the century including Aldous and Maria Huxley, Charlie Chaplin, H.G. Wells, Bertrand Russell, and H. L. Mencken. While Loos delights in name-dropping, she is less willing to discuss her own personal life, devoting scant attention to her relationships with adopted daughter "Miss Moore," her long-time housekeeper Gladys, and bandleader Peter Duchin, whom she cared for after his mother died in childbirth. Loos died of a heart attack August 18, 1981, in New York City.

### **Books**

*Contemporary Authors*, Gale, 1999.

Loos, Anita, *Cast of Thousands*, Grosset and Dunlap, 1977.

Loos, Anita, *Kiss Hollywood Goodbye*, Viking, 1974.

McCreadie, Marsha, *The Women Who Write the Movies: from Frances Marion to Nora Ephron*, Birch Lane Press, 1994.

### **Periodicals**

*People Weekly*, December 12, 1988, p. 54.

### **Online**

*Britannica Online: Women In American History* <http://women.eb.com>, (December 10, 2000.)

*The Silents Majority* <http://www.mdle.com/ClassicFilms>, (December 10, 2000.) □

# M

## Mary Mallon

**Irish cook Mary Mallon (1869-1938) was dubbed “Typhoid Mary” by the media after she infected dozens of people with the dreaded disease.**

When Mallon worked as a cook at the turn of the century, typhoid fever was a highly contagious disease and a serious threat to the public health. Mallon was the first identified person who carried and spread the disease without ever exhibiting the symptoms. At least three deaths and 53 cases of typhoid were directly linked to her, with thousands of other probable cases. Because she refused treatment, she spent her final years quarantined as a threat to the public health.

### Ordinary Beginnings

Mary Mallon was born September 23, 1869. She claimed to have been born in the United States, but actually was born in Cookstown, County Tyrone, Ireland, to Catherine Igo Mallon and John Mallon, and immigrated from Ireland as a teenager to live in New York with an aunt and uncle. Perhaps destined to lead an ordinary life as a household servant, she instead backed into infamy by way of a suspected childhood case of typhoid that she didn't even remember, and her chosen profession of cook. Little is known about Mallon's life before she caught the attention of sanitary engineer and epidemiologist George A. Soper, who was investigating outbreaks of the disease.

Typhoid fever is relatively rare today, but at the turn of the century, it was a deadly disease that infected as many as 50 per 100,000 people. In New York City in 1906, typhoid struck 3,467 people, killing 639. Because health care was

primitive by today's standards, the disease was difficult to treat. Sufferers simply had to endure about a month of symptoms that included a high fever, upset stomach, headache, and red marks on the skin.

Typhoid was thought to be spread through impure water, but at the turn of the century, scientists began to suspect that humans who had lived through typhoid might still harbor the germs that cause it, spreading the disease by contaminating food or household objects.

By talking to her employment agency, Soper pieced together some of Mallon's history. She had worked for several years with a family in Westchester County, New York, disappearing after a guest became ill with typhoid in 1900. Later that same year, she was hired into a family in Manhattan where a fellow worker contracted the disease a few weeks after she arrived, although Mallon was never suspected as a connection. Over the next decade, she worked at eight different households, Soper discovered. Seven of these households experienced typhoid outbreaks. In most cases, as soon as the disease struck, Mallon quit and disappeared.

### Tracked Mallon Down

In 1906, Soper was asked to investigate an eruption of typhoid at a summer home in Oyster Bay, Long Island. That summer, six of the eleven members of the household had taken ill three weeks after the arrival of the family's new cook. After searching for sources of contamination like spoiled food or contaminated water, Soper began to suspect a human carrier, and learned that the cook had disappeared. He tracked Mallon through her employment agency, and finally located her in the New York home of her current employer. Soper assumed that Mallon had no idea she was the cause of the repeated outbreaks and would be happy to find out how to guard against future tragedies. “I



thought I could count upon her cooperation in clearing up some of the mystery which surrounded her past," Soper wrote in *The Military Surgeon*, describing how he intended to ask Mallon for samples of her urine and feces for examination. "I hoped that we might work out together the complete history of the case and make suitable plans for the protection of her associates in the future. Science and humanitarian considerations made it necessary to clear up the whole matter."

Apparently, Mallon did not agree. "My interview was short," Soper noted. "It started in the kitchen and ended almost immediately at the basement door. Reason, at least in the forms in which I was acquainted with it, proved unavailing. I never felt more helpless."

Soper planned a raid, enlisting a colleague to help stake out a tenement house where Mallon often visited a male friend. When Soper finally confronted Mallon in hopes of gaining her cooperation, he met with complete denial. "We were unable to make any headway," Soper wrote in *The Military Surgeon*. "As Mary's attitude toward us at this point could in no sense be interpreted as cordial, we were glad to close the interview and get down to the street. We concluded that it would be hopeless to try again."

Unable to gain Mallon's consent to be examined, Soper turned the case over to the New York City Department of Health, recommending that the department arrest her in order to subject her to a bacteriological examination. In March 1907, the Health Department sent a team, including inspector Dr. S. Josephine Baker, three police officers and

several interns, to collect Mallon. When the crew arrived at the house, Mallon herself opened the door, only to slam it again when she realized what was happening. She ran and hid, aided by the other workers in the house, who claimed not to know where she had gone. The officers spent three hours searching the house and the one next door, and were about to give up when one noticed a bit of fabric poking out from an outside closet.

Trapped, Mallon was still unwilling to relent. "She fought and struggled and cursed," Baker recalled, reported John Steele Gordon in *American Heritage*. "I told the policemen to pick her up and put her in the ambulance. This we did, and the ride down to the hospital was quite a wild one." Baker, whose own father died of typhoid fever, described having to sit on Mallon the entire way to the hospital.

At the hospital, Soper made a third and final attempt to reason with Mallon. He visited Mallon in her room in the detention area, hoping to persuade her to give a medical history. Once again, Soper was met with frustration. "This interview was shorter than the other two," he wrote in *The Military Surgeon*. "Without uttering a word Mary retreated with dignity to the toilet, leaving me standing alone in the room."

### Confirmation and Controversy

Just as Soper had suspected, even though Mallon appeared to be perfectly healthy, her stools contained a pure culture of the bacteria that causes typhoid fever. Finally, Soper's theory was proven. Mallon had acted as a human carrier of the disease, perhaps as a result of a childhood case of typhoid that she didn't even recall. "The implication was plain," Soper wrote. "The cook was virtually a living culture tube in which the germs of typhoid multiplied and from which they escaped in the movements from her bowels. When she prepared a meal, the germs were washed and rubbed from her fingers into the food. No housekeeper ever gave me to understand that Mary was a particularly clean cook."

Even though Mallon remained a threat to public health because she still harbored the disease and because she refused to accept that she was a carrier, some people felt Mallon was being imprisoned unfairly. Her case was argued unsuccessfully before the state supreme court, which found that the Health Department had good cause to keep Mallon in custody, although the judge expressed sympathy for Mallon's situation. Finally, in 1910, after three years in isolation at Riverside Hospital on North Brother Island in New York, Health Commissioner Ernst J. Lederle released Mallon upon her agreement to avoid employment as a cook and to keep in close contact with health authorities.

Not long after her release, Mallon disappeared. Historians have speculated that Mallon was unable to find any work besides her first vocation, and, facing the prospect of total poverty, changed her name and once again became a cook. The trail of typhoid began again, as Mallon again worked briefly at many places and left every time people fell ill.



### Rediscovery

A 1915 outbreak of typhoid at the Sloane Hospital for Women in New York City proved Mallon's final downfall. Twenty-five nurses and other workers took ill, and epidemiologist Soper was once again called in to determine the source of the infection at an institution that prided itself on its scrupulous attention to cleanliness. Soper learned that workers had nicknamed a cook "Typhoid Mary," and immediately knew he had once again found the elusive Mallon. "That she took chances," Soper wrote in *The Military Surgeon*, "both with the lives of other people and with her own prospect for liberty and that she did this deliberately and in a hospital where the risk of detection and severe punishment were particularly great, argues a mental attitude which is difficult to explain."

Tracked to a home on Long Island, Mallon was once again removed to Riverside Hospital on North Brother Island. This time, her prospects for release were slim. "She was now a woman who could not claim innocence," Soper asserted. "She was known willfully and deliberately to have taken desperate chances with human life, and this against the specific instructions of the Health Department. She had been treated fairly; she had been given her liberty and was out on parole. She had abused her privilege; she had broken her parole. She was a dangerous character and must be treated accordingly."

Over the years, Mallon seemed to have come to a sort of peace with her situation. She lived in nearly total isolation for many years in a one-room cottage with only a dog for company. Eventually she was allowed to work in the hospital laboratory and earned small tastes of freedom. She ventured off the island for short unsupervised trips into the city, where she would visit friends and shop for special foods. Predictably, she cooked and ate alone.

Following her second capture, Mallon spent the rest of her life at Riverside Hospital, more than half her life having been spent confined on the island. After a series of small strokes, she suffered a major stroke in 1932 that left her paralyzed and bedridden until November 11, 1938, when she died. The nine mourners at her funeral at St. Luke's Roman Catholic Church in the Bronx were reluctant to be identified but probably included the few friends she had made through her job at the hospital. Mallon was buried at St. Raymond's Cemetery under a headstone that read "Jesus Mercy."

### Books

Leavitt, Judith Walzer, *Typhoid Mary: Captive to the Public's Health*, Beacon Press, 1996.

### Periodicals

*American Heritage*, May-June 1994, p. 118.  
*FDA Consumer*, June 1989, p. 18.  
*The Military Surgeon*, July 1919.  
*Resident and Staff Physician*, May 1987. □

## George Mallory

**Renowned English mountaineer George Mallory (1886-1924) participated in the early 20th-century attempts by British climbers to reach the summit of Mount Everest, the highest mountain in the world. It is possible that he and his climbing partner, Sandy Irvine, were the first people to reach the summit. However, because they died in the attempt, whether or not they succeeded remains a mystery.**

George Mallory was born on June 18, 1886, in Mobberley, Cheshire, England, the son of a wealthy clergyman who was also a lord. Mallory and his brother and two sisters led a free, undisciplined life in their rural village, where they spent much of their time out of doors; years later, according to P. L. Firstbrook in *Lost on Everest*, Mallory's sister Victoria would recall: "It was always fun doing things with George. He had the knack of making things exciting and often rather dangerous. He climbed everything that it was at all possible to climb. I learnt very early that it was fatal to tell him that any tree was impossible for him to get up." Once, when Mallory was sent to his room for misbehaving, he disappeared. Later, he was found on the roof of the Mobberley Parish Church. He protested that he had followed orders and gone to his room to get his hat before climbing out.

### A Small Margin of Safety

When he was eight or nine years old, Mallory became curious about what it would feel like to be on an island, stranded by the tide. When he and his family visited the seashore, he climbed up on a big rock when the water was at low tide and waited for the tide to come in. However, young Mallory had no idea that the entire rock would soon be underwater; when the tide came in and water covered the rock, he had to be rescued. Although his grandmother was deeply upset by this incident, Mallory remained unbothered. In another instance from his childhood, Mallory told his sister that a person could lie down on the train tracks and let a train pass over. Although he never actually tried such a stunt, he frequently climbed poles, roofs, and anything else he could find. According to Firstbrook, Mallory's friend David Pye wrote, "There is no doubt that all his life he enjoyed taking risks, or perhaps it would be fairer to say doing things with a small margin of safety."

At the age of 14 Mallory won a scholarship to Winchester College. He loved the school, and his interest in climbing was fueled by the fact that his headmaster, Graham Irving, was an experienced mountain climber. With Mallory and some other students, Irving formed the Winchester Ice Club, a climbing group. Irving was an experienced but controversial climber who advocated climbing without local guides and who often climbed alone, both considered irresponsible at the time.



### Climbs in the Alps

In 1904, when Mallory was 18, the group went to the Alps and attempted to climb Bourg St-Pierre, a relatively modest mountain of under 12,000 feet. Despite its modesty, the mountain proved more than enough for the young climbers. Mallory and another boy developed mountain sickness 600 feet from the summit, forcing them to retreat. Mallory later returned with Irving and succeeded in two summit climbs. At this point he was hooked, and spent the following summer in the Alps. Away from mountains, he climbed the roof of his family's house, towers, and church steeples, occasionally getting into trouble for these exploits.

Mallory attended Magdalene College, Cambridge, where he was not particularly happy as a freshman. During his second year he made more friends, including Charles Darwin's grandson (also named Charles), the poet Rupert Brooke, zoologist A. E. Shipley, and economist Maynard Keynes. Although he was interested in his studies, Mallory often failed to hand in his work on time, and cared little when he tested poorly on his exams. He spent his vacations from school climbing in the Lake District of England.

In his third and fourth years at school Mallory's academic performance improved. In 1909 he met Geoffrey Winthrop Young, an experienced climber who would become a lifelong friend. Young introduced Mallory to other great climbers of the day, including Percy Farrar, who would later ask Mallory to be a part of the first Everest expedition.

Mallory was still not sure what he wanted to do with his life; he considered, and rejected, the ideas of becoming a writer, a clergyman, or a mathematics teacher. Eventually, under pressure by his father to get a job, he took a position as assistant master at Charterhouse, where he was conscientious but often troubled because he was not much older than the students and he was not particularly authoritative. His students were often bewildered by the fact that Mallory wanted to treat them as equals, a method almost unheard of in the authoritarian schools of the time. He often took students on climbing trips that led to lifelong friendships.

On July 29, 1914, Mallory married Ruth Turner, the daughter of an architect. The couple had a daughter, Frances, the following year. In 1916, during World War I, he spent a few months as a second lieutenant in the Royal Garrison Artillery, but was sent home when an old ankle fracture began bothering him. He and Ruth had another daughter in 1917, and a son in 1918.

### Review of Life's Meaning Determined Goals

Although he had only spent a short time on the front, his war experiences shook Mallory and made him reassess his life. What was truly important? What did he truly want to do with his life? Although happy with his family, he still felt restless and unsatisfied. When, in 1921, Percy Farrar asked him to be part of the first Everest expedition in 1922, he eagerly accepted.

The Everest expedition of 1922 did not succeed. The team spent weeks reconnoitering the mountain and debating possible routes to the summit. Mallory eventually mapped a route to the summit from the northeast. The climbers attempted to reach the summit, but had not traveled far before horrendous weather forced them to retreat. Overall, the expedition was unprepared and poorly equipped. As quoted by Jochen Hemmle, Larry A. Johnson, and Eric R. Simonson in their *Ghosts of Everest*, Mallory later wrote, "I doubt if any big mountain venture has ever been made with a smaller margin of strength." Three more attempts to scale Everest in the next year also failed because of exhaustion, illness, equipment failure, and avalanche.

### 1924 Everest Expedition

Their first few failures left the explorers undaunted. On June 6, 1924, Mallory and climber Andrew Irvine emerged from their tent at Camp IV on the 13,280-foot-high North Col of Everest, ready to make another attempt on the summit. They had spent two months walking from Darjeeling, India, to reach this spot. Other members of their expedition were camped nearby: Colonel Edward Felix Norton lay in his tent, suffering from snow blindness, and Noel Ewart Odell and John de Vere Hazard had made breakfast of fried sardines, biscuits, tea, and hot chocolate. They had already tried twice to attempt the summit, but had failed. Now they were running out of supplies. Many of their porters had become sick, and now time was running out. Any day now—or any hour—the snow season would begin, burying the mountain in fierce storms. Mallory and Irvine determined to make one last summit attempt.

Because of its high altitude, the air on Everest is too thin to provide enough oxygen. Mallory and Irvine put on their heavy, cumbersome oxygen apparatus. Accompanied by eight Tibetan porters carrying provisions, blankets, and extra oxygen cylinders, they set out toward the higher Camp V. Eight hours later, four porters returned with a note from Mallory stating that the weather was good and he was hopeful. Their next goal, Camp VI, was only 2,000 feet below the summit.

Despite this seemingly short distance, the way was not easy. It included a steep climb up crumbly limestone, a nearly vertical 100-foot wall known as the First Step, a dangerously exposed walk along a ridge, another 100-foot wall, and finally a broad plateau leading up to the actual summit. Even if they did reach the summit, the climbers' ordeal would not be over. Descending through this terrain would be even more dangerous, because by then they would be extremely exhausted from the ascent.

### A Change in the Weather

Mallory and Irvine set out from Camp VI the next morning. Odell, who had accompanied them, remained behind to explore the geology of the mountain near Camp VI and noticed a change in the weather: a midmorning mist was forming and beginning to cover the western face of the mountain. At the time, he thought the mist was only on the lower half of Everest, and that Mallory and Irvine probably had clear weather where they were. At 12:50, his forecast was confirmed when the whole mountain cleared, and he actually saw Mallory and Irvine, tiny black specks at that distance, moving slowly up the summit ridge. "Then the whole fascinating vision vanished, enveloped in cloud once more," he wrote, according to Hemmler, Johnson, and Simonson. Odell believed that the men were only three hours from the summit, and he hurried to Camp IV to get it ready for their return after they reached the summit. Just as he reached the camp, a snow squall blew in.

Odell became concerned that Mallory and Irvine would have a hard time finding Camp VI in the snow. He climbed up the ridge shouting and whistling to guide them in. Realizing it was far too early to be expecting them, he returned to Camp VI. Now the weather suddenly cleared. As Mallory had instructed him the day before, once Odell had tidied Camp VI and supplied it with a compass and some extra food, he descended to Camp IV. Hazard was there, and the two men waited for their fellow climbers.

They waited in vain, as Mallory and Irvine never returned. Odell and Hazard remained optimistic, thinking their friends had spent the night at one of the higher camps as they saw no fires or distress flares. In the morning they scanned the mountain with binoculars but saw nothing. At noon Odell and two porters began climbing up, despite the fact that Odell was exhausted. Camp V was untouched, just as Odell had left it two days before.

### No Evidence of Climbers Found

The next morning, when the porters refused to climb higher, Odell climbed alone to Camp VI, carrying extra oxygen. Camp VI, like Camp V, was unchanged. He then

climbed upward for two hours, but found no trace of the men, so he returned to Camp VI, where he laid out Mallory and Irvine's sleeping bags on the snow, a signal to Hazard that he had not found anyone. Then he climbed back toward Hazard. As Odell descended, he scanned the summit. He later wrote, according to Hemmler, Johnson, and Simonson, that "It seemed to look down with cold indifference on me, mere puny man, and howl derision in wind-gusts at my petition to yield up its secret—the mystery of my friends." On June 21, 1924, the London *Times* published the story: "Mallory and Irvine Killed on Last Attempt."

### New Expedition Finds Mallory's Body

In 1999 the Mallory and Irvine Research Expedition was launched to try and find the climbers' bodies and to determine whether they had, in fact, been the first to reach the summit of Mt. Everest or whether they had died in the attempt. The explorers found Mallory's body below the First Step. Odell, the last person to see him alive, had seen him some 435 meters higher, which suggests that he was descending the mountain. While other evidence also indicated that he had reached the summit and was climbing down, it was not viewed as entirely conclusive. Mallory had been carrying two bottles of oxygen, but neither of them was with his body, which suggests that he had used both of them, discarded them, and was descending. The position of his body, and the injuries he sustained, indicated that he lost his footing and fell to his death. In addition, Mallory had a rope tied around his waist, indicating that he must have been roped to Irvine—a common practice among climbers—when he fell. The rope had broken cleanly, as if it had snapped from the sudden tension.

Mallory's altimeter and watch were both broken and his camera, if he had one, was missing, so that no concrete evidence remains to tell us whether the two men actually reached the peak. Firstbrook wrote in *Lost on Everest*, "The camera, if found, will be with Irvine—faithful and dependable, even in death. But if they summited at night, there will be no photographic record of their achievement." The writer also noted, "Whether they reached the summit or not, George Mallory and Sandy Irvine set the world an example. Their determination, bravery and heroism inspired generations of climbers to face the challenge of a mountain, to hold ambitions dear, to work together and to persevere until the summit is reached. Their story, their aspiration and their energy is an example to us all. In death, as in life, they remain together on the mountain; they are in every way, *the men of Everest*."

While Irvine's body was never found, the expedition concluded from the evidence that he probably survived the fall but then died of exposure. If his body is ever found, it could provide more clues as to whether Irvine and Mallory were in fact the first people to reach the top of Mt. Everest.

### Books

- Engel, Claire Elaine, *A History of Mountaineering in the Alps*, Greenwood Press, 1950.  
Firstbrook, P. L., *Lost on Everest*, Contemporary Books, 2000.

Hemmler, Jochen, Larry A. Johnson, and Eric R. Simonson, as told to William E. Northdurft, *Ghosts of Everest: The Search for Mallory and Irvine*, Mountaineers, 1999.

Messner, Reinhold, *Everest: Expedition to the Ultimate*, Kaye and Ward, 1979.

Mitchell, Richard G. Jr., *Mountain Experience*, University of Chicago Press, 1983. □

## Alice Marble

**Alice Marble (1913-1990) was the first female tennis player ever to win both the British and U.S. women's singles, doubles, and mixed doubles championships in the same year.**

Alice Marble was born in Beckworth, California, on September 28, 1913. Her father died in an automobile accident when she was six years old. After his death, the family moved to San Francisco, where they lived near the tennis courts of Golden Gate Park. Playing there was free, so the sport was attractive to the poor family, especially to Marble's brothers.

### "A Pretty Good Arm"

Despite the availability of the tennis court, Marble was more interested in baseball. By the time she was 13 years old she was the mascot and ball girl for the San Francisco Seals, a minor-league team. Her practice of entertaining fans by catching fly balls in the outfield prompted former San Francisco Seals player Joe DiMaggio to later recall to Ralph Hickok in *A Who's Who of Sports Champions*, "She had a pretty good arm."

Marble's interest in physical activity was fostered by her mother, who often took her five children to the Golden Gate Park and played active sports with them. "Then we'd all walk home and be in bed by eight o'clock," Marble told Charlotte Humber in *Famous in Their Twenties*. "Even when I was in high school, that routine continued, with the eight o'clock bedtime."

At the urging of her brothers, who thought baseball was too tomboyish for her, Marble began playing tennis on the public courts at the age of 15. She never had the advantage of being formally taught how to play the game. She was not very interested in tennis at first, because she thought it was the kind of easy game only played by sissies. Her enthusiasm for the sport did not even increase when her brothers signed her up for a tournament. The courts were wet, so Marble and the other players dragged blankets across them to soak up the water. Not surprisingly, she was beaten early, but her brief experience of competitive play had intrigued her; she realized that tennis was harder than it looked. Challenged by this experience, Marble was hooked, and devoted much of her free time to working on her game to become a better player.

During her first years in the sport Marble developed a habit of rushing the net because she didn't feel confident about her ground strokes. This habit, which started out of



insecurity, later gained her a reputation as one of the sport's most aggressive women players.

### Called "Brilliant but Erratic"

Marble's 75 cents-per-week allowance did not go far to pay for the racquets, balls, and shoes she needed. When she won her first tournament, the Pacific Coast Junior and Women's Championship, she was still playing with a borrowed racquet because she could not afford to buy her own. And although the public courts were free, players had to look serious if they wanted to play for longer than the occasional weekend game. Applicants for court time were put on a waiting list; if a player lost the first set, he or she went to the bottom of the list and waited an average of two hours before their name came to the top of the list again. Players who won remained on the court and played the next person on the list.

Marble was often out after her first set, but she spent her two-hour waiting periods watching and learning from other players, or volleying in the dirt in front of the clubhouse. She also attracted the attention of other players, and someone who knew Coach Eleanor Tennant eventually suggested to Tennant that she come to watch Marble play. Tennant was impressed by the teen's obvious, if unschooled, talent and offered to coach her. She remained Marble's coach for the rest of her life. In *Courting Danger*, Marble wrote that Tennant was an inspiring teacher. "She gave clinics in department stores, schools, public parks. She could make the

laziest student run and the clumsiest hit the ball time after time."

According to Himber, Marble was considered a "brilliant but erratic" player. Fortunately, as she gained in personal maturity, Tennant also taught her about attitude, poise, and perseverance as well as about tennis. "She learned that the will to win had to be there," Himber explained, "stronger and more enduring than the power of her fastest stroke."

### Illness Proved Integral to Training

In 1933, when Marble was 20 years old, she played in a tournament in Easthampton, Long Island, New York. Because of rain delays, officials decided to make up time by holding the singles and doubles semifinals and finals on the same day. Marble played 108 games during that one day; although she won the singles and doubles semifinals, she lost both finals, eventually passing out due to dehydration from overexertion in the extreme heat.

The following year Marble traveled to France as a member of a U.S. women's team, but collapsed to the ground in a faint during her first match. Eventually she was diagnosed with pleurisy (some sources say tuberculosis) and took some time off from tennis to recover at a sanatorium. Bored and anxious to leave after eight months, she convinced Tennant to get her out. She left the sanatorium against her doctor's orders. "It was a most valuable period for me, although at the time I resented the dreadful waste of time away from my beloved tennis," Marble later recalled to Himber. "I developed an attitude toward life in general that has stood me in good stead since. I became poignantly aware that good health is the most valuable of human possessions. I didn't know it then, but the whole period of my illness was as important for my career as any other preparation I have had."

During Marble's recovery, Tennant had her student eat a special diet and perform special exercises to regain her lost strength. Because she had spent such a long time in bed, the young woman could only slowly begin to walk again, first going only one block, then a little farther, and gradually working up to three miles a day. However, her energy level was still distressingly low, too low for her to play tennis. She visited a different doctor, who told her that she was anemic. After two weeks of treatment for the low level of iron in her blood, Marble regained her energy and began a program of strength training. In addition, she took up singing to improve her lung capacity. She did so well at this that, between tennis seasons, she performed as a singer in a supper club at New York City's Waldorf Astoria Hotel in 1939.

With her mother's permission, Marble moved in with Tennant. Because she had little money, she arranged a barter system with "teach", as she called Tennant; she would work as Tennant's secretary and Tennant would coach her for free. Marble truly loved tennis, describing it as her hobby as well as her full-time sport. According to Himber, she once said, "Sometimes after a day's work I am so tired as I get ready to play that I don't feel much like it, but as soon as I start to play I forget everything and just enjoy it."

Fearing another on-the-court collapse, officials of the National Tennis Association were reluctant to let Marble play again after her recovery. However, Marble proved her strength by inviting them to watch her play two hours a day in hot weather. They eventually agreed to let her play in the national tournament.

### Achieved a String of Wins

In 1936 Marble lived up to her potential, winning the national singles championship and the mixed doubles championship. In 1938 she won the Wimbledon women's doubles, repeating that win in 1939, as well as capturing that year's singles title. In fact, 1939 would prove a phenomenal year for Marble as she became the first woman ever to win the British and U.S. women's singles, doubles, and mixed doubles championships all in the same year. She won the Wimbledon mixed doubles title from 1937 to 1939, and in 1939 and 1940 the Associated Press named her Female Athlete of the Year. In *Courting Danger*, written when she was 77, Marble looked back on her tennis career: "When you've lived as long as I have, the sheer joy of having played the game comes to matter more than the victories, the records, the memories."

In 1940 Marble broke another barrier when she was hired by New York radio station WNEW as a football reporter. She gave two 15-minute broadcasts each week. On her first broadcast, she listed teams she thought would win on the following day, and of 45 games, picked the winners of 31; three other games were ties. Her knowledge of the game, unusual for a woman at that time, rapidly won her a devoted audience.

In 1941 Marble turned professional and toured with fellow tennis player Mary Hardwick. During the 1940s she enrolled at classes at New York University and Columbia University, although she never amassed enough credits to graduate because of her busy schedule. In addition to playing, studying, broadcasting, singing, and designing sports clothes, Marble lectured at women's colleges, clubs, church groups, and other public forums, urging people to get physically fit and make it a habit for life. She urged women who believed they were too tired or too old for fitness to get moving, noting that people who became active and stayed that way were healthier and happier. She also believed, contrary to popular opinion of the time, that women were perfectly able to participate in any activity men participated in, using as an example the fact that women in England during World War II, even those aged 50 and over, took over many men's jobs when the men left to fight the war.

### "I Didn't Care about Living"

In 1942, during World War II, Marble met Captain Joseph Norman Crowley, who was in army intelligence. The two were married after a brief courtship. She became pregnant, but lost the baby in a car accident in 1944. Shortly after this, news reached her that Crowley had been killed in action when his plane was shot down over Germany. Distraught, Marble tried to commit suicide by overdosing on sleeping pills, but was saved by Tennant and a friend, who took her to the hospital.

Early in 1945, Marble was recruited as a spy by the Allies. One of her former lovers, a Swiss banker, was providing financial services to high-ranked German Nazi officials, and Allied agents hoped Marble could find out some of his secrets. They sent her to Switzerland to play in well-publicized tournaments, gambling that he would try and see her again. He did, and she managed to discover a great amount of information about his dealings before she was caught and almost killed in the mission. She later wrote in *Courting Danger*, "When I agreed to use tennis as a cover for an assignment that had little chance of succeeding, I felt I had nothing left to lose but my life, and at the time I didn't care about living. A few months later, on a dark mountain road, I found that I *did* care. When my life was in danger I did what I've always done: I fought."

### Continued to Fight

Throughout her life, Marble remained determined to achieve her goals, fighting social prejudices along the way. Later in her life she was active in encouraging tennis officials as well as the public to accept the presence of African American and homosexual players in the game. She also continued to encourage women to become physically fit and participate in sports. "When the day comes that a woman who is athletic will no longer be regarded as the unusual type, when it will seem as natural for women as it now seems for men to be keenly interested in athletics, we'll start training girls to be active athletes," she commented to Himber. "We'll not discourage them, as we do today, from taking part in tomboy play when they're six, and ten, and twelve." Marble died in Palm Springs, California on December 13, 1990.

### Books

*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.

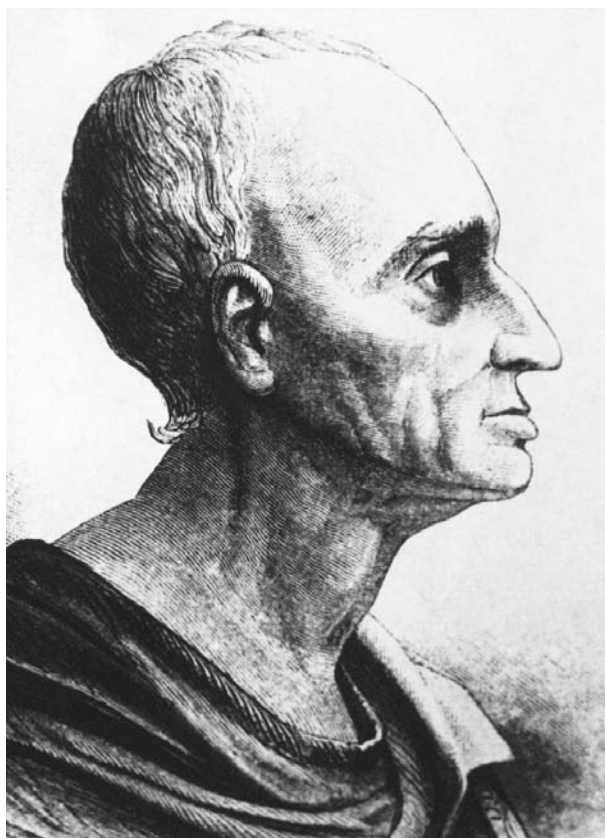
Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton Mifflin, 1995.

Himber, Charlotte, *Famous in Their Twenties*, Books for Libraries Press, 1942.

Marble, Alice, with Dale Leatherman, *Courting Danger*, St. Martin's Press, 1991. □

## Andreas Marggraf

**Andreas Sigismund Marggraf (1709-1782) was an important figure in chemistry as it evolved from alchemy in the eighteenth century. He worked on a broad range of subjects, concentrating on problems in the areas of inorganic, organic, and analytical chemistry. He isolated several elements, made an important discovery about sugar, and was one of the first to use a microscope in the field of chemistry.**



**M**arggraf was born on March 3, 1709 in Berlin. His mother was Anne Kellner, about whom little is known. His father was Henning Christian Marggraf, an apothecary to the Royal Court located in Berlin. The elder Marggraf was also an assistant at the medical school (Collegium Medico-Chirurgicum) and did some chemical research. Andreas Marggraf received a well-rounded training in chemistry that began with his father's various connections.

Marggraf was the last important German chemist to believe in the flawed theory of phlogiston, according to Isaac Asimov in his *Asimov's Biographical Encyclopedia of Science and Technology*. Phlogiston was the theory proposed and popularized by Georg Ernst Stahl that materials were composed of air, water and three earths and that one of these earths escaped from any material during combustion. Perhaps the reason for Marggraf's adherence to this theory, despite the fact that materials often increased in weight when burned, was that one of his first teachers was his father's colleague, Caspar Neumann, an adherent to Stahl's theory. Marggraf studied under Neumann from 1725 through 1730.

According to an entry in the *Dictionary of Scientific Biography*, by Martin S. Staum, Marggraf further learnt his craft from an apothecary in Frankfurt-am-Main, next studied at the University of Strasbourg, and then studied metallurgy in Freiburg. From 1735 through 1753, Marggraf ran his father's apothecary at the court. In 1737, his background and connections helped win him an opportunity he refused,

that of a ducal apothecary appointment in Wolfenbützel, Brunswick.

Instead, Marggraf was admitted in 1738 as a member of the Königlich Preussischen Societät der Wissenschaften (Prussian Society of Sciences) and remained an unpaid member until 1744. In 1746 the organization was reorganized and renamed Académie Royale Des Sciences et Belles-Lettres. Frederick II named Marggraf director of the chemical laboratory at the Académie in 1753 and Marggraf became director of the physical class in 1760. He remained in these positions until 1782. During this time, he also gave private instruction in chemistry.

### The Chemical Work

Marggraf was a precise and careful chemist, painstaking in his work and in his recording of that work. He was known more for experimenting and describing rather than for postulating and theorizing. Before Marggraf, the alchemists had tried to discover ways to change metals into gold as well as discover the key to perpetual youth. Alchemy was the study of transmutation—the change of a substance into something more desirable.

Marggraf worked with various materials and documented what he found using the balance for weighing exact amounts, both before and after the experimental tests. He was creative in his use of solvents to extract, and then to recrystallize the substance extracted. He also used flame tests to determine differences in substances as the flame burned in different colors depending on the substance burned. This method predates the more modern emission spectroscopy. A metal blowpipe was used for his experiments. This was a tube that heightened the flame by including more air in order to see the colors more vividly. It also allowed one to see the type of debris the substance would leave as it interacted with the metal.

Phosphorus was a rare substance in Marggraf's time, and he found a simple way to prepare it. He evaporated putrefied urine and mixed its salts with "chloride of lead, sand and coal," according to E. O. Von Lippmann in the essay on Marggraf he contributed to the book *Great Chemists*. After heating for four hours and redistilling, it was pure white and clear, and could be poured into glass tubes with the appearance of rods. Marggraf noted that when burned it increased in weight and formed a mass that was feathery. Also, when this phosphorus was dissolved in water it formed phosphoric acid, a substance that was unknown until that time. It could be returned to phosphorus by heating with coal, which was an improvement over previous methods of obtaining phosphorus.

Next, Marggraf tried to produce phosphorus from hydrochloric acid without using urine, as previous scientists had suggested that this was possible. He failed. This led him to suggest that the type of salt contained in urine was necessary in order to produce phosphorus. Staum tells us that Marggraf also substantiated another scientist's statement that phosphorus is contained in vegetable matter and Marggraf figured that "the higher yields of phosphorus from urine in the summer are proportional to increased consumption of vegetable foods."

According to Von Lippmann, the mineral and vegetable alkalis (soda and potash) were thought to be identical, "or the alkali of marine salt (sodium chloride) was held to be analogous to lime." Marggraf demonstrated that these materials were different by one of his painstaking experiments. He observed that potassium chloride when converted to nitrate turned into a needlelike salt and when burned turned the flame blue-violet. However, nitrated marine salt was cubic and turned its flame yellow when burned. The potassium sulfate was barely soluble while the sulfate of the marine salt was much more soluble. After observing all this, Marggraf reasoned that the alkalis were present in the plant before the ashing process began. As Von Lippmann states, Marggraf wrote that the plant resource for these salts was that it "attracts them out of the soil, out of water and air."

### The Sugar Beet

One of the most significant of Marggraf's findings, at least in terms of its impact on industry, is his discovery that sugar from beets was exactly the same as sugar from cane. Before his time, efforts had been made to extract sugar from many other fruits, vegetables and even nuts. Marggraf postulated that sugar from sweet-tasting plants must contain a sugary substance, so he investigated the white beet, the beet root and the red beet. First he sliced, dried and pulverized the three plant parts just mentioned. Next, with the use of boiling alcohol, he extracted their juice, by filtering and then letting this juice crystallize in corked tubes for several weeks as the liquid evaporated. Once the crystal stage was reached, he examined these crystals under a microscope. This was perhaps the first use of a microscope for chemical identification. The crystals seen under the microscope were identical to those of cane sugar.

Though large-scale production of sugar from beets did not take place in Marggraf's lifetime, he recognized the significance of the discovery. Previous to this time, sugar had been made from cane, which was to be found in the warmer climates such as the West Indies. It was traded to England and other places in Europe and these places experienced high prices and shortages when they were unable to get sugar due to war blockades, especially during the Napoleonic Wars that began at the end of the eighteenth century.

However, Marggraf's discovery and influence made its mark because his student, Achard, tried his experiment on a large-scale, produced a significant amount of sugar, estimated the cost to be six cents per pound, and interested the French Institute in investigating his claims. This was enough to cause King William III of Prussia to finance a sugar beet factory and thus the industry was born. Marggraf's work had reached beyond his time and today sugar is made from beets in many countries all over the world.

Marggraf himself had recognized that this was a boon for the poor farmer when he wrote, as Von Lippmann has it: "There should be no doubt by now that this sweet salt, sugar, can be made from our own plants just as well as from sugar cane." Also, in the book *The Story of Alchemy and Early Chemistry*, John Maxson Stillman quotes Marggraf: "the poor cultivator could well serve himself with this plant

sugar or its syrup instead of the usual costly product, and if by help of inexpensive machines he pressed this juice from these plants, somewhat purified it, and reduced it to the consistency of a syrup." Thus Marggraf realized the real practical implications of his work for the domestic farmer of his time.

### Other Findings

Marggraf's other scientific work was important, if not as immediately applicable as his work with beets. He discovered magnesia by decomposing a serpentine mineral; he found another distinct material, alumina; did experiments that isolated zinc by creating an industrially useful distilling process from calamine. He demonstrated that iron was present in limestone and in the ashes of many plants by the fact that these reacted with red prussiate of potash (the equivalent of potassium ferrocyanide). One of his experiments showed that selenite was chemically the same as gypsum.

He worked with cedar wood to isolate cedar oil by steaming it at lower temperatures than its actual boiling point. This process was then used to isolate other oils. He distilled ants into an oil and an acid. He froze and redistilled the acid to purify it. This type of acid forms salts when mixed with alkalies, ammonia, some metals, and reduces mercuric oxide to the metal.

Despite his prolific work in chemistry, Marggraf was never in the best of health. He had a stroke in 1774 and was ill from that time until his death in Berlin on August 7, 1782. However, he left numerous discoveries and observations to the world of chemistry.

Von Lippman tells us that Marggraf's motto was "care and cleanliness in working." He was an introvert who kept out of politics and dedicated his life to his work in chemistry. His methods of careful weighing and measuring both before and after reactions yielded much quantitative information for future scientists. His patience when waiting for crystallization, poisoning, and other reactions lent credence to the importance of time in chemical reactions. He laid much groundwork for future chemists, not to mention the practical implications of his work for industrialists.

### Books

- Asimov, Isaac, *Asimov's Biographical Encyclopedia of Science and Technology*, Doubleday and Company, Inc., 1982.
- The Beet Sugar Story*, The United States Beet Sugar Association, 1959.
- Farber, Eduard, *The Evolution of Chemistry*, The Ronald Press Company, 1969.
- Farber, Eduard, *Great Chemists*, Interscience Publishers, 1961.
- Gillispie, Charles Coulston, *Dictionary of Scientific Biography*, Charles Scribner's Sons, 1974.
- Hufbauer, Karl, *The Formation of The German Chemical Community (1720-1795)*, University of California Press, 1982.
- Hudson, John, *The History of Chemistry*, Chapman and Hall, 1992.
- Stillman, John Maxson, *The Story of Alchemy and Early Chemistry*, Dover Publications, 1960. □

## George Perkins Marsh

**George Perkins Marsh (1801-1882) is best remembered for his work *Man and Nature* (1864), which was later revised as *The Earth as Modified by Human Action* (1874). Published one hundred years before the ecology movement of the 1960s, Marsh's theories recognized human impact on the environment and have since influenced ecologists throughout the world. A skilled diplomat, Marsh is also acknowledged for his successful posts as ambassador to both Turkey and Italy.**

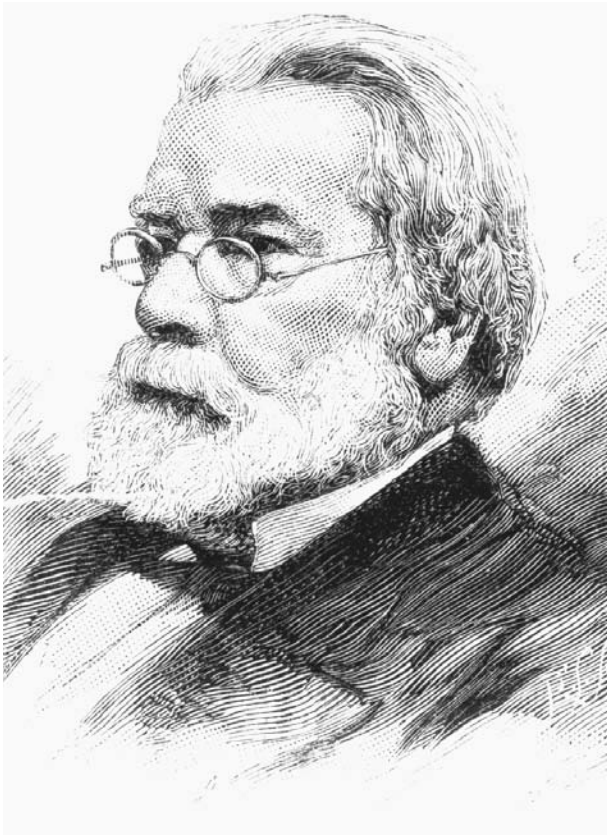
Marsh was born in Woodstock, Vermont on March 15, 1801. He grew up in rural Vermont and maintained an affinity with the outdoors throughout his life. Marsh's ancestors on both his paternal and maternal side included members of the intellectual elite of New England. His father, Charles Marsh, a prominent local lawyer and district attorney for Vermont, established his estate in an idyllic setting along the Quechee River in the foothills of the Green Mountains. As David Lowenthal speculated in his biography *George Perkins Marsh: Versatile Vermonter*, this setting helped shape Marsh's ideals as "From the summit of Mt. Tom young George Marsh could survey the entire cosmos of his early years. The main range of the Green Mountains, far to the west, was dark with spruce and hemlock and white pine. But thirty years of clearing and planting had converted the lower, gentler hills surrounding Woodstock into a variegated pattern of field and pasture, while pioneer profligacy and the need for fuel had already destroyed much of the forest on the steeper slopes."

Much of Marsh's childhood, however, was spent indoors. He showed an early aptitude toward study, beginning to read Reese's *Encyclopaedia* at the age of five. Influenced by his strict Calvinist father, Marsh was infused with an almost compulsive need to acquire facts. According to Lowenthal, "His family considered him a paragon because he knew almost everything from ethics to needlework." In fact his devotion to reading reportedly led to poor eyesight, and at age seven or eight, he was restricted from reading for four years. During this time, young Marsh ventured out into the woods and began to observe nature firsthand. He commented that "the bubbling brook, the trees, the flowers, the wild animals were to me persons, not things." Marsh took not only an aesthetic interest in nature, but, owing to his father's influence, a scientific interest as well.

### Scholarly Endeavors

Marsh gained much of his early education at home as his older brother taught him Latin and Greek, his father geography and morals, and he garnered a great deal of information from his own reading of the encyclopedia. However, because his father wanted young George to receive a more traditional and religious education, Marsh was





sent to Phillips Academy in Andover, Massachusetts, in 1816. There amidst a “prison-like existence” Marsh failed to thrive intellectually. Within a few months, he had left Andover. At age fifteen, he attended Dartmouth College, although he had little fondness for the uninspired curriculum and took it upon himself to study Spanish, Portuguese, French, and Italian. Following his graduation at age nineteen, Marsh taught Greek and Latin at Norwich Academy. He detested teaching and quit after just one year.

### Gained Recognition in Politics and Diplomacy

During the next four years, Marsh returned to Woodstock, where he recovered from a relapse of the eye-sight condition he had suffered from as a child. He also began to study law and, in 1825, was admitted to the bar. He then moved to Burlington, Vermont, where he lived for 35 years, pursuing his legal career as well as numerous unsuccessful business ventures. Never truly happy as a lawyer, Marsh ran for Congress as a Whig and was elected in 1843. He served until 1849. During his tenure in office, Marsh opposed the admission of Texas as a slave state and argued against United States involvement in the Mexican War. Perhaps Marsh’s most lasting legacy in Congress, however, was his involvement in organizing the Smithsonian Institute. In Lowenthal’s biography of Marsh, he contended, “The Smithsonian story illustrates the kind of role that Marsh was to play again and again. He was not a great statesman. Nor was he a scientist of the first rank; he made

no original discoveries. But in the borderlands linking science and the public weal Marsh made lasting contributions. He applied science to life, not with the disinterested precision of an engineer, but with the aims and methods of a humanist. The Smithsonian—its aims, its activities, its personnel—was in large measure the result of Marsh’s efforts as an impresario of ideas.”

Marsh was appointed United States minister to Turkey in 1849 by President Zachary Taylor. Marsh’s proficiency in 20 languages helped distinguish him as a highly effective diplomat. In addition to his duties as minister, Marsh traveled extensively and furthered his interest in the study of geography. He gathered meteorological data that he compiled in writing pieces for the *American Journal of Science*, as well as collecting plant and animal specimens that he sent to the Smithsonian. Following an administration change, Marsh was recalled to the United States in 1854 and served as Vermont railroad commissioner from 1857 until 1859. Also upon his return, Marsh began to garner recognition as an eminent philologist, lecturing at Columbia University and the Lowell Institute. His *A Compendious Grammar of the Old-Northern or Icelandic Language* (1838), *Lectures on the English Language* (1860), and *The Origin and History of the English Language* (1862), while ponderous and outdated are nevertheless considered important works in the field of philology.

In 1861, Marsh was appointed by President Lincoln to be the first United States minister to the new kingdom of Italy. He successfully held this post for the last 21 years of his life. So well trusted was Marsh that the Italian government allowed him to arbitrate a difficult boundary dispute between Switzerland and Italy. Having served longer than any American diplomat except Benjamin Franklin, Marsh became known as the “Patriarch of American Diplomacy.” Marsh died in Vallombrosa, Italy, on July 23, 1882 and was buried in Rome. His various accomplishments as a scholar and diplomat earned him accolades, prompting this description in *American Authors: 1600-1900: A Biographical Dictionary of American Literature*: “[He was] one of the most typical and most significant examples of the nineteenth century New England mind in action.”

### Man and Nature Inspires Conservation Movement

Although Marsh began writing *Man and Nature* when he was in his sixties, several critics note that what would become his masterwork was the culmination of a lifetime of his observations of the natural world. In particular, his travels throughout the Mediterranean and North Africa confirmed what he believed to be true based upon his observations in New England: when humans cultivate the land and exploit natural resources without regard to management and replenishment, the land is altered and ultimately destroyed. Ever the scholar, Marsh took an historical overview to delineate his thesis. Joseph Gustaitis wrote in *American History Illustrated*, “[It] is a staggering compilation. Beginning with the fall of Rome, *Man and Nature* moves on to a complex evaluation of the relationships between animals

and plants. It continues with a 200-page chapter on forestry, analyzes man's influence on water, examines the origin and structure of sand dunes, and concludes with grand speculations about canals, deserts, and earthquakes." Summarizing Marsh's ideas, Paul Brooks wrote in his *Speaking for Nature: How Literary Naturalists from Henry Thoreau to Rachel Carson Have Shaped America*, "[It] was the first book to consider man as a geological force, a force upsetting what we know today as the 'balance of nature.' Marsh's concern was less with nature's impact on man than with man's impact on nature, and he took not only America, but the whole civilized world as his province." Marsh proposed that humans were superior beings, and that they held control over the environment. According to Marsh, "Man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are turned to discords." However, humankind becomes both a destructive and constructive force wherein there is "the possibility and the importance of the restoration of disturbed harmonies and the material improvements of waste and exhausted regions." Larry Anderson maintained in *Wilderness* that "Marsh's call for active, constructive rehabilitation of damaged landscapes anticipated today's nascent 'restoration ecology' movement."

*Man and Nature* proved to be initially popular, going through three publications during Marsh's lifetime. While it faded from interest after the turn of the century, it began to regain popularity in the 1930s and continues to influence society. Although Marsh himself was apt to dismiss *Man and Nature* as a heavy and cheerless tome, the effect of his work cannot be underestimated. Gifford Pinchot, the first head of the U.S. Forest Service, considered *Man and Nature* "epoch-making," and, indeed, it was Marsh's work that many historians contend directly led to the formation of the national forest system in 1891. Often considered a prophet for his groundbreaking work, the problems he illuminated over a century ago still cause concern. As Anderson stated in his *Wilderness* essay, "[The] dire prospect of global warming, and other recent environmental calamities, from floods in Bangladesh to the enormous oil spill in Alaska's Prince William Sound—such phenomena dramatize the paradox Marsh well understood before there was a genuine conservation movement or a sophisticated scientific understanding of globe-encircling environmental processes: The technological and economic forces that provide valuable material benefits can also produce the very conditions that undermine the planet's ability to sustain life." While Marsh moved on to pursue other projects after having written *Man and Nature*, the legacy of his work has been a constant source of inspiration in developing conservation and ecology studies. As biographer Lowenthal stated, "Anyone with a hoe or an ax knows what he is doing, but before Marsh no one had seen the total effects of all axes and hoes. Once Marsh made this general observation, the conclusion was, for him, inescapable. Man depends upon soil, water, plants, and animals. But in securing his livelihood he may unwittingly destroy the fabric of nature that supports him. Therefore, said Marsh, men must learn to understand their environment and how they affect it. And they must take action, individual and collective, to restore and maintain a more viable milieu."

## Books

- American Authors 1600-1900: A Biographical Dictionary of American Literature*, edited by Stanley J. Kunitz and Howard Haycraft, H.W. Wilson Company, 1938.
- Biographical Directory of the American Congress 1774-1949*, United States Government Printing Office, 1950.
- Brooks, Paul, *Speaking for Nature: How Literary Naturalists from Henry Thoreau to Rachel Carson Have Shaped America*, Houghton Mifflin Company, 1980.
- Dictionary of American Biography*, edited by Dumas Malone, Charles Scribner's Sons, 1933.
- Dictionary of Literary Biography*, Volume 1, Gale, 1978.
- Encyclopedia of American Biography*, edited by John A. Garraty, Harper and Row Publishers, 1974.
- Environmental Encyclopedia*, First Edition, Gale, 1994.
- Lowenthal, David, *George Perkins Marsh: Versatile Vermonter*, Columbia University Press, 1958.
- National Cyclopaedia of American Biography*, Volume II, University Microfilms, 1967.
- Oxford Companion to American History*, edited by Thomas H. Johnson, Oxford University Press, 1966.
- Oxford Companion to American Literature*, edited by James D. Hart, Oxford University Press, 1983.
- Webster's American Biographies*, edited by Charles Van Doren, G. and C. Merriam Company, 1975.

## Periodicals

- American History Illustrated*, December 1984, p. 42-3.
- Horizon*, Summer 1968, pp. 17-23.
- National Wildlife*, August-September 1980, pp. 28-9.
- Wilderness*, Summer 1990, pp. 64-68.

## Online

- "George Perkins Marsh," *A and E Network Biography*, <http://www.biography.com> (December 27, 2000). □

# Gregory Martin

**Gregory Martin (c. 1540-1582) was a Roman Catholic priest and scholar. He was the primary translator of the Douai-Rheims Bible, the first English translation specifically for Catholics. His work has long been heralded as an important contribution to biblical scholarship.**

The significance of Martin's life must be judged in relation to the historical time and place in which he lived. In England, the sixteenth century was marked by political and religious turbulence. When King Henry VIII's wife Catherine of Aragon did not bear a son to inherit the throne, Henry began looking for means by which he could annul the marriage. The reason was not hard to find, but in the entanglement of politics and religion, the situation became problematic. Catherine had been previously married to Henry's brother Arthur, since deceased. Because it was against church law, based on the teachings of the book of Leviticus, for a man to marry his brother's widow, Henry

had sought and received a special dispensation from the pope to allow their marriage. Now, needing to be free from the marriage, Henry called upon the pope Clement VII to renounce the dispensation and annul the marriage. When the pope refused, Henry rejected the Catholic Church and the pope's authority and in 1542 established the Anglican Church, over which he, as the king, ruled as the supreme head. He then divorced Catherine and married Anne Boleyn.

Although Henry was motivated by political reasons, the outcome had numerous religious ramifications. Some who refused to acknowledge the king as supreme ruler of the church were martyred, most notably Sir Thomas More. Spurred on by the influence of similar reformations in Europe, the Anglican Church suppressed monasteries and introduced the Bible in English (previously only available in Latin) to the local churches. When Edward VI ascended the throne in 1547, the Protestant movement advanced rapidly as he enacted a systematic reform of church doctrine and worship. Upon Edward's death in 1553, England returned to Roman Catholicism under Queen Mary for a short period. In 1558 Elizabeth I took over the throne and once again restored the Protestant church. Due to the conflict, both Catholics and Protestants suffered persecution as power shifted back and forth.

### Catholic Translation of Scriptures

It was into this turbulent time that Martin, a lifelong devout Catholic, rose to acclaim as the one who would provide English-speaking Catholics with a Catholic translation of the scriptures. He was born in Maxfield, a parish of Guestling, near Winchelsea, in Sussex, England. Although the date of his birth is not known with all certainty, it is believed to be around 1540. His name is first mentioned in historical records in 1557, when he was selected as one of the original scholars of St. Johns College, Oxford, newly founded by Sir Thomas White. During his time at Oxford, where he became a highly respected scholar of Greek and Hebrew, he befriended Edmund Campion, who would later become a Jesuit martyr, and was influential in Campion's conversion to Catholicism. Martin engaged in the standard course of studies, including logic and philosophy. Earning his Master of Arts degree in 1564, Martin left St. Johns around 1569 because of religious tensions. Although he did not publicly affirm his Catholic faith until the following year, he remained quietly Catholic while at Oxford, a life that became increasingly difficult to sustain. He found employment and refuge as a tutor for the children of Thomas, the fourth Duke of Norfolk, including Philip, Earl of Arundel, who would later be martyred as well.

In 1570 Martin relinquished his tutoring responsibilities and traveled to Douai, France, where he enrolled as a candidate for the Catholic priesthood in the English College, founded by William (afterward Cardinal) Allen. Allen, who had long felt the need for an English version of the Bible as a means to combat the biased Protestant translations, put upon Martin the job of developing a new translation. For the remainder of his life, Martin devoted himself to teaching biblical studies and producing a translation of an English

Bible for the Roman Catholic Church. He was subsequently ordained in March 1573 and received his licentiate in divinity in 1575. He remained in Douai teaching Hebrew and scriptural studies until 1576, when Allen called upon him to travel to Rome to assist in the establishment of a new English College there. For two years Martin stayed in Rome and helped to organize the new Catholic school. In 1578, he returned to the English College, which was temporarily moved to Rheims due to increasing political problems in Douai. During his tenure at the college in Rheims, Martin contracted tuberculosis. He traveled to Paris in search of a cure, but found none. He died on October 28, 1582, as his New Testament translation went to print. Due to a lack of funds and interest, his translation of the Old Testament, completed before his death, was not published until 1609-10.

### Douay Bible

Under the direction of Allen, Martin headed a team of Catholic scholars in the creation of what is commonly called the Douay, or Douai-Rheims, Bible. The work is so named because the New Testament was published while the English College was located in Rheims and, by the time the Old Testament was published, the school had returned to Douai. Martin undertook the vast majority of the translating work, methodically translating two chapters a day. His translation was then reviewed and revised by Thomas Worthington, Richard Bristowe, John Reynolds, and Allen himself, all of whom had been educated at Oxford. According to the 1909 edition of *The Catholic Encyclopedia*, "The original Douay Version, which is the foundation on which nearly all English Catholic versions are still based, owed its existence to the religious controversies of the sixteenth century. Many Protestant versions of the Scriptures had been issued and were used largely by the Reformers for polemic purposes. The rendering of some of the texts showed evident signs of controversial bias, and it became the first importance for the English Catholics of the day to be furnished with a translation of their own, on the accuracy of which they could depend and to which they could appeal in the course of argument."

Tied up in the controversy of the translation was Martin's decision, along with the other scholars, to translate from the Vulgate, rather than from the original Hebrew or Greek texts. The Vulgate is the Latin version of the Bible translated by St. Jerome late in the fourth century. For the next 12 centuries, the Vulgate was transcribed with less and less accuracy, until finally, during the Council of Trent (1545-1563), a revised Vulgate was issued. The reworked Vulgate was declared authoritative for Catholics by the Council of Trent and affirmed by Pope Pius IV in his acceptance of the council's decrees in 1564. Along with the political significance of using the Vulgate, the translators also believed that it was a purer translation than many of the transcriptions of the original Greek and Hebrew text available at that time. In the long and controversial preface to the Douay version, the authors write, "We are very precise and religious in following our copy, the old vulgar approved Latin: not only in sense, which we hope we always do, but sometimes in the very words and phrases, which may seem

to the vulgar read and to common English ears not yet acquainted therewith, rudeness or ignorance." They assert that their work was rendered necessary by the many "false translations" by Protestants, who have skewed the meaning of the scriptures by "adding, detracting, altering, transposing, pointing, and all other guileful means: specially where it serveth for the advantage of their private opinions."

Martin's translation is characterized by the retention of many Latinisms, making the text rather cumbersome and difficult to read. In other words, when Martin felt he could not substitute a Latin word with a suitable English word that would fully convey the meaning, he anglicized the Latin word, changing the Latin letters into English letters. It was assumed that when readers came across unfamiliar words, they would stop to inquire their meaning. According to the *Jerome Biblical Commentary* (1968), "The translation, although competent, exhibited a taste for Latinisms that was not uncommon in English writing of the time but has seemed excessive in the eyes of later generations." Although burdensome to read, the Douay (Old) Testament and later the Rheims (New) Testament were heralded as important translations for the Catholic Church.

Although not officially noted as a source, Martin's translation is commonly recognized as having a large influence on the King James Version. Undergoing extensive revisions in 1749 by Richard Challoner, the Douay Bible became the standard source for Catholic scripture reference into the twentieth century. Although the Douay version is still used in Ireland and England, it is based on the revisions made by Challoner, who wished to make the text more accessible to readers and inexpensive to purchase. As a result, the contemporary Douay Bible resembles the original Douai version in little more than name. According to S. L. Greenslade in his article "English Versions of the Bible, 1525-1611," found in *The Cambridge History of the Bible: The West From the Reformation to the Present Day* (1963), "Gregory Martin showed that he could write with power. All the rhythms of his speech have been destroyed by the revising hand of Bishop Challoner in the eighteenth century, and the Douay version as it is now known has lost much of what Martin gave it."

### Other Works

Along with his important contribution to biblical translation, Martin also wrote numerous works on religious topics. His book *A Treatise of Schisme* (1578) led to the printer of the book to be charged with treason and executed as it was believed that the text contained a recommendation to assassinate the queen. In 1582 Martin published *A Discovery of the manifold Corruptions of the Holy Scriptures by the Heretics of our days, specially the English Sectaries*. The work sparked a fierce debate between Catholic and Protestant scholars and resulted in the publication of numerous rebuttals, including William Fulke's *Defence of the sincere and true Translations of the holy Scriptures into the English Tongue*. Martin's other writings include *A Treatise of Christian Peregrination* (1583), *Against the Marriage of Priests* (1584), *Of the Love of Soul, with questions to the Protestants* (1603), and numerous titles published in Latin.

### Books

- The Bible in Its Ancient and English Versions*, edited by H. Wheeler Robinson. Clarendon Press, 1954.
- Bruce, F. F. *The English Bible: A History of Translations from the Earliest English Versions to the New English Bible*. Oxford University Press, 1970.
- The Cambridge History of the Bible: The West From the Reformation to the Present Day*, edited by S. L. Greenslade. Cambridge University Press, 1963.
- Delaney, John J., and James Edward Tobin, *Dictionary of Catholic Biography*. Doubleday and Company, 1961.
- Fulke, William. *A Defence of the Sincere and True Translations of the Holy Scriptures into the English Tongue Against the Cavils of Gregory Martin*. Edited by Charles Henry Hartshorne. Cambridge University Press, 1843.
- The Jerome Biblical Commentary*. edited by Raymond Brown, Prentice Hall, 1968.
- Smith, George. *The Dictionary of National Biography, The Concise Dictionary: Part I: From the Beginnings to 1900*. Oxford University Press, 1961.
- Webster's New World Companion to English and American Literature*. edited by Arthur Pollard, Word Publishing, 1973.

### Online

- "Gregory Martin," *Britannica.com Inc.* <http://www.britannica.com> (January 3, 2001).
- "History of Protestantism," *Britannica.com Inc.* <http://www.britannica.com> (January 3, 2001).
- "Douay Bible," *The Catholic Encyclopedia*, Kevin Knight, 1999. <http://www.newadvent.org> (January 3, 2001).
- "Gregory Martin," *The Catholic Encyclopedia*, Kevin Knight, 1999. <http://www.newadvent.org> (January 3, 2001). □

## Mata Hari

**Even though she is one of the best-known spies in history, Mata Hari (1876-1917) was far from being successful. She ironically found the fame she had longed for in her death and continued legend. Her life and adventures still fascinate people, who regard her as the twentieth century's first and foremost femme fatale.**

A baby girl was born in Leeuwarden, located in the Netherlands, on August 7, 1876, and christened Margaretha Geertruida Zelle. She came from a proper bourgeois, Calvinist family, and her father was a well-to-do hatter. But when he abandoned his family for another woman, and Margaretha's mother died soon after, the teenage girl found herself in dreadful circumstances.

It wasn't until March 1895 that the 18-year-old's destiny began to take shape. It happened while reading the advertisements in the *Het Nieuwes van den Dag*. There, she came across an advertisement by an army captain, stationed in the Dutch East Indies, who was seeking a wife. The officer was Captain Rudolf MacLeod, a Dutchman of Scottish ancestry who had been stationed in the Indies for almost 20



years. At the time of the advertisement, he was recuperating from malaria in Amsterdam.

The advertisement was actually placed in the *Het Nieuwes van den Dag* as a practical joke by one of the newspaper's reporters who was a friend of MacLeod. It received 16 responses, with Margaretha's the last to arrive. However, hers contained a photograph that obviously intrigued the army captain. They went on their first date, and their romance, such as it was, quickly took off despite a 21-year age difference. They exchanged numerous letters (which MacLeod later sold to Dutch reporters), and these revealed the passionate nature of the young woman. They were married in the town hall that July of 1895, honeymooned at the spa in Wiesbaden, Germany, and returned to Amsterdam where they settled into an uneasy life together.

By September of 1896, MacLeod was deemed healthy enough to return to the East Indies, but they were unable to return because Margaretha was pregnant. She gave birth to a son, Norman John MacLeod, on January 30, 1897. The family eventually sailed for the Dutch East Indies aboard the *Prinses Amalia* on May 1, 1897.

### Dutch East Indies

For the next few years, the Dutch East Indies, located in southeast Asia, was home. MacLeod's first two postings on his return were to Ambarawa, located in central Java, and then Toempoeng, where the couple's second child, a daughter, was born. In December of 1898, MacLeod was promoted to major and given a new post as a garrison

commander. It was months before Margaretha and the children were able to join him, and tragedy and scandal quickly struck the family.

Soon after their arrival, the children became violently ill and were hospitalized. It was determined that they had been poisoned. Within two days, young Norman was dead. Margaretha blamed the children's nurse who, according to gossip, had been having an affair with MacLeod. Others believed MacLeod had raped the woman's daughter, and she was getting her revenge.

MacLeod took a new post in the jungle, where Margaretha became ill with typhoid fever. MacLeod himself became ill once again, and on October 2, 1900 he retired from the army. The family remained in the Dutch East Indies, but Margaretha longed to return to Europe, specifically Paris. Her infatuation with the older man had long since worn off, especially since he no longer had a position of prestige.

The family returned to Amsterdam in 1902, but MacLeod too had become tired of the arrangement and he deserted the family. In the website article, "Child of the Dawn," it was noted that "MacLeod descended into alcoholism and flagrant womanizing." Margaretha was granted a divorce and custody of their daughter. She left her daughter with relatives, headed to Paris, and never looked back.

### Life in Paris

She arrived in Paris with her beauty as her only asset, and soon took a job as an artist's model. But that didn't pay well enough for her to live and she returned to the Netherlands. She grew tired of life in The Hague and Amsterdam, and once again went to Paris. However, this time she had considerable assistance. In The Hague, she had met Baron Henry de Marguerie, a wealthy bachelor and man about town, who was attached to the French ministry at The Hague. He set her up at the Grand Hotel in Paris, bought her a new wardrobe, and gave her spending money. Yet she was determined to make it on her own.

At first, she took a job as a riding instructor, and joined an exhibition riding team that was to perform in circuses. When the team got no bookings, she took the advice of a friend, Ernest Molier, who had formed the riding team, and decided to give dancing a try. She also changed her name to Marguerite.

The culture of the Orient was sweeping Paris at the time of these changes in her life. This allowed her to draw on her five years in the Dutch East Indies, and to craft a legend for herself that marked her exotic beauty. The only problem was that she had never studied dance, though she possessed a natural grace. She decided to create something entirely new, at least to Europeans, based on the style of dancing she had seen in the Indies. She also began to rewrite her personal history.

### Dancer and Courtesan

In the beginning, she told people that she was the daughter of a Javanese Buddhist priest and a Dutch woman. Her parentage then changed to an important Dutch colonial official and a local woman. But when it came time for her

initial performance she billed herself as “Lady MacLeod,” whose father was British aristocracy and her mother an Indian who had had her trained as a Hindu temple dancer. As Russell Warren Howe described it in *Mata Hari: The True Story*, Margaretha had no trouble redefining her experience, as some Europeans confused the Dutch East Indies with India.

Her first performance was in the salon in the home of one Mme. Kireyevsky (also transliterated Kireevsky), a former singer. It was a successful debut, but more important it brought her to the attention of M. Emile Guimet, the proprietor of the Musée Guimet, an oriental art museum. Guimet was the final step in Margaretha’s transformation into Mata Hari. He invited her to dance at the museum while shrewdly observing that neither her original name nor her newly acquired “aristocratic” stage name were authentic enough for a Hindu temple dancer. After some discussion she came up with the name Mata Hari. The name translates to “light of the day” or “eye of the day,” meaning the sun or dawn.

On March 13, 1905, the date of her performance at Musée Guimet, Mata Hari came to be. The impresario Guimet decorated the museum’s stage with a statue of Siva (the Hindu God of destruction and reproduction), before which was a bowl of burning oil, employed four other dancers, and lit the whole scene in candlelight.

Mata Hari herself was dressed in clothing from the museum’s collection, mostly gauzy and transparent shawls that she stripped away as her dance became more erotic. The culmination of her performance was a simulated sex act with Siva. The audience, on the peak of modernism, and never having seen anything like it before, adored her. A few days later she would dance again at Mme. Kireyevsky’s salon (for the benefit of the Russian Red Cross) and between the two shows she suddenly had a name and a following in Paris—among her devoted fans were ambassadors and members of the Russian and French aristocracy.

For the next nine years, she reigned over a Europe that moved ever closer to her sensibilities—that is, the freedom of modernism—even as it trudged closer and closer to destruction. There were comparisons to Isadora Duncan, but in truth Mata Hari was more of a stripper than a dancer. And thanks to the entree into certain areas of society that her dancing had brought her she was also Europe’s best known courtesan (defined as a lover or mistress of a nobleman). As the “Child of the Dawn” website article noted, “During the early years before World War I, Mata danced her way into the hearts and wallets of soldiers and statesmen on all sides of the political map and all over the globe.”

Her numerous lovers during this period included War Minister Adolphe-Pierre Messimy; Alfred Kiepert, a wealthy German landowner and military officer; composer Giacomo Puccini; Baron Henri de Rothschild; and possibly Jules Massenet, for whom she danced in his opera *Le Roi de Lahore* in 1906. Mata Hari managed to scandalize the audience, the theater management, or both wherever she performed—most notably Milan’s La Scala. She maintained residences in Paris and the Hague, and her star burned brightly across Europe, until the eve of World War I.

Her only problem was her age. She had begun her career late in life and by 1914 she was 38-years-old. Although a 1915 report from the *The Daily Telegraph* (London) describes her as “mahogany in colour, rather tall, aged between 35 and 40, a very pretty woman,” she was clearly past her prime. Younger women were now doing what she had done—and if not doing it better, they were certainly more risqué. With fewer performances came fewer opportunities to meet new lovers. Both meant less money.

### Became a Spy

She originally began spying for the Germans during the war, but the intelligence she gathered never amounted to much. By 1916, she had fallen in love with a young Russian officer, Vadim de Masloff, and as a consequence switched her allegiance, and offered to work for the French. She even made a proposal in which she would enter Germany and seduce the Crown Prince.

This proved to be her undoing. Her contact was none other than the head of French intelligence, Captain Ladoux, who had set out to entrap her. After a liaison with a German officer, Mata Hari then traveled from the Netherlands to Spain, and then to England. She hoped to eventually travel to Belgium and then Germany.

However, she was arrested in England. Since her Dutch passport bore her original full name, the British were confused, which led to them to confuse her with another German spy. After numerous cables back and forth between London and Paris, she was sent back to Spain. There, Ladoux’s organization managed to get their hands on secret cables she had sent to the Germans, who no longer trusted her anyway. She returned to Paris, and was later arrested on February 13, 1917, at the Elysees Palace Hotel.

The French were determined to use her capture as a propaganda boost. They claimed she had cost the lives of 50,000 French soldiers. There were eight charges against her for espionage activities dating back to December 1915. It is believed that circumstantial as well as manufactured evidence, led to her being found guilty on all the charges. She was sentenced to death.

Subsequently, the French ignored an appeal from the Queen of the Netherlands to free Mata Hari. A French offer to the Germans for a prisoner exchange was also ignored. In the days before her execution, she exhibited a great deal of dignity, and converted to Catholicism. On October 15, 1917, Mata Hari was executed by a firing squad.

On the website *Famous Females: Women in Espionage*, it was noted that “Most historians do not believe that she [Mata Hari] realized the seriousness of the game she was trying to play.” An article in the *Sunday Times* debated whether she was a “cunning and manipulative double agent” or “a convenient scapegoat” for the French. The article added that her myth “has refused to die, despite historical evidence that she was not an alluring nymphette, but a prostitute in her 40s.”

Although history and popular culture have long reinforced the romantic, infamous version of the Mata Hari story, by the end of the twentieth century, many historians

had come to believe that she was at worst an inept spy, possibly not a spy at all, but also a victim of her own fame.

### Books

Howe, Russell Warren, *Mata Hari: The True Story*, Dodd, Mead and Company, 1986.

Waagenaar, Sam, *Mata Hari*, Appleton-Century, 1965.

### Periodicals

*Daily Telegraph (London)*, January 27, 1999.

### Online

"Child of the Dawn: Mata Hari," *About French Culture website*, <http://frenchculture.about.com/culture/frenchculture/library/weekly/aa080700a.htm> (December 11, 2000).

"Mata Hari," *Famous Females-Women in Espionage*, <http://famousfemales.tripod.com/6or.htm> (March 11, 2001).

"MI5 lifts veil on Mata Hari's luckless lovers," *The Sunday Times*, January 24, 1999, <http://www.sunday-times.co.uk/news/pages/sti/99/01/24/stinwenws01004.html?1056493> (December 11, 2000).

"One possibility of Mata Hari's trial," *Famous Females-Women in Espionage*, <http://famousfemales.tripod.com/6tri.htm> (March 11, 2001). □

## Christy Mathewson

**Christy Mathewson (1880-1925) was a much-admired American sports hero in the early part of the twentieth century. Educated and self-confident, he was a role model for the youth of his era and one of baseball's greatest pitchers. Mathewson won 373 games in 17 seasons and was among the "Immortal Five" players who were the first inductees into major league baseball's Hall of Fame.**

The charismatic Mathewson was one of the smartest and most talented pitchers of any era. Except for a short stint with the Cincinnati Reds at the close of his career, Mathewson spent his entire career pitching for John McGraw's New York Giants, one of the best teams of baseball's so-called "dead-ball era." He became a protege and friend of McGraw, one of baseball's greatest managers. Mathewson appeared in four World Series with the Giants. He finished third on the all-time list in victories and shutouts. When his career ended, he spent three seasons as manager of the Reds. Mathewson died at age 45 from tuberculosis, contracted from exposure to poison gas while serving in World War I.

### Makings of a Star

Born in the small mill town of Factoryville, Pennsylvania, just north of Scranton, Mathewson was the oldest of five children. His Protestant parents were staunchly religious and wanted him to become a minister. He grew up into a handsome, blond, blue-eyed, broad-shouldered, athletic,



and intellectual young man—a paragon of the prized male attributes of his day.

Spurning the ministry, Mathewson enrolled at Bucknell University. There, he was president of his class while starring in baseball, basketball and football. In football he was an accomplished field goal kicker. In 1899 Mathewson turned professional, playing minor league baseball with Taunton. The next season, he went to Norfolk and compiled a 20-2 record, which earned him plenty of attention from major league scouts. The New York Giants signed him to a contract, offering him a \$1,500 bonus. They brought him right to the majors during the 1900 season, but Mathewson won none of his five starts and was sent back to Norfolk.

In 1901 the Cincinnati Reds drafted Mathewson for \$100. Before the season started the Reds traded him back to the Giants for pitcher Amos Rusie. It proved to be one of the most lopsided trades in baseball history. Rusie eventually made it to baseball's Hall of Fame, but he was at the end of his long career, had not pitched in two years because of a sore arm, and would never win another game. Mathewson went on to win 372 games for the Giants before returning to the Reds for one final victory in 1916. The explanation for the deal was that Reds' owner John Bush was about to buy the Giants, and he wanted fresh young arms on his new team.

### All-American Hero

In his first full season for the Giants, Mathewson won twenty games and lost seventeen. On Opening Day in

1902, he shut out Philadelphia but ended up that season with a losing record of fourteen wins and seventeen defeats. The next year, he began a twelve-year stretch of dominance in which he averaged 26 wins a season and compiled four thirty-win years. Mathewson won 317 games and lost only 133 games in that span. He was the dominant pitcher in the National League, leading his league in wins four times, in earned run average five times, and in strikeouts five times.

The renowned tactician John McGraw immediately took Mathewson under his wing after becoming Giants manager in 1903. That spring, Mathewson and his new wife, Jane, a Sunday school teacher, celebrated their honeymoon at the Giants' training camp. McGraw's wife Blanche became close friends with Jane Mathewson. When the team returned to New York, the McGraws and Mathewsons shared a ground-floor apartment near Central Park. They remained close throughout Mathewson's life.

Mathewson became a huge fan favorite in New York after he led the team to a National League championship in 1904 while compiling a record of thirty-three wins and twelve losses. McGraw refused to play in the World Series because he considered Boston, the champions of the upstart American League, too lowly to challenge. In 1905 the Giants easily won the pennant again. This time McGraw agreed to face the Philadelphia Athletics in the World Series. Mathewson electrified the nation by pitching three shutouts in the five-game series. In the three games, he gave up fourteen hits and walked only one batter. His feats made him the new century's first modern sports icon.

Few major league ballplayers at the turn of the century were college graduates, and Mathewson stood out, both on and off the field. He projected a patrician air of pride and nobility, even though he could sometimes be brutally honest. "You must have an alibi to show why you lost," he once told a reporter. "If you haven't one, you must fake one. Your self-confidence must be maintained."

Mathewson was nicknamed "Big Six" by his teammates because he measured six feet, quite tall for that era. Cut straight from the mold of the clean-cut fictional collegiate sport hero of the era, Frank Merriwell, Mathewson became "something of a paragon, really the first professional athlete to function as a role model for America's youth," according to baseball historian Charles Alexander. Sunday games were rarely played in those days because of blue laws, but when they were, Mathewson refused to suit up, because he said he had promised his mother that he never would work on the Sabbath. In an era when baseball was the undisputed national pastime, sportswriters constantly polished Mathewson's image. The legendary writer Grantland Rice called Mathewson "the knightliest of all the game's paladins."

In stark contrast, McGraw's Giants were a brawling, rowdy outfit, with the manager one of the fiercest competitors in the game. McGraw often baited and fought umpires, and his players bullied and intimidated other teams. Mathewson's own behavior did not always match his sterling reputation. He threw wicked brushback pitches at batters' heads, chewed out umpires, and occasionally threw punches during the Giants' many on-field brawls. Revealing

his contempt for umpires, he once said: "Many baseball fans look upon an umpire as a sort of necessary evil to the luxury of baseball, like the odor that follows an automobile." During one brawl in 1904, Mathewson reportedly knocked down a boy selling lemonade near the Giants' bench. Contradicting his clean-cut image, he occasionally drank beer, played poker and smoked cigars, but these habits were rarely reported in the popular press.

### A Will to Win

Like his legendary manager, Mathewson hated to lose. He used all his wits in battle. His memory was so sharp that he would often take on eight teammates in checkers. On the field, he studied and memorized his opponents' weaknesses. He never made a mistake a second time against a batter. He had command of four pitches—a screwball, a wicked curveball, a chance of pace, and a respectable though not overpowering fastball. His screwball, then called a fadeaway, was his trademark pitch. "Anybody's best pitch is the one the batters aren't hitting that day," he said famously.

Despite his obvious talents, Mathewson's greatest weapons were his intelligence, his composure and his remarkable control. He issued only 1.3 walks per game in his career. In 1913 he pitched sixty-eight consecutive innings without giving up a walk. With his great control and intellectual approach to pitching, Mathewson might be compared to the Atlanta Braves' star of the 1990s, Greg Maddux.

In the spring of 1906, Mathewson came down with diphtheria. He never regained his full strength that season, yet still managed to win twenty-two games. Two years later, Mathewson had his finest year, winning an amazing thirty-seven of his forty-four starts and pitching thirty-four complete games and 390 innings. The thirty-seven victories set a post-1900 baseball record that has never been broken. His earned run average in that season of 1908 was a low 1.43, and the following year it was even better, a remarkable 1.14.

McGraw occasionally used Mathewson in relief. In one game in 1908, with the Giants leading 4-1 in the ninth, Mathewson had already showered and dressed in street clothes. But when the Giants' Joe McGinnity walked the bases loaded, McGraw called for Mathewson. Still dripping wet, he went to the mound hatless and in street shoes and speedily retired the side.

The 1908 race went down to the wire. To determine the National League winner, officials ordered a disputed tie game between the Giants and Cubs replayed at the end of the season. A rowdy, overflow crowd at the Polo Grounds in New York heaped abuse on the Cubs and adulation on Mathewson. As he entered the field in a long linen duster, the crowd roared, "Fadeaway, Matty!" But the Cubs won the game when the Giants' center fielder ignored Mathewson's pleas to back up, and Joe Tinker hit a triple over his head. "I never had less on the ball in my life," Mathewson later admitted.



## World Series Thrills

The Giants returned to the World Series in 1911 against the Philadelphia Athletics. During the series, a *New York Herald* baseball reporter paid Mathewson \$500 for the privilege of ghost writing a column under the pitcher's name. In the opening game, Mathewson won 2-1, throwing a complete game with only ninety-two pitches. In the second game, Giants' pitcher Rube Marquard gave up a game-winning homer to A's slugger Frank Baker. Mathewson's column the next morning criticized Marquard for throwing a pitch to Baker that McGraw had warned him not to throw. But in the ninth inning of the third game, with the Giants leading 1-0, Mathewson served up a home run ball to Baker. Mathewson eventually lost that game and another, and the Giants lost the series, four games to two.

In 1912 Mathewson started three more World Series games, but did not win any of them, and the Giants lost to the Boston Red Sox, four games to three. In the final game Mathewson had a 2-1 lead in the tenth inning when outfielder Fred Snodgrass dropped a fly ball. Then Mathewson and first baseman Fred Merkle let a catchable foul ball drop, giving Tris Speaker a second chance, and Speaker delivered a game-winning hit.

In 1913 Mathewson finally won his fifth World Series game, a 3-0 win in ten innings. However, it was the Giants' only win of the Series, which would be Mathewson's last. Mathewson still holds the all-time World Series records of four shutouts and ten complete games. His World Series earned run average was a microscopic 1.15. All five of his Series losses were due to lack of run support from his teammates.

## Untimely End

After his dozen brilliant seasons, Mathewson faded quickly. In 1915, troubled by back and shoulder pain, he won only eight games. The next season the Cincinnati club wanted Mathewson to be their new manager, and McGraw obliged by trading his friend.

Mathewson managed the Reds for three seasons without getting them into contention. His most notable move as manager was suspending first baseman Hal Chase for "indifferent playing." Mathewson knew Chase was involved with gamblers and suspected him of throwing games. It was a bold move in an era when gambling encroached on the sport's integrity.

In 1918 Mathewson enlisted in the Army to fight in World War I. He was gassed by friendly forces in a training exercise. The poison gas caused tuberculosis. Mathewson returned to the Giants to coach for three more seasons under his old friend McGraw, and later served as a part-time owner and president of the Boston Braves. But his poor health eventually forced him into a tuberculosis sanitarium at Lake Saranac, New York. There he died, on the first day of the 1925 World Series, at the age of forty-five. Mathewson was buried at Bucknell College, and McGraw served as a pallbearer at the funeral.

Mathewson's 373 wins put him in a tie for third on the all-time list. His career earned run average of 2.13 ranks

fifth. He is third with eighty career shutouts. He was honored posthumously for his sports achievements as one of the original five players elected to the Baseball Hall of Fame in 1936.

## Books

- Alexander, Charles C., *John McGraw*, Penguin, 1988.  
*The Ballplayers*, edited by Mike Shatzkin, William Morrow, 1990.  
*The Baseball Encyclopedia*, MacMillan, 1997.  
Cantor, George, *Inside Sports World Series Fact Book*, Visible Ink, Detroit, 1996.  
Davis, Mac, *Hall of Fame Baseball*, Collins/World, 1975.  
Light, Jonathan Fraser, *The Cultural Encyclopedia of Baseball*, McFarland and Co., 1997.  
Seymour, Harold, *Baseball: The Golden Age*, Oxford University Press, 1971.  
Sullivan, George, *Pitchers: Twenty-Seven of Baseball's Greatest*, Atheneum, 1994.

## Online

- "Christy Mathewson," *Baseball Almanac*, <http://baseball-almanac.com/quomath.shtml>. □

# Bob Mathias

**Bob Mathias (born 1930) was the youngest person ever to win the gold medal in the Olympic decathlon, a feat he accomplished in 1948 at the age of 17. He was also the first person ever to win two Olympic decathlons.**

Bob Mathias was born on November 19, 1930, in Tulare, California, the second of four children born to Dr. Charles Milfred and Lillian (Harris) Mathias. With her first child a son, Lillian Mathias had her hopes set on a baby girl for her second child; it is said that she cried when she heard that her new baby was another boy. Even as a baby, however, Mathias displayed a phenomenal level of coordination, a hint of his future talent in sports.

## Overcame Anemia to Become Star Athlete

When Mathias was 11 years old, he was found to have a shortage of red blood cells, and his father treated him for anemia. He had to take iron pills, eat a special diet, and take frequent naps to conserve his strength. By the time he entered Tulare High School, however, he had recovered from this illness and joined the football, basketball, and track teams. Within a short time, he was a star in every event he participated in.

By his senior year Mathias had gained a reputation as the best prep football fullback on the West Coast and had a nine-yard average per carry. On the basketball team he scored 18 points per game during his senior year and was an All-Stater. In track and field he was a winner in the shot put, discus, and 220-yard high hurdles; he also won the anchor



leg on the winning relay team and tied for second in the high jump. Mathias further distinguished himself by winning the high and low hurdles at California's State High School Track Meet in 1948.

Mathias's coach at Tulare, Virgil Jackson, noted the young man's all-around talent and pegged Mathias as a natural for the decathlon, an event in which athletes compete in ten track and field events. The events include the 100-meter dash, long jump, shot put, high jump, and 400-meter dash, all held on one day, followed by the 110-meter hurdles, discus throw, pole vault, javelin throw, and 1,500-meter run on the second day. Each event is scored according to a point system, and the athlete with the highest number of points after ten events is the winner. In the *Encyclopedia of World Sport* Frank Zarnowski noted that "Patience, a rigorous training regime, and long-term goals are necessary for multi-event success."

### Became World's Best in Three Weeks

Jackson and Mathias didn't have time for any long-term training, because the Southern Pacific Amateur Athletic Union (AAU) Games in Los Angeles were only three weeks away, but Jackson was confident that Mathias could learn the events and compete successfully. Mathias had never pole vaulted, thrown a javelin, long jumped, or run distance races, but he trained for the three weeks and won. Shortly after this, in late June of 1948, Mathias amazed onlookers by winning the National AAU championship and Olympic trials at Bloomfield, New Jersey. In doing so, he defeated

experienced decathlete and three-time national champion Irving "Moon" Mondschein. His score of 7,224 points was the best in the world since 1940.

### Competed in 1948 Olympics

On his way to the 1948 Olympics in London, Mathias was the youngest member on any U.S. Olympic track and field team ever. He worked hard right up to the event, spending most of his time training. Unfortunately, training without allowing his body any recovery time caused elbow and knee injuries. These injuries, as well as the high caliber of the competition, made Mathias's prospects for a medal look dim.

At 7 a.m. on August 5, 1948, Mathias breakfasted on steak and orange juice, then headed to London's Wembley Stadium, where 70,000 spectators waited in a cold rain. Although he was not allowed to warm up before running his first event, the 100 meters, he managed to race the distance in 11.2 seconds, a tie with his own personal record for the event. On the broad jump he went over 23 feet, but fell backward. On his next try, he only made 21'8 1/2". This score was very low, putting him near the bottom of the field of 35 contenders. For the shot put, Mathias threw a distance of over 45 feet. However, because he unknowingly violated a technical rule in the way he stepped out of the shot put circle after the throw he was forced to settle for a distance of 42'9 1/4".

Between events the rains continued, and Mathias waited for his high jump event wrapped in a blanket. Missing his first two tries, the young man began to worry. If he missed a third time, he would be disqualified. On the third try, however, he made it, sailing over at 6'1 1/4", his best height ever. His last event, ten hours after the start of the day's competition, was the 400-meter run, which Mathias finished in 51.7 seconds. After a long, cold, wet, and exhausting day, the high school student from Tulare, California, found himself in third place in the Olympic decathlon.

On the second day of competition, a stiff and sore Mathias awoke to find that it was still pouring. His first event of the day was the 110-meter hurdles, which he almost botched by losing his balance. Losing speed during his balance mishap, he poured on the speed to complete the run, finishing with a personal worst time ever of 15.7 seconds. He threw the discus 145 feet, but competitor Mondschein's discus skidded across the wet grass, knocking Mathias's marker from the place where his discus had originally landed. For half an hour Olympic officials wandered over the field arguing about where Mathias's marker had been before positioning a new marker a foot and a half short of his actual throw. Despite this, the new distance of 144'4" was good enough to put Mathias in first place, with a 48-point lead.

At noon Mathias was exhausted, cold, soaking wet, and hungry. However, officials refused to let him go to lunch, saying he might have to do his pole vault soon. They then divided the athletes into two groups, with Mathias in the second group. It would be six hours before it was his turn to vault. All the contenders had encountered difficulty with the pole vault because the pole and runway were slippery due

to the rain. Mathias waited until the bar was over ten feet to take his turn. By now, it was twilight, the only light coming from the Olympic torch, flickering through the rain and a string of 50-watt bulbs lighting the stands. Although the contest became almost dangerous in these conditions, Mathias continued vaulting on higher and higher bars until he cleared 11'5 3/4". By now he was in second place, with only Ignace Heinrich of France ahead of him.

The next event was the javelin. It was night, and Mathias threw by the light of an official's flashlight, even losing his javelin in the dark. By the end of the event, however, he was only 189 points behind Heinrich. If he could win the 1,500-meter run, he would also win the gold. Exhausted, hungry, and suffering from pain in his foot and his stomach, a determined Mathias won the run with a time of 5'11", earning 354 points to make his point total 7,139 compared to Heinrich's 6,974. As recorded by James D. Whalen in *Biographical Dictionary of American Sports*, sportswriter Allison Danzig commented of Mathias's performance: "In rain, on a track covered with water, in failing light, and finally under floodlights, it was an amazing achievement."

Barefoot, Mathias sloshed to the stands and hugged his mother, as his father and two brothers cheered him. According to Cordner Nelson in *Track's Greatest Champions*, he assumed that all decathlons were held in such grueling conditions, and told his father, "No more decathlons, Dad ever again." After the win, according to Larry Schwartz of *ESPN.com*, a reporter asked Mathias what he would do to celebrate. Mathias replied, "I'll start shaving, I guess." He then immediately went to sleep, and had to be awoken the next day so he could participate in the victory parade. He received a congratulatory telegram from President Harry S. Truman, was besieged by a crowd of 5,000 people at the airport on his return home, and was the star of a victory party in his hometown of Tulare.

### Continued Athletic Career

After winning the Olympic decathlon, Mathias graduated from high school and enrolled at Kiski Preparatory School in Saltsburg, Pennsylvania. He intended to make up for his lack of scholastic achievements, which did not match his athletic ability. Mathias was at Kisco for only a year before he was flooded with offers of college scholarships, based on his outstanding athletic ability. In 1949 Mathias enrolled at Stanford University, but didn't play football until his junior year. In that year, he led the team to its first Pacific Coast Conference title in 11 years. From there he went to the Rose Bowl, which Stanford lost to Illinois. According to Nelson, when Stanford coach Jack Weiershauser was asked how Mathias could be so good at so many events without much training, he responded: "He just does it, that's all. Especially when we need it. It's all in his mind."

At the national AAU championships in 1950, Mathias set a world record with a win of 8,042 points. Officials later revamped the point system, revising his total to 7,444 points, but still a world record. Two years later, at the 1952 AAU championships held at Tulare, Mathias was determined to win again. This event was the final trial to deter-

mine who would be on the U.S. Olympic team at the 1952 games, to be held in Helsinki, Finland. He won with a world record-setting score of 7,829 points, far beyond his previous record of 7,444.

### "I've Never Been So Tired in My Life"

At the 1952 Olympics, the veteran Mathias was favored to win, and he did. He beat his own world-record decathlon score by earning 7,887 points, 912 points ahead of second-place contender Milton Campbell, also from the United States. According to Whalen, Mathias's comment after winning was, "I've never been so tired in my life." Although often compared to famed U.S. decathlete Jim Thorpe, Mathias beat all of Thorpe's decathlon event records except for the 1,500-meter run.

A year after his second Olympic victory, Mathias retired from amateur competition, remaining undefeated in the decathlon. He married Melba Wiser, a drama major at Stanford. The couple had three daughters. Mathias served two-and-one-half years in the Marine Corps and later became a member of the U.S. Marine Corps reserve. He appeared in four films, one of which, *The Bob Mathias Story*, was about his own life. He also was a star of a television series. In 1961 Mathias and his wife founded a sports camp for boys, and started a similar camp for girls in 1969. Remaining a popular figure in his state, Mathias served as a Republican representative to the U.S. Congress from California's 18th District from 1967 to 1974. After serving in Congress he was appointed director of the U.S. Olympic Training Center at Colorado Springs and eventually headed the National Fitness Foundation. He was also president of the American Kids' Sports Association. In 1974, he was inducted in the National Track and Field Hall of Fame as a charter member. He also became a member of the U.S. Olympic Hall of Fame.

### Books

- Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.
- Encyclopedia of World Sport*, edited by David Levinson and Karen Christensen, ABC-CLIO, 1996.
- Hanley, Reid M., *Who's Who in Track and Field*, Arlington House, 1973.
- Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton, Mifflin, 1995.
- Nelson, Cordner, *Track's Greatest Champions*, Tafnews Press, 1986.

### Online

- "Boy-Wonder Mathias Elevated Decathlon," *ESPN.com*, <http://espn.go.com/> (December 20, 2000). □

## Henry Maudslay

**British mechanical engineer Henry Maudslay (1771-1831), known as the father of the machine-tool industry, laid an important foundation for the Industrial Revolution by improving interchangeability and**

**precision in tool-making. Maudslay also made many other advancements in engine design.**

Maudslay was born in Woolwich, Kent, in the southeastern part of England, on August 22, 1771. His father was a mechanic at the Royal Arsenal in Woolwich, and by the age of 12 Maudslay was also working at the arsenal as a “powder monkey.” His task was to fill cartridges with gunpowder. In just two years, he was promoted to the joiner’s shop and then apprenticed as blacksmith in the metalworking shop.

At the age of 18, Maudslay, who had developed extraordinary skills, left the arsenal to work with Joseph Bramah, a pioneer in hydraulics and locksmith work. Bramah, the inventor of the first unpickable lock, soon noted Maudslay’s talent and within a short time promoted him to foreman. Maudslay worked with Bramah from 1789 to 1798, then left after a dispute over wages to form his own business.

### Building Blocks

At 27, Maudslay opened his first engineering shop off Oxford Street in London, relocating four years later to a facility on Margaret Street. His first big job was a commission from Marc Isambard Brunel and Samuel Bentham for the production of 43 machines that could manufacture wooden blocks, or pulleys, for the British Admiralty to use at the Royal Dockyards in Portsmouth. The block-making machinery consisted of metal tooling machines that cut wood and were organized in an assembly line fashion. Reciprocating saws, circular saws, boring tools, milling machines, and lathes, run on power from a 30-horsepower steam engine, were used to build blocks in three sizes.

Built at Portsmouth over almost six years, the machine factory produced more than 130,000 new blocks every year. Ten unskilled workers could operate the machinery and accomplish the work done by 110 skilled workers prior to mechanization. Some of the blocks produced by the machinery invented by Maudslay were used in Portsmouth until the 1940s.

### Developed Screw-Cutting Lathe

Maudslay’s most influential invention came early in his career. In 1799 and 1800, he developed a screw-cutting lathe. The machine, which created uniformity in screws, was a revolutionary development necessary for the Industrial Revolution. Although others, including Jesse Ramsden and David Wilkinson, had constructed lathes prior to Maudslay, Maudslay’s instrument offered improvements in durability, functionality, and precision by including a slide-rest, lead-screw, changeable gears, and an all-metal design. According to *Great Engineers and Pioneers in Technology*, “Maudslay’s screw-cutting lathe consisted of a spindle, on which the work was mounted, connected by a series of gears to the lead screw, which propelled the sliding tool carriage.” A knife-edged steel instrument that could be set at any angle determined the pitch of the screw or the angle at which the grooves were cut. A softer metal bar was

revolved while being cut by the sliding tool bar that held the cutting tool. Because the lathe operated on a spindle, it could advance at a constant rate, thus creating grooves that were uniform in depth, angle, and spacing.

Before the development of Maudslay’s lathe, which became the first to be used widely in manufacturing, each screw or bolt was a unique item that had to be matched with a unique nut. Every bolt and every nut had to be marked as a matching pair. The process of matching bolts and nuts in the construction of complicated machinery proved to be time-consuming, frustrating, and expensive. Any machine that needed repair and thus required disassembly could easily become a nightmare of mismatched screws and nuts. In his autobiography, James Nasmyth, a talented engineer who worked from 1828 to 1830 as an assistant in Maudslay’s shop, noted: “None but those who lived in the comparatively early days of machine manufacture can form an adequate idea of the annoyance, delay, and cost of this utter want of system, or can appreciate the vast services rendered to mechanical engineering by Mr. Maudslay, who was the first to introduce the practical measures necessary for its remedy. In his system of screw-cutting machinery, and in his taps and dies, and screw-tackle generally, he set the example, and in fact laid the foundation, of all that has since been done in this most essential branch of machine construction.”

To prove the perfection of his device, Maudslay used his screw-cutting lathe to create a screw that was five feet in length and two inches in diameter, with 50 thread cuts per inch. The accompanying nut was 12 inches long and contained 600 thread cuts. Although Maudslay’s early version of his lathe required a machinist to take the lathe apart to change settings, later he added design improvements that allowed the operator to alter settings by simply switching removable gears. Maudslay’s original lathe is housed at the Science Museum in London.

The lathe is one of the oldest machine tools, and its use went back many centuries. Early lathes were all used to cut and form wood. Maudslay’s mechanical advances were important because he developed a machine that could be used to build other machines. Because his lathe could cut and form tool steel, engineers who later improved upon his work were able to supply greatly needed consistency and precision in a wide array of industrial machine parts. Those who specialized in precision were also aided by Maudslay’s advancements, including clockmakers, builders of scientific instruments such as telescopes and navigational equipment, and gunmakers.

### Perfection and Precision

Maudslay, not surprisingly, was a perfectionist. He maintained careful order in his manufacturing shop, with tools, prototypes, and inventions neatly arranged. With his business growing and gaining notice, he eventually employed several hundred workers at his factory in Lambeth. Each craftsman was supplied with standard plane surfaces, taps, and dies so that all work could be checked for accuracy and consistency. In his desire to measure his perfection, Maudslay made another advancement in mechani-

cal science by inventing a bench micrometer with an accuracy range to 0.0001 inches, or 0.0025 millimeters.

Considered a brilliant and kind man, Maudslay took note of those with particular talent who entered his workforce. Several important mechanical engineers apprenticed under and worked with Maudslay, including Richard Roberts, Joseph Clement, James Nasmyth, and Sir Joseph Whitworth. Joshua Field, a noted designer of marine steam engines, eventually became a partner in the business. Along with Maudslay's two sons, Thomas Henry and Joseph, the business became known as Maudslay, Sons, and Field.

### Engine Work

Deeply interested in engines himself, Maudslay worked closely with Field in engine design. In 1807 he was awarded a patent on the first table engine, which became a main source for compact power for years. The table engine replaced the traditional walking beam and became widely used in machine shops and aboard ships.

With the assistance of Field, Maudslay manufactured marine steam engines. The initial engines were small, with only 17-horsepower capacity, but later Maudslay's factory produced engines as large as 56 horsepower. Late in his life, Maudslay directed his craftsmen to construct two 200-horsepower engines. Both his sons and Field were quite skeptical of the directive, considering the endeavor too expensive when no customer was at hand to buy them. Nonetheless, the engines were built, and the Royal Admiralty was pursued to purchase them for the steamship, the *Dee*, then under construction. Maudslay was so pleased with the outcome that he commissioned Nasmyth, who had the skills of an artist, to draft a memorial portrait drawing. Seven years after Maudslay's death, his firm, which was continued for over a quarter of a century by his sons, built a 750-horsepower steam engine to power the transatlantic ship, the *Great Western*.

### Continuous Curiosity

Besides machine tooling and steam engines, Maudslay had a vast creative interest spanning many other areas. According to Nasmyth, "Mr. Maudslay was a man of a wide range of mechanical abilities. He was always ready to enter upon any new work requiring the exercise of special skill. It did not matter whether it was machine tools, engraving dies, block machinery, or astronomical instruments." He held patents on numerous inventions, including a method of printing calico, a process of differential motion for raising weights and turning lathes (with Bryan Donkin), a process for water purification (with Robert Dickinson), and methods of removing the salt and regulating the water flow of marine boilers (with Fields).

During the final part of his life, Maudslay developed a strong interest in designing a powerful telescope after a trip to Germany offered him the chance to visit the Berlin Observatory and see powerful images of Jupiter, Saturn, and the moon. At Lambeth, he began to study the problems and difficulties in distortion associated with glass telescopes. His desire was to build a grand telescope no less than 24 inches in diameter. However, in January 1831, after visiting a sick

friend in Boulogne, France, he caught a severe cold during the trip back across the English Channel. Upon arriving home, he remained bedridden for almost a month and never recovered his health. He died on February 14, 1831. Following his written instructions, he was buried in a cast iron tomb of his own design in a Woolwich churchyard. In memory of his great contributions, a statue was erected near the ferry dock in Woolwich.

Along with the many toolmaking contributions Maudslay offered to the development of mechanical science, he also influenced his generation and those that followed with his unrelenting expectations of precision and accuracy. Clearly he benefited from the work of those before him, but in many ways Maudslay's genius marked a new direction in the industrial world that opened the doors to innumerable possibilities.

### Books

*The Cambridge Biographical Encyclopedia*, 2nd edition, edited by David Crystal, Cambridge University Press, 1998.

*Chambers Biographical Dictionary*, 6th edition, edited by Melanie Parry, Chambers, 1997.

Daintith, John; Sarah Mitchell; and Elizabeth Tootill, *A Biographical Encyclopedia of Scientists*, Volume 2, Facts on File, 1981.

*Great Engineers and Pioneers in Technology*, Volume 1, edited by Roland Turner and Steven L. Goulden, St. Martin's Press, 1981.

Williams, Trevor I., *A Biographical Dictionary of Scientists*, 3rd edition, Adam and Charles Black, 1982.

### Online

"Henry Maudslay," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (February 7, 2001).

"Henry Maudslay," *World of Invention*, <http://www.galenet.com> (February 7, 2001).

Nasmyth, James, *The Autobiography of James Nasmyth*, <http://www.nasmyth.com/bio> (February 7, 2001). □

## Winsor McCay

**Winsor McCay (1871-1934) has been called the "Father of the Animated Cartoon." He didn't invent the medium but is responsible for advances in the field and creating the basic way cartoons are still made today. He also produced *Little Nemo in Slumberland*, one of the most fantastic and beautiful newspaper comics in the history of the medium.**

The place and year of Zenas Winsor McCay's birth is murky. He claimed he was born on September 26, 1871 in Spring Lake, Michigan. His parents, Robert and Janet, lived there, and he spent his youth there. According to his biographer, John Canemaker, it is most likely that McCay was born while his mother was visiting her family near Woodstock, Ontario in the fall of 1867. He was named after Robert McCay's boss, American entrepreneur Zenas G. Winsor.



McCay drew incessantly throughout his childhood. His drawings impressed everyone with their high levels of detail—from bolt heads on machines to feathers on chickens—resulted from close observation and a cognitive process he later called “memory sketching.”

In 1885, the McKays moved to Stanton, Michigan. Around this time, Robert McKay changed the spelling of the family name from McKay to McCay, and Winsor McCay stopped using Zenas.

His father insisted that McCay have a business education. In 1886, at the age of 19, he enrolled at Cleary Business College in Ypsilanti, Michigan. Once there he skipped classes (he never graduated) and made money by drawing portraits of patrons at a dime museum—a sort of permanent indoor circus sideshow—in nearby Detroit. This work sharpened his abilities as a commercial artist, as he learned to create drawings that looked like the subject, but were always flattering. It also fulfilled a growing need to perform publicly, as a crowd often gathered to watch him work.

McCay became known as an artist in Ypsilanti, and caught the attention of John Goodison, a professor of drawing at Michigan State Normal School. Goodison provided private lessons—the only formal lessons McCay ever had—and drilled the young artist in perspective, an understanding of solid geometry, and a sense of substance that would be evident in all of McCay’s subsequent work.

## Chicago and Cincinnati

Goodison urged McCay to attend the Art Institute of Chicago. McCay went to Chicago, but instead of enrolling in the Art Institute, took a job as an apprentice at a printing company. After two years in the print shop while again moonlighting in a dime museum, McCay’s fortunes took him to Cincinnati, Ohio. There he made promotional posters and art for another dime museum. He also worked as a billboard painter. His habit of drawing the outline of a figure in one continuous line without referring to a sketch attracted the crowds for which he loved to perform.

Soon after he arrived in Cincinnati in 1891, he met Maude Leonore Dufour, and they eloped. Five years later, they had a son, Robert Winsor, in June 1896, followed by their only other child, Marion Elizabeth, in August 1897. To better provide for his family, McCay took a job as reporter-artist for the Cincinnati *Commercial Tribune*.

At the end of the nineteenth century, newspapers did not have the technology to reproduce photographs. A reporter who could produce quick, accurate line drawings of people and events, that could easily be turned into an attractive engraving for reproduction, was a great commodity. McCay, with his strong background in forms and perspective as well as his talent for drawing from memory, was better equipped than most. His detailed full-page of places and events became an important part of the *Tribune*.

McCay had a lighthearted humorous side, too. It occasionally appeared in the *Tribune*, illustrating a poem or story. However, it found greater release in one of the premier humor magazines of the day, *Life*. Not to be confused with Henry Luce’s photo magazine that began in the 1930s, *Life* was a collection of cartoons and short humor pieces. Not only did McCay contribute single panel editorial cartoons to the magazine, but *Life* artists, like A.B. Frost, inspired him. Frost often drew his cartoons in sequence, much like today’s newspaper comic strips, where a series of panels, each with a caption, would tell a story. This was a technique that McCay would later employ.

The Cincinnati *Enquirer* offered McCay an increase in salary. In 1900 he became head of its art department. McCay experimented with gag cartoons and with sequential strips in *Life*. He then created *The Tales of the Jungle Imps*, a series of 43 illustrations accompanying poems by the Sunday editor. The series was the first extended work featuring the comic style for which he would become famous.

## New York and Little Nemo

During this time, McCay came to the attention of James Gordon Bennett, Jr.’s New York *Herald*. Before the end of 1903, McCay was in New York, drawing editorial cartoons and illustrating news stories for the *Herald* and Bennett’s other New York paper, the *Evening Telegram*.

While at the *Herald*, McCay began using the comic strip form. Newspaper comic strips were still new at the time, and extremely popular. The comics sold papers, and an artist with a popular strip that could be syndicated—sold to other papers across the country—could become rich and famous, a situation that appealed to McCay.

After a number of false starts, McCay found popularity with his first sustained strip, *Little Sammy Sneeze*, which debuted in the *Herald* on July 24, 1904. It featured the adventures of a small boy whose powerful sneezes would always occur at the most inopportune times. It was soon joined by what would become his longest running strip, the more adult-oriented *Dream of a Rarebit Fiend*, beginning in the September 10, 1904 edition of the *Evening Telegram*. This strip had no recurring character, but showed the hallucinatory dreams of a different person in each episode. Each panel would show the person in an often-inexplicable dangerous or embarrassing situation. The situation would grow worse through the next-to-last panel, when death, destruction, deformity or madness seemed inevitable. The last panel showed the person, usually in bed, waking fitfully, and decrying the Welsh rarebit—a dish made with melted cheese and ale served on toast—they had eaten for dinner.

McCay soon created two more strips. *The Story of Hungry Henrietta* ran for six months in 1905. McCay had experimented with continuity and constant motion in his previous strips, foreshadowing his future career as an animator, but Henrietta showed even more promise. Not only does each panel of each episode build on the one previous, but the main character, a child, was obviously older each week. Another adult-oriented strip, *A Pilgrim's Progress by Mister Bunion*, began in June 1905 and ran through 1910.

McCay returned to the world of dreams on October 15, 1905, when *Little Nemo in Slumberland* debuted in the *Herald* Sunday comic section. This was McCay's comic masterpiece. The comics were printed in a tabloid, and *Little Nemo* ran on a full page, the size of half a newspaper page. Each week would open with Nemo, the cute young boy based on McCay's son Robert, experiencing something strange or visiting Slumberland, an architecturally astounding place populated with strange people, most of whom were always glad to see Nemo. The last panel always showed Nemo awakening in his own bed. Or next to it, having fallen out.

*Little Nemo in Slumberland* became instantly popular. It was translated into seven languages. An operetta composed by Victor Herbert opened on Broadway in 1908. And the characters were merchandised on clothing and games. The strip ran in the *Herald* until 1911, when McCay started working for William Randolph Hearst. Re-titled *In the Land of Wonderful Dreams*, it ran in the *New York American* until December 1914.

### McCay the Animator

While he was creating these comics, McCay also found a way to fulfill his need for public performance. Following other cartoonists, he entered vaudeville, performing in theatrical reviews as a lightning-quick sketcher, drawing his popular characters on a blackboard.

McCay found great success in vaudeville, even taking out-of-town bookings, but by 1909 he was looking for a way to refresh his act. Inspired by his son's flipbooks, and the early films of Emile Cohl, McCay made an animated film featuring characters from *Little Nemo* the first cartoon based on established comic strip characters. What set the short

film apart from its predecessors was McCay's talent. McCay drew almost 4000 separate drawings on rice paper, testing and re-testing each one so that the transition from one drawing to the next—each drawing representing one frame of film—would appear smooth and seamless, without jerks or shakiness. And each drawing featured his beautifully rendered line drawings of his characters. No previous animation had featured such strong graphics or care in presentation, preferring to attract crowds on the novelty of animation alone.

The addition of the film to his vaudeville act in 1911 was extremely successful. The next year, he would produce his second film, *The Story of a Mosquito*, based on an episode of *Rarebit Fiend*. In this film, made up of nearly 6000 drawings, an oversized mosquito is shown as it bites a sleeping man on the face. Not content with simple animation, McCay provides the mosquito with a personality of its own as it goes through the motions of preparing to attack (by honing its proboscis with a sharpening wheel) and gorging itself on its snack. This film proved as popular as *Little Nemo*, but was so detailed that many felt it could not be made of drawings and was some other kind of visual trick.

In 1913, the skeptics were quieted by his next film, which starred a creature that no one could fake: *Gertie the Dinosaur*. This was McCay's most ambitious film to date, requiring 10,000 drawings which, for the first time in a McCay film, featured backgrounds. McCay drew each picture of Gertie using what he called the "McCay Split System." Instead of animating the dinosaur's movements from beginning to end, he broke the action into smaller parts, and determined what the poses would be at the start and finish of that action. Then he would fill in the drawings between the two poses, assured of where Gertie was going and how she should look. (The same basic procedure is still in use today, and is called "In-betweening," and the job is split up; sometimes copiers or computers are used.) This gave Gertie the smooth well-timed motions she needed. As McCay finished each drawing, his assistant, John A. Fitzsimmons, would painstakingly trace the background from a master drawing onto each sheet.

Gertie's timing was important because for the first time in his act, the live McCay would interact with the character on screen, ordering her to do tricks until the end when Gertie would bend down to the edge of the screen. At that point McCay would step behind the screen. His animated image would take over, stepping on screen and into Gertie's mouth. They would both bow and Gertie would gently carry the animated McCay off-screen.

McCay's continued success angered one man. His new boss, W.R. Hearst, felt that his employees should be on call, and McCay's vaudeville act interfered with his newspaper work. In 1913, McCay was told that he would no longer be producing comic strips, only serious editorial drawings.

McCay turned his creative side to his animation, and created his longest film ever, *The Sinking of the Lusitania*, about the attack on a Cunard ocean liner by a German submarine in May 1915. Working from photographs and first-hand accounts, McCay recreated the incident from the time the ship left New York harbor through the rescue of

passengers and horrific deaths by drowning. This was the first film McCay did on transparent celluloid sheets, as had been recently patented by others. Using this technique, the same background painting could be used over and over. It still took almost 25,000 separate drawings, and over eight months of McCay's time. It was released in July 1918.

By this time, McCay's new contract with Hearst prohibited any vaudeville performances. He continued to create editorial cartoons, and made six more animated shorts, but none with the impact of his first efforts. He stopped for reasons that range from his age (he was 54), his work for Hearst, and a general disappointment that cartoons were quickly becoming commercial filler for movie houses and not the art that he once thought they could be.

After an uninspired and unsuccessful attempt to bring Little Nemo back to the comic pages in 1924 and 1925, he dedicated the rest of his career to editorial work for Hearst and illustration for advertising. On July 26, 1934, at his home in Brooklyn, New York, Winsor McCay died of a massive cerebral hemorrhage.

### Books

Canemaker, John, *Winsor McCay: His Life and Art*, Abbeville Press, 1987.

Crafton, Donald, *Before Mickey*, MIT Press, 1982.

Stephenson, Ralph, *The Animated Film*, Tantivy Press, 1973. □

## William Cameron Menzies

**William Cameron Menzies set the Hollywood standard for designing sumptuous movie panoramas. In epics such as *Gone with the Wind* and fantasies such as *The Thief of Baghdad*, studios relied on the visual wizardry of Menzies, whose prestige derived from his uncanny eye for movie visuals.**

Menzies played a crucial role in creating the stunning scenes of *Gone with the Wind*. The muted earth tones, shocking swatches of bright color, and the sweeping range of the sets are among Menzies's landmark contributions to this favorite American film. His sure and brilliant hand lies behind the wizardry of many other classic films. Menzies was an innovative designer who pioneered many special effects techniques. His varied contributions and the depth of his influence on the art of film were not widely recognized in his lifetime. In his career as a director, Menzies was often criticized for under-directing. But his films always looked stunning.

### Making Film into Art

A graduate of Yale University, Menzies served with the American forces in Europe during World War I. After the war ended, he attended classes at the Art Student League in New York City. He began his long career working for Famous Players and then for United Artists as a set designer on silent films. His earliest film credit was as art designer for a



1918 movie, *The Naulahka*. He worked on several films with director Raoul Walsh and actress Miriam Cooper, including *Serenade* in 1921 and *Kindred of the Dust* in 1922.

Menzies first teamed up with some big names when he worked on the design of a 1923 hit, *Rosita*, which was directed by Ernst Lubitsch and starred Mary Pickford. In a few years, Menzies gained notoriety within the film industry for his hard work and willingness to go beyond conventional designs into new territory. He brought his magical touch to the filming of the ancient Arabian tale, *The Thief of Baghdad*, in 1924. Directed by Walsh and starring Douglas Fairbanks, the movie was hailed by critics and adored by audiences. Menzies's wondrous sets helped weave an intoxicating spell. The *New York Times* called it an "entrancing picture, wholesome and compelling, deliberate and beautiful, a feat of motion picture art which has never been equalled." Critic James Quirk called it "a work of rare genius. Here is the answer to critics who give the motion picture no place in the family of the arts."

Menzies was instrumental in elevating the Hollywood film to an art form. His creative energy and craftsmanship raised the status of the designing arts in filmmaking. Menzies was the first to get billing as a production designer, indicating overall credit for the entire look of a movie. He paid careful attention to every aspect of how a film looked. He would walk through movie sets with a sketch pad under his arm, always seeking to improve on details.

In 1925, Menzies contributed to four films, including a couple of romantic comedies and the Rudolph Valentino



star vehicle, *Cobra*. Menzies' lavish interiors for that film illustrate the opulence of the 1920s. Also in 1925, Menzies contributed to the Valentino adventure, *The Eagle*.

Elegant interiors, sprawling exteriors: Menzies could do it all. His services were in increasing demand. In 1926, Menzies worked on Valentino's *Son of the Shiek*, the hokey terror film *The Bat*, and two other movies. The prolific Menzies contributed production designs to five films in 1927, six in 1928, nine in 1929, and ten in 1930. Increasingly, Menzies was working with top Hollywood stars and directors—with Douglas Fairbanks in *The Iron Mask* and *Taming of the Shrew*, with Ronald Colman in *Raffles*, and with John Barrymore in *The Beloved Rogue* and *The Tempest*, an adventure story set during the Russian Revolution.

Menzies's contributions were recognized during the first presentation of the Academy Awards, covering the years 1927 and 1928. Menzies received an Oscar for art direction for his work on *The Dove* and *The Tempest*. Menzies' last silent film, made in 1928, was *Sadie Thompson*, starring Gloria Swanson.

Menzies revolutionized film set decoration, transforming it from an incidental aspect of moviemaking to a central component of cinematic design. The grandeur of the classic Hollywood adventure epics, historical dramas and opulent romances was heavily influenced by his work. So was the popular film noir style, which Menzies pioneered by welding German expressionism with a hard-nosed American realism in films such as *Alibi*.

### New Challenges

In 1930, Menzies produced his first film, *The Wizard's Apprentice*. Later, in the 1940s and 1950s, he would be the producer or associate producer on six other films.

A more significant step came in 1931, when Menzies co-directed his first two films with Kenneth McKenna: *Always Goodbye*, a romantic comedy, and *The Spider*, a murder mystery adapted from a stage play. In 1932, Menzies had his first solo directing credit with *Almost Married*, a remake of a melodrama about bigamy. That same year he co-directed a Bela Lugosi science fiction thriller, *Chandu the Magician*.

With Cameron King, Menzies co-directed a romantic comedy, *I Loved You Wednesday*, in 1933. That same year, Menzies helped write the screenplay and design the sets for the Paramount version of *Alice in Wonderland*, a flop despite an all-star cast and Menzies's dazzling sets.

Menzies's most interesting film as a director was his 1936 conception of the H.G. Wells epic, *Things to Come*. Later science fiction films such as *Blade Runner* owed much to *Things to Come*. Invited to England by producer Alexander Korda to direct the film, Menzies mounted the action on elaborate, futuristic mindscapes. Visually, *Things to Come* was a seminal work of cinematic science fiction. It unfolds as a series of rather static scenes, set in three different periods in the future. Slow and somewhat didactic, it is remarkable for its special effects and hyper-modern style.

Not enjoying the success as a director that he had enjoyed as a production designer, Menzies returned to his

earlier calling in 1938, designing the set for the cave sequence in *The Adventures of Tom Sawyer*.

### The Burning of Atlanta

Perhaps the most memorable sequence in all of Hollywood filmmaking is the burning of Atlanta in *Gone with the Wind*. Menzies is responsible for that incredible scene. It was done on a set in Los Angeles, with flames shooting 100 feet in the air. It was Menzies's idea to use the fire for a dual purpose—to clear out old sets from MGM's 40-acre back lot and to film the epic's climactic scene. Special effects teams piped oil and water into the sets to stoke or douse the flames, seven cameras were used, and the sets were made to collapse by tractors pulling wire cables. Menzies masterminded the entire arrangement.

Menzies's handprints were all over *Gone with the Wind*. His tireless work was evident in the fine details of the sets, but he did much more than just production design. Three directors have been recognized as working on the film—Victor Fleming, George Cukor and Sam Wood—but Menzies also deserved credit. Producer David O. Selznick said Menzies "spent perhaps a year of his life in laying out camera angles, lighting effects and other important directorial contributors."

In fact, Menzies began work on the epic in 1937, using a five-hour-plus shooting script. He made a storyboard of every scene and camera angle—a rare achievement in those days. His concepts provided the impetus for the film's producers to go ahead and shoot the film on a studio back lot.

For his work on *Gone with the Wind*, Menzies received a special honorary Academy Award that cited his innovative use of color "for the enhancement of dramatic mood." The memorable uses of color include Scarlett O'Hara's red dress as she walks over gray dead bodies. In many other films, Menzies also used his technical skills to emphasize emotions. He often would use barriers, such as fences or walls, to depict grief or tension between characters. He pioneered the technique of "forced perspective," building sets and using camera angles to exaggerate depths and thus emphasize danger or emotional distance.

### A Director's Best Friend

*Gone with the Wind* marked the first of Menzies's notable collaborations with Wood. In 1940, Menzies contributed special effects (including the memorable windmill scene) for the Alfred Hitchcock picture, *Foreign Correspondent*; designed the acclaimed and popular Wood-directed film *Our Town*, and produced the masterful remake of *The Thief of Baghdad*. Alexander Korda was the director for that brilliantly conceived film about the Arabian Nights, and again Menzies did not receive credit for his full contributions; he should have been listed, according to some film historians, as co-director.

Menzies designed the productions of *The Devil and Miss Jones* in 1941, a popular romantic comedy; *The Pride of the Yankees*, a legendary sports biography, and *Kings Row*, an acclaimed melodrama about small-town Americana, in 1942; and the adaptation of Ernest Hemingway's

*For Whom the Bell Tolls* in 1943. Wood directed all four of these exceptional films, but Menzies played an immeasurable role in their success. Actress Teresa Wright, in an interview in 1959, recalls Wood relying heavily on Menzies's visual sense in *Pride of the Yankees*: "Bill Menzies used to draw a sketch for every scene—it was beautiful, it was well conceived. Bill had a marvelous motion picture eye. In his mind's eye he saw what would be the right finished product on the screen."

While doing stellar work on such important films of the 1940s, Menzies produced and directed several less notable movies, such as 1944's *Address Unknown*. In 1949, Menzies tried something new, directing a television series, *Fireside Theater*.

In the early 1950s, Menzies directed and designed the production of three films—*Drums in the Deep South*, *The Maze*, and *Invaders from Mars*. The first was a pedestrian western, and *The Maze* was a bizarre horror-comedy about a wealthy heir who turns into a frog.

*Invaders from Mars* is standard 1950s science-fiction fare redeemed by Menzies's unusual visuals. The plot involves a boy who sees aliens abduct his father and has a hard time convincing anyone that it really happened. The viewer gets a surreal, nightmarish glimpse into a child's world of uncaring adults. When the boy reports the incident at the police station, the sergeant's desk is impossibly high. Doors are too large and halls too long, and the only decorations on the walls are clocks that are always fixed at the same time.

The final film to which Menzies contributed was 1956's *Around the World in Eighty Days*, in which he was credited as associate producer. He died just a few months after that comedy-adventure became a big box-office hit.

## Books

Halliwell, Leslie, *Halliwell's Who's Who in the Movies*, Harper, 1999.

Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.

Smith, John M. and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.

Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

## Periodicals

*Entertainment Weekly*, July 12, 1996.

*Variety*, June 22, 1998.

## Online

"Gone with the Wind," <http://www.amps.net/newsletters/Issue20/20-night.htm>.

"Reminiscences of Teresa Wright," <http://www.reelclassics.com/Actresses/Teresa/teresa-interview7.htm>

"The Things That Come out of Things to Come," *DVD Savant*, <http://www.dvdresource.com/savant/s65things.shtml>

"Things to Come," *Deep Fly*, <http://www.oz.net/~deepfly/Things.html>.

"Things to Come," *Films of the Golden Age*, <http://www.filmsofthegoldenage.com>.

"Things to Come," <http://chomsky.arts.adelaide.edu.au/person/Dhart/Films/ThingstoCome.html>

"William Cameron Menzies," *Internet Movie Database*, <http://www.imdb.com>

"William Cameron Menzies" *Mr. Moody*, [http://www.mr-moody.com/goldenboy/whoswho/menzies\\_w.htm](http://www.mr-moody.com/goldenboy/whoswho/menzies_w.htm).

"William Cameron Menzies," <http://www.kimsvideo.com>.

"William Cameron Menzies," <http://www.mdle.com/ClassicFilms/BTC/design2.htm> □

# Angela Merici

**Angela Merici (1474-1540) was a devout Italian Catholic nun. Dedicated to educating young girls, she established the Order of St. Ursula in 1835. She was canonized as St. Angela in 1807.**

Based on an engraving on the statue at Desenzano, Italy, Angela Merici's birth is set at March 21, 1474 in the province of Venice. Most biographers believe she was born on a farm two miles outside of Desenzano. The size, condition, and location of the farm, called Grezze, indicate that Merici came from moderate wealth, not from a peasant family as was traditionally believed. In addition, she was said to have a command of language characteristic of good breeding. In fact, Angela's mother came from a successful merchant family in Salo. Her family was pious and she was educated in religion. Her father read to her daily about the lives of the saints. It is believed that this is how she first learned about St. Ursula.

She spent the first ten years of her life in Desenzano, a town located on the western shore of Lake Garda in the Lombardy region. When she was young, Merici's beloved older sister died a few months after their father. Her sister's tragic death left Angela disconsolate because it occurred before her sister could receive the last sacraments of the Catholic Church.

For a period Angela remained alone with her mother at Grezze. She was still a child when her mother died, leaving her orphaned. She was sent to the town of Salo to live with her maternal uncle. The devout Angela eventually joined the third order of St. Francis and increased her daily devotions and prayer, asking God to give her a sign about the condition of her sister's soul. Eventually she had a vision that satisfied her that her sister was in heaven.

In 1794, when she was 20, Merici's uncle died and she returned to Desenzano. During this time she became concerned about the lack of religious training for young girls and the condition of the family and society in general. She converted her home into a school. There she gathered the young girls of the town and taught them the rudiments of Christianity, directing them to take her lessons back into their homes to share with their families.

## A Vision

In 1506, while praying, Angela Merici was said to have had a grand vision in which angels and maidens descended from heaven and a voice instructed her to found an association of virgins under the guidance of St. Ursula. Ursula was a

fourth-century virgin and martyr venerated as a protector of women. The order Angela was inspired to start would devote itself to both bodily and spiritual works of mercy, with an emphasis on the education of young women.

Merici remained in Desenzano for the next ten years, establishing her community for religious training. In 1516, she was invited to the neighboring town of Brescia to start a similar school. To fulfill her earlier vision, Merici gathered together a group of young women. A house was put at their disposal to allow them to continue their work. The citizens of Brescia began to consider her a prophet, frequently referring to her as Angela of Brescia.

### The Miracle of a Pilgrimage

In 1524, Merici began a pilgrimage to the Holy Land, seeking to do penance and understand the will of God. While on the island of Crete or at some point between Crete and Corfu, she was suddenly and inexplicably struck blind. Merici's devotion to her religion and her intense desire to visit the Holy Land made her determined to continue her journey. During her entire journey she remained blind and saw nothing of the Holy Land. However, she wrote that she "saw these places with the eyes of her soul as if she had seen them with her bodily eyes."

After she left the Holy Land, her eyesight suddenly returned. According to some accounts, it was restored while she prayed before the crucifix at the same old Venetian church on Crete where she had been struck blind. Returning to Italy, she went to Venice. There, local civic leaders, members of the Doge's Council, who had heard of her work in Brescia and Desenzano, asked her to take charge of the Hospital of Incurables. She refused, preferring to return to her work in Brescia.

In the following years she received invitations from the Council of Venice and the pope to work in Castiglione, Venice and Rome. On each occasion she refused, remaining in Brescia to complete her work. Merici made many pilgrimages throughout Italy during her life but none had the impact on her of her pilgrimage to the Holy Land.

### The Founding of an Order

On November 25, 1535, in the company of her followers, Angela Merici formally founded the Order of St. Ursula in a small house near the Church of St. Afra in Brescia. In 1536, Merici laid down the rules of the Ursuline Order, clarifying her plan to restore the family and the supremacy of Christianity through the education of girls. In 1537 she was elected superior of the company by unanimous vote.

After founding the order she wrote *Testament and Souvenirs*, in which she directed her nuns to emphasize gentleness, the significance of the individual, and the consequence of using persuasion over force. Merici became ill toward the end of 1539, but even while sick she continued to receive visitors and hold religious discourse with them.

She died in Brescia, Italy on January 27, 1540. On January 29 her body was placed on a bier in the church of

St. Afra and a continuous procession of villagers passed by to pay their respects. A dispute ensued over the proper burial place, but Merici had foreseen this problem and received special dispensation from the pope allowing her to plan her own funeral. She was buried at St. Afra.

Merici was beatified by Pope Clement XIII in 1768 and canonized on January 24, 1807, by Pope Pius VII.

### The Ursuline Order

Merici devoted her life to educating women at a time when girls were not considered worthy of education. She was fond of saying "disorder in society is the result of disorder in the family." She believed that by educating girls in a family setting that society would be improved and Christianity strengthened.

She encouraged those who followed her to understand the needs of their time and make changes accordingly. Her order set down no formal vows, but taught virginity, obedience and poverty as a way of life. Contrary to all religious teachings and orders of the day, this small group of young women at first did not take vows or wear habits and continued to live with their families.

The Ursuline Order would become the oldest teaching order of religious women in the Catholic Church. Although originally its members led a non-cloistered life, the Ursuline Order underwent change as it grew and spread throughout the world. In 1572 the nuns began to live in secluded communities in Milan and in 1596 in Avignon. In 1585 Pope Paul V issued a papal bull formalizing the Ursulines into a religious order of cloistered nuns taking formal vows.

By 1612 the Ursulines of Paris began taking solemn vows and soon similar convents were established elsewhere. By the 17th century, Merici's group was based primarily in France, forming the basis for orders founded in Quebec in 1639 and New Orleans in 1727. The order in New Orleans founded one of the first institutions of learning for women in America. After the War of 1812, the New Orleans school was converted to a hospital that nursed both American and British soldiers. Among the institutions of higher learning founded by the Ursulines in the United States are the College of New Rochelle in New York in 1898 and Ursuline College in Cleveland in 1871. In 1900 a congress of Ursulines met in Rome and established a single union of many congregations.

### Books

- Book of Saints* Thomas Y. Crowell Company, 1966.
- Caraman, Philip, *Saint Angela*, Longmans, Green and Co., 1963.
- Catholic Encyclopedia*, Robert Appleton Company, 1907.
- Ellsberg, Robert, *All Saints*, Crossroad Publishing Company, 1998.
- Farmer, David Hugh, *The Oxford Dictionary of Saints*, Oxford University Press, 1997.
- Hardon, John A., *Modern Catholic Dictionary*, Doubleday, 1966.
- HarperCollins Encyclopedia of Catholicism*, edited by Richard P. McBrien, HarperCollins, 1989.
- Microsoft Encarta Encyclopedia 99*, Microsoft Corporation, 1993-1998.
- Therriault, Michel, *1998 Canadian Encyclopedia*, Infonautics Corporation, 1997.

### Online

"Angela Merici, Saint," *Britannica.com*, <http://www.britannica.com/seo/s/saint-angela-merici> (November 15, 2000).

"Angela Merici 1474-1540," *Catholic Information Network*, <http://www.cin.org/saints/merici/html> (November 15, 2000).

"St. Angela Merici," *New Advent*, <http://www.newadvent.org/cathen/01481a.htm> (November 15, 2000). □

## Ethel Merman

**For more than fifty years singer and actress Ethel Merman (1909-1984) was a beloved legend of stage and screen. Her first musical appearance, in George and Ira Gershwin's *Girl Crazy* in 1930, resulted in her instant rise from secretary and occasional club singer to Broadway singing sensation. Merman went on to star in a dozen more stage musicals and numerous films and continued to perform into her seventies.**

Actress and singer Ethel Merman was born Ethel Agnes Zimmermann in Astoria, a suburb of New York City, on January 16, 1909. She later shortened her name to Merman because, she said, "If you put Zimmermann up in lights, you'd die from the heat." Merman showed an early interest in singing, and her parents, Edward and Agnes, encouraged her. Edward Merman, an accountant, loved to sit at the family piano and sing, and his daughter often joined him. Even then her voice showed signs of becoming a giant instrument; she noted later in a *New Yorker* interview that, "The neighbors used to hear me, of course." Merman made her public debut at the age of five, singing at a Red Cross camp.

In high school Merman trained to be a secretary; even in later life, she insisted on taking her own notes at business meetings and handling her own correspondence. She became the secretary to the president of a New York City company, who had connections in the entertainment industry. He gave her a letter of introduction to George White, a theatrical producer. White offered Merman a place in the chorus line of *Scandals*, a long-running and highly popular Broadway revue; amazingly, she turned down this break because she preferred to sing. Merman continued to work as a secretary, but also began to sing at nightclubs. While singing at the Little Russia club, agent Lou Irwin noticed Merman and signed her to a six-month contract at Warner Brothers' New York studio. However, the closest she came to a film performance was as a bit player, wearing a leopard skin. Merman decided to keep singing at night clubs and soon had regular engagements.

At this point Merman elected to quit her day job and, in another stroke of good luck, she caught the attention of theatrical producer Vincent Freedley. In 1930 he arranged an audition with rising young composer George Gershwin, who was casting for a musical, *Girl Crazy*, cowritten with his brother Ira. Merman was hired and appeared on the



program far down the cast list, as "Kate Fothergill," bride of a gambler. On opening night, while singing "I Got Rhythm," Merman held a high C for 16 bars. The audience went wild and she had to perform several encores. Her performance overshadowed the rest of the cast, including the musical's star, Ginger Rogers. George Gershwin, who was conducting the orchestra, reportedly ran backstage afterward and told Merman, "Don't ever let anyone give you a singing lesson; it'll ruin you." Merman became an instant star at the age of twenty-one, based on this single performance, and wisely followed Gershwin's advice. *Girl Crazy* ran for 272 performances, and Merman belted out "I Got Rhythm" eight times a week.

### Teamed up with Cole Porter

After the success of *Girl Crazy*, Merman appeared in the eleventh edition of George White's *Scandals*. This time, however, rather than being offered a place in the chorus line, Merman was one of the headliners along with singer Rudy Vallee. She sang several numbers, and her solo rendition of "Life Is Just a Bowl of Cherries" made the song a popular hit. *Scandals* ran on Broadway for 202 performances. After it closed in 1932, Merman then appeared on the road in Pittsburgh, in the musical *Humpty Dumpty*, a satire of American history. Unfortunately, this show was one of the few flops in Merman's career, and it soon closed without ever leaving Pittsburgh. However, by the next season *Humpty Dumpty* had been drastically rewritten and opened on Broadway as *Take a Chance*. Again Merman was

a hit with audiences, which led to her being offered her first featured role in a Hollywood film.

The cast of the film *We're Not Dressing* included such major stars as Bing Crosby and Carole Lombard, but it did not give Merman a real chance to display her singing talent. Her biggest number was singing "The Animal in Me," which she shared with a "chorus line" of forty elephants. The song was cut from the final film and, after appearing in another minor film role in *Kid Millions*, Merman decided to return to the New York stage. These experiences foreshadowed what would be a major problem with Merman's screen appearances. She was not a typical screen beauty and, as she recalled later, the directors constantly told her to hold down her voice, her strong point.

In 1934 Merman starred in the musical comedy *Anything Goes*, which featured songs by Cole Porter. She sang several songs that are now among the most famous of show tunes, including "I Get a Kick Out of You," "You're the Top," and the show's title song. *Anything Goes* was a major hit and ran for 420 performances. During its run Merman also was given a radio program of her own. Once again, she decided to try Hollywood, appearing in the film version of *Anything Goes* as well as several more forgettable roles. Again she was disappointed by her film career and returned to Broadway. Through the rest of the 1930s Merman continued to alternate stage and screen roles. She starred in three more Cole Porter stage musicals: *Red, Hot and Blue!*, *Du Barry Was a Lady*, and *Panama Hattie*; and in the films *Happy Landing*, *Alexander's Ragtime Band*, and *Straight, Place, and Show*. As usual, Merman found that she was a hit on stage, but her films were not as successful. Film executives began to feel the same; when *Du Barry Was a Lady* was filmed, Merman's role was given to Lucille Ball.

In 1943 Cole Porter turned to Merman once again when casting his new Broadway musical, *Something for the Boys*. Although the production was plagued by management problems and reviewers found Porter's new songs below his usual standards, Merman was stellar and the show ran for more than 400 performances. *Something for the Boys* marked one of the rare occasions when Merman missed a performance; several months into the show's run, she developed a severe case of laryngitis, and her understudy had to take over for a week. This musical also marked the fifth and last time that Merman would star in a Porter musical.

### Greatest Hit Musicals Followed

After *Something for the Boys* closed, Merman was approached for the lead in a new musical to be produced by the famous team of Richard Rodgers and Oscar Hammerstein, *Annie Get Your Gun*. Equally famous composer Jerome Kern had agreed to write the show's songs; however, he died suddenly and Irving Berlin was convinced to step in. Merman's portrayal of Western marks woman Annie Oakley proved to be one of her most famous performances. With great Berlin songs like "You Can't Get a Man with a Gun" and "There's No Business Like Show Business," *Annie Get Your Gun* was a huge hit and ran for 1,147 performances. However, when the show was filmed in

1950, Merman's role went to Betty Hutton (who also had been given the film lead in *Red, Hot and Blue!* the previous year).

During the 1950s Merman starred in two more hit stage musicals, *Call Me Madam* and *Gypsy*. In *Call Me Madam*, another Berlin musical that opened in 1950, Merman portrayed a character based on noted Washington, D.C. hostess Perle Mesta. Merman took pride in always knowing her lines, but also did not like last minute changes. When Berlin asked her to learn new lyrics for the song "The Hostess with the Mostes" she reportedly refused, saying, "Call me Miss Bird's Eye. It's frozen." *Call Me Madam* had advance sales of \$1 million and ran for 644 performances. Merman also starred in the film version made in 1953.

Merman's last great stage hit was 1959's *Gypsy*, with music by Jule Styne and lyrics by Stephen Sondheim. In this story of famous stripper Gypsy Rose Lee, Merman played the ultimate driven stage mother, Rose Hovick. Her number "Everything's Coming Up Roses" was an instant hit, as was the show itself; it ran for 702 performances. Merman considered the role of Rose Hovick her favorite, and "Everything's Coming Up Roses" became her anthem. She was deeply disappointed when her role in the 1962 film version went to Rosalind Russell. After *Gypsy*, Merman starred in a 1966 revival of *Annie Get Your Gun* and then joined the cast of *Hello Dolly* for three months during the seventh year of its run.

### Tragedies Filled Personal Life

Despite Merman's flashy, self-confident stage and screen image, her personal life never matched the success of her professional life. She was married and divorced four times: to film agent William B. Smith; airline president Robert F. Six; publishing executive Robert D. Levitt; and, finally, actor Ernest Borgnine for 38 days in 1964. She had two children with Levitt, who committed suicide years after their divorce. Merman's daughter (nicknamed "Ethel Jr.") struggled with chronic depression and lost custody of her children to her husband after their divorce. She died in 1967 following a drug and alcohol overdose, in a vacation cabin with her visiting young children in the next room. "Ethel Jr.'s" death also was listed as a suicide, but Merman never accepted that verdict and insisted that her daughter had taken an accidental overdose of prescription medicine.

Merman continued to perform well into her seventies. She retired from Broadway in 1970, after starring in *Hello Dolly*, but during the 1960s and 1970s she frequently appeared on television programs. Merman was a guest on Judy Garland's variety show and also featured on *Batman* (as "Lola Lasagne"), *The Love Boat*, and *The Muppet Show*. Merman also made several films during this time, although none were the hit musicals that had made her famous. Among her later films were *It's a Mad, Mad, Mad, Mad World* (1963) and *Airplane* (1980), in which she played an injured soldier who thought he was Ethel Merman. Her last major public appearance was at a Carnegie Hall benefit performance in 1982. The next year Merman underwent surgery to remove a brain tumor that was discovered after she suddenly collapsed in her apartment. However, the

tumor was not operable and she continued to decline. Sadly, the woman with a giant singing voice and vibrant stage presence became bedridden and had to struggle to speak even a few words. Merman died in New York City, where she had lived her entire life, on February 15, 1984.

### Books

Leonard Maltin's *Movie Encyclopedia*, Penguin/Dutton, 1994.  
 Merman, Ethel, and George Eells, *Merman: An Autobiography*, Simon and Schuster, 1978.  
 Merman, Ethel, and Pete Martin, *Who Could Ask for Anything More*, Doubleday, 1955.  
 Thomas, Bob, *I Got Rhythm: The Ethel Merman Story*, Putnam's, 1985.

### Periodicals

*National Review*, March 23, 1984, p. 16.  
*New Yorker*, May 31, 1993, p. 73.  
*Time*, February 27, 1984, p. 104.  
*Vanity Fair*, February 1992, p. 174.

### Online

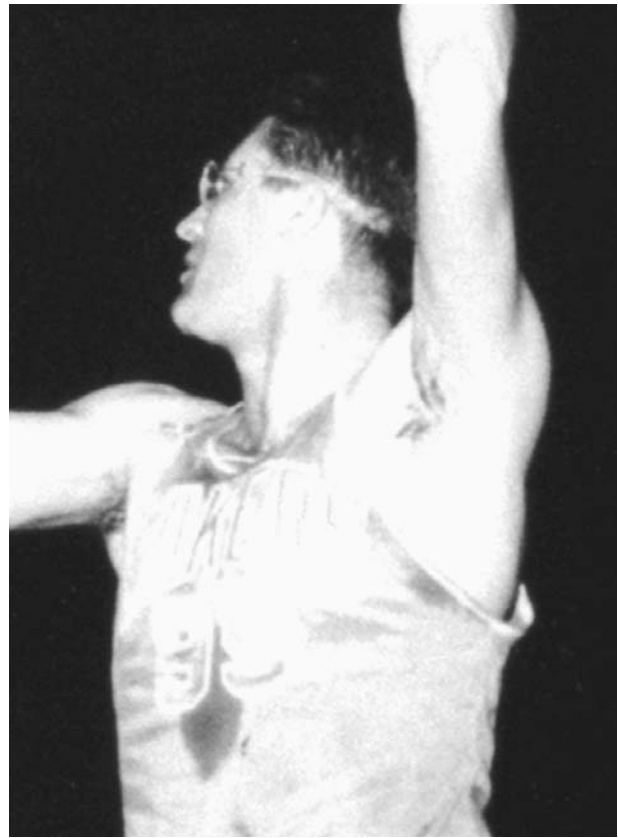
"Biography for Ethel Merman," *Internet Movie Database*, <http://www.imdb.com> (December 6, 2000). □

## George Mikan

**George Mikan (born 1924) has been described by the Naismith Memorial Basketball Hall of Fame as "the first dominant big man in professional basketball and the game's first superstar." At six feet, ten inches, he towered over most other college and professional players of the 1940s and 1950s. As a player for the Minneapolis Lakers (later the Los Angeles Lakers), Mikan repeatedly helped lead the team to league championships. When he retired after nine professional seasons, Mikan held the record for the most career points scored, 11,764.**

No one who knew George Lawrence Mikan as a boy would have guessed that he would grow up to become one of the first superstars of professional basketball. Born into a Croatian family in a small Illinois town, Mikan was one of three brothers, all of whom helped out at the family's restaurant. All of the brothers were tall, but George Mikan stood out from other boys his age. By the time he was 11, he was well over six feet tall and often was the target of taunting, because he also was very awkward and wore thick glasses. Mikan's only early sports interest was the game of marbles, in which he won a countywide marble-shooting championship.

When he entered high school, Mikan made the basketball team but was cut after the coach found out he could not play without his glasses. Mikan began to play on the local Catholic Youth Organization (CYO) team but soon afterward broke his leg when he stepped on a ball. His great



height—which eventually topped at six feet, ten inches—was accompanied by very brittle bones, a problem that would plague him throughout his basketball career. Mikan's doctor thought that he would not be able to play again after breaking his leg, and he could not even walk normally for more than a year. He decided to become a priest, but then began to play again once his leg healed. Hoping for an athletic scholarship to Notre Dame University, Mikan was crushed when the school's coach told him he never could be a good basketball player because he was too tall and slow. Although many more recent players have been even taller than Mikan, at that time he was viewed almost as a freak.

Fortunately for Mikan, another school viewed him differently. DePaul University then was little known in the world of basketball. It had just hired a new coach, Ray Meyer, who saw Mikan play and decided to work with the tall, awkward boy with thick glasses. DePaul gave him a full athletic scholarship, a decision it never regretted. Meyer helped Mikan to condition his body and shoot more accurately—and also to stop being embarrassed about his height.

All of this work paid off when Mikan blossomed into a star center for the DePaul team. Centers traditionally had simply swatted the ball away from the opposing team, leaving it to other players to shoot baskets, but Mikan also became an excellent scorer. In fact, his protection of the basket was perhaps too good; men's basketball rules were changed during his college years to prohibit goaltending,

which forced him to stand farther from the basket. However, this change barely affected his playing or his team's success. Mikan led all college teams in scoring for the 1944-45 and 1945-46 seasons, averaging more than 23 points per game both years. He became a three-time All-American and was named college player of the year in 1946. In a championship semifinal game against Rhode Island—won by DePaul 97-53—Mikan set a Madison Square Garden record by scoring 53 points.

### Led Lakers to Championships

When Mikan graduated from DePaul in 1946, he went to the Chicago Gears professional team with a five-year contract. His \$12,000 annual salary was the highest ever paid to a basketball player. During his rookie season, Mikan scored an average of 16.5 points per game and helped the Gears win their league's championship. Although Mikan drew many new fans, the Gears were financially unstable and the team went bankrupt after his rookie season. Johnny Kundla, coach of the new franchise Minneapolis Lakers, picked Mikan. Setting up this new team did not go smoothly. Kundla, a college coach, had been the Lakers' third choice for coach, and they originally had selected another player as starting center for the team. When Mikan was offered this job, he thought that Minnesota was too far from his home base in Chicago. But he was convinced to sign on after he met with the management, missed his flight home, and the sportswriter who was driving him convinced him how wonderful the area was. The Lakers outdid the Gears' record salary offer to Mikan, giving him a one-year contract for \$12,500.

After Mikan began playing for the Lakers in 1947, he became the first real celebrity of professional basketball. When the team traveled to New York City's Madison Square Garden, the marquee would read "Tonight: George Mikan vs. Knicks." Many fans came just to see this giant of a man play. Some sportswriters credit him with saving basketball as a professional sport, especially since various franchises and leagues would open and then fold within a few years. Although Mikan often dominated the court, he was not a one-man team. During the late 1940s and early 1950s the Lakers also acquired such outstanding players as Jim Pollard, Vern Mikkelsen, and Slater Martin. With this outstanding team in place, the Lakers went on to win league championships in six out of seven years (1948, 1949, 1950, 1952, 1953, and 1954). In 1950 the Associated Press named Mikan the greatest basketball player of the first half of the twentieth century. The Lakers lost to Rochester in the division finals in 1951, probably because Mikan had been injured. He insisted on playing in the series against Rochester with a fractured leg. Mikan described these games for *Newsday* in 1990: "The doctors taped a plate on it [the broken leg] for the playoffs. I played all right, scored in the 20s. I couldn't run, sort of hopped down the court."

Other teams used many tricks to stop the Lakers, usually unsuccessfully. The strategy with the oddest outcome was one the Fort Wayne Pistons tried during a game in 1950. Since the Lakers were averaging 84 points per game, the Pistons decided to play slowly to reduce the scoring

possibilities. At that time there was no rule limiting a team's time of possession, so the Pistons spent much of the game walking and standing with the ball. The strategy worked; the Pistons won by a score of 19-18, the lowest point total in National Basketball League (NBA) history. But even in this game the Pistons could not stop Mikan, who scored 15 of the Lakers' 18 points. The 24-second shot clock was instituted a few years later, largely in response to this game.

Following the 1953-54 season, Mikan surprised basketball fans by announcing his retirement. He was only 30, but the sport had taken a heavy toll on his body. During his career he had fractured both of legs, both feet, a wrist, several fingers, and his nose (numerous times). He had had 166 stitches, suffered from a permanent limp, lost a kneecap, and could not straighten his arms fully. Mikan also wanted to spend more time with his family. As he recalled for *Sports Illustrated* in 1989, "I came home one day and picked up my second son, Terry, and he began crying. He was afraid of me, because he didn't know who I was. It broke my heart." Despite his physical condition, Mikan was persuaded to return to the Lakers for the 1955-56 season. However, his best playing days clearly were over; he played in only 37 games and scored only 390 points. After that season, Mikan once again announced his retirement, this time for good. During his nine-season professional career, Mikan had led the league in scoring six times (1946-52). He also set a league record by scoring a career total of 11,764 points (an average of 22.6 points per game).

### Returned to World of Sports

The season after Mikan retired permanently from professional playing, John Kundla—who had coached the Lakers since their founding—decided to move into the team's front office. Mikan seemed the logical choice to replace Kundla, but his coaching career, which lasted only the first half of the 1957-58 season, was short and disastrous. The Lakers started with a 9-30 record, and Mikan stepped down to let Kundla finish coaching the season. The Lakers could not rise again to the heights of their championship years and they lost many fans. And the stadium they used held only 8,000 people; it often was booked with trade shows during playoff season and the Lakers had to rent college gyms. In 1960 the team's management announced that it was leaving Minnesota and moving to Los Angeles, which had no professional franchise. Mikan decided to leave basketball entirely; he practiced law, renovated real estate in Minneapolis, and spent more time with his family. One consolation to him had to be that, when the Naismith Memorial Basketball Hall of Fame elected its first inductees in 1959, Mikan was one of the players honored.

In 1967 Mikan returned to his beloved sport as the first commissioner of the new and short-lived American Basketball Association (ABA). During his two years as commissioner, he created the league's distinctive red, white, and blue basketball. Mikan then once again returned to his law practice but could not stay away from sports for long. In the mid-1980s Mikan and a group of Minneapolis businessmen convinced the National Basketball Association (NBA) to start a new team in Minnesota, the Timberwolves. He also

became involved in a number of other business enterprises such as a California recreational vehicle company. In 1993 Mikan discovered a new sport: roller hockey. When Dennis Murphy (who also had founded the ABA) decided to expand his Roller Hockey International franchises, he asked Mikan to buy a team, and Mikan became the owner of the new Chicago Cheetahs.

Mikan looked back on his career and at modern basketball for *Sports Illustrated* in 1996. He acknowledged that the game had undergone huge changes. For instance, during his professional career Mikan's salary was only a fraction of what has been paid to superstars in recent years, and there were only a few thousand fans at many games. Mikan expressed one regret about the direction of the game: that it lacked the teamwork passing of earlier days, when "going upcourt, the ball wouldn't hit the floor."

### Books

- Goodman, Michael E., *Los Angeles Lakers*, Creative Education, 1998.
- Heuman, William, *Famous Pro Basketball Stars*, Dodd, Mead, 1970.
- Hickok, Ralph, *A Who's Who of Sports Champions*, Houghton Mifflin, 1995.
- Lace, William W., *The Los Angeles Lakers Basketball Team*, Enslow Publishers, 1998.
- Rainbolt, Richard, *Basketball's Big Men*, Lerner Publications, 1975.

### Periodicals

- Basketball Digest*, January 2001, p. 74.
- Sports Illustrated*, November 6, 1989, p. 128; August 22, 1994, p. 52; November 11, 1996, p. 76.

### Online

- "The Fifty Greatest Players in NBA History: George Mikan," *NBA at 50*, <http://www.nba.com/nbaat50/greats/mikan.html> (January 18, 2001).
- "George Mikan," *Naismith Memorial Basketball Hall of Fame*, <http://www.hoophall.com/halloffamers/Mikan.htm> (January 18, 2001).
- "NBA Legends: George Mikan," *NBA History*, [http://www.nba.com/history/mikan\\_bio.html](http://www.nba.com/history/mikan_bio.html) (January 18, 2001). □

## William Moffett

**Considered by many to be the architect of United States naval aviation, Rear Admiral William Moffett (1869-1933), was the chief of the Bureau of Aeronautics from 1921 until his death in 1933. He was responsible for the modernization of the navy to include aircraft carriers and the aircraft needed to land on them. He introduced launching catapults on all cruisers and battleships, encouraged the development of large flying boats for work with the fleet, motivated the improvement of the design of the air-**

**cooled engine, and supported the experimentation with dirigibles.**

William Adger Moffett was born in Charleston, South Carolina, on October 31, 1869, to Captain George Hall Moffett, a Confederate veteran and merchant, and Elizabeth H. Simonton. He was the fourth son of seven children. His father was killed in an accident when he was six. He had a strong mother who raised him to believe that he should always act with judgment and behave according to a strict code of conduct. He attended public schools, the Presbyterian Sunday School, and engaged in typical boy activities such as hunting, fishing, and boating. At sixteen, Moffett took the competitive examinations for the Naval Academy on July 30, 1886, and passed with top honors. He began school in August 1886, and graduated in 1890.

### Served in Spanish American War

After eight years of service mostly at sea, Moffett was on the *Charleston* when Guam surrendered without a fight during the Spanish American War. He also served as watch and division officer during the Battle of Manila Bay. The commander at Manila Bay, Admiral George Dewey, designated Moffett as captain of the port. He was to salvage Spanish ships sunk in the Battle of Manila Bay.

After his return to the United States, Moffett married Jeanette Beverly Whitton in July 1902. The marriage produced seven children. Two children died before reaching adulthood. His three sons became naval aviators and his two daughters married naval officers. Moffett was short at 5' 6" but kept in shape. He taught his children good values, and administered corporal punishment if necessary. As an officer he was known as patient, diplomatic, and a team player who worked within the naval system. He was considered a lively fellow who liked action, color, and a little noise, as well as being a noted raconteur. He rarely swore and did not tell off-color stories. He liked his pre-dinner Manhattan, smoked a pipe, and liked mystery stories, especially Agatha Christie.

As an officer Moffett was well liked. He was able to choose the right man for the job and expected him to work "for the good of the ship." He delegated the details and concentrated on broad policies. He backed his men to the hilt unless he found out that they had fouled up. Then he got rid of them quickly. He encouraged his men to show initiative and advanced their careers as well as he could. He was promoted to lieutenant commander in 1905, studied at the War College in 1906, and served two years as navigator and later executive of the *Maryland* from 1908 through 1910. His ships, including the *Maryland*, won many efficiency awards in engineering, gunnery, and athletics.

### Battle of Vera Cruz

Moffett was appointed commander in 1911, and after a year as executive aboard the *Arkansas*, he was given command of the *Chester*, a scout cruiser. During the winter of 1912 at Guantanamo Bay, Cuba, Moffett saw his first air-



craft. Two years later in 1914, he saw Lieutenant Patrick N.L. Bellinger make reconnaissance flights at Vera Cruz. These flights provided the intelligence needed to defeat the Mexican sea and land forces during an American intervention in the Mexican Civil War. Moffett took his ship the *Chester* into the inner harbor at Vera Cruz without a pilot or navigational aides and had her moored close in at daybreak. The *Chester* fired on buildings along the waterfront, greatly supporting the troops ashore. For his efforts in this battle, Moffett was awarded the Congressional Medal of Honor on December 4, 1915. General Order 177 stated that he "placed his ship nearest the enemy and did most of the firing and received most of the hits."

During World War I from August 1914 to November 1918, Moffett commanded the Great Lakes Training Station in Illinois and the 9th, 10th, and 11th naval districts. He expanded the station from a capacity of 1,600 men to over 50,000. During the war he trained nearly 100,000 men for the fleet. He also founded a school for aviation mechanics and organized several flight units for practical instruction. In 1916 he was made captain. He showed excellent executive ability and promoted naval activities to the general public. He wanted to fight overseas during the war, but the navy felt that his abilities were best used in training men. For this service he was awarded the Distinguished Service Medal.

### Appointed Director of Naval Aviation

After the war Moffett assumed command of the *Mississippi* in 1919. The ship carried spotter aircraft. Moffett believed that naval aviation would be extremely important in the future. He wanted to reform the Office of Naval Aviation after he had some difficulty cutting through the bureaucracy to learn about catapults. Also, he learned that a new post, chief of the Bureau of Aeronautics, would soon be created. Lastly, he was certain that aircraft carriers would be the best weapon system to have if the United States had to wage a war in the Pacific with Japan. In 1921 he was appointed director of naval aviation.

As director of naval aviation, Moffett was enmeshed in bureaucracy. He could not get his needs met with the current chain of command. He found that he had to go through the chief of naval operations who could not legally give orders to the bureaus that handled aviation. Also, there were no aviators among the ranking naval leaders. There were no aircraft carriers and no planes that could land on ships. Without one he could not get the other. Pioneer aviators were too junior in the navy to influence policy and as line officers had to spend two years at sea before they could be promoted. This lowered their flying proficiency. Navy personnel argued about whether there should be a Naval Aviation Corps similar to that of the Marine Corps or a Bureau of Aeronautics. Lastly, Congress drastically cut defense funds after World War I.

### Named First Chief of Bureau of Aeronautics

Fortunately, Moffett had the support of the secretary of the navy, Josephus Daniels, and the chief of the Bureau of Construction and Repair, Rear Admiral David W. Taylor.

They supported the idea of a bureau. Moffett spoke before Congress detailing the need for a central authority to coordinate affairs. President Harding entered the discussion and called for a subcommittee to recommend legislation on both civil and military aviation. Harding approved the bills for air bureaus in the Navy and Commerce Departments. Representative Hicks, a member of the House Naval Affairs Committee, shepherded the legislation through Congress. Brigadier General William "Billy" Mitchell of the United States Army entered the fray and supported the idea of an independent air force. Moffett wanted the Navy Air Wing tied to the Navy. Moffett prevailed and the Bureau of Aeronautics was authorized. Moffett was promoted to rear admiral, the first air admiral in the Navy, and became the first chief of the Bureau of Aeronautics on July 25, 1921 where he served three four-year terms. While all this political maneuvering was going on, the Navy was slowly going forward with its air program. Congress authorized the conversion of a collier to be refitted as an experimental aircraft carrier, the *Langley*. In the winter of 1919 catapults and planes were fitted to battleships and flying boats were added to the fleet.

As chief of the Bureau of Aeronautics, Moffett controlled the activities of the Naval Air Force, including a naval experimental station at Annapolis, Maryland, and helium production. He became the chief of naval operation's major advisor. He controlled purchasing, and supervised the construction, design and installation of equipment provided by other bureaus. He brought together ships carrying aircraft, planes, and pilots while also managing a revolution in aviation technology. At 52 years of age, Moffett created and enrolled in the naval aviation observer course in Pensacola, Florida. By June 17, 1922, he had performed every flight function except piloting. His flight pay made him the highest paid admiral in the Navy.

### Placed Turntable Catapults on Ships

The Washington Conference of November 1921 through February 1922 affected the Bureau of Aeronautics greatly. Moffett realized that aircraft carriers could serve as advanced bases that were not allowed under Article XIX of the Five Power Naval Disarmament Treaty. Congress did not fund the carriers Moffett demanded so he sent aviation to sea on fleet ships outfitted with turntable catapults. He acquired an airship tender, the *Wright*. The *Lexington* and the *Saratoga*, two fleet carriers, were being built. With the carriers, five aircraft tenders, and an airship tender, Moffett felt that the Navy could sustain a cross-Pacific war. He also embarked on a program to build a thousand planes in five years. He promoted and funded the development of Charles Lawrance's radial air-cooled engine. This engine did not have radiators, coolant, and plumbing that caused a lot of trouble in liquid-cooled types.

Moffett employed his planes in fleet exercises as spotters for long-range gun fire, took photographs and movies, towed target sleeves for antiaircraft firing, and tracked torpedoes fired by ships for recovery. Moffett ran into flack from fleet commanders who felt that they needed carriers, better fighting and observation planes, and radios in torpedo

planes. They also felt that Moffett spent too much time on publicity and favored Naval Air Factory products over private industry.

### **Fleet Exercise Mock-Bombed Panama Canal and Pearl Harbor**

In his first term as chief of the Bureau of Aeronautics, Moffett had brought in improvements in both the liquid-cooled and radial engines. His planes held 22 of 42 world records. He boosted the airplane industry by purchasing new equipment on the open market. He shifted the use of wood, wire, and fabric in favor of metal for aircraft. Moffett's carriers performed excellently in severe tests of their ability during the 1926-1929 fleet exercises. Aircraft from the *Langley* mock bombed the Panama Canal in 1926, and in 1928 planes from the *Lexington* and *Saratoga* successfully performed a mock bombing of Pearl Harbor, perhaps giving the Japanese a lesson which they put to use in 1941. The *Saratoga* crossed the Pacific in 1929 and launched 32 fighters, 17 dive bombers, and 17 torpedo bombers from 140 miles out and caught the defenders of the Panama Canal unaware again. Other planes attacked from the Atlantic side of the canal in another mock attack. Moffett certainly proved the importance of the air wing in warfare.

### **Killed in Dirigible Accident**

President Herbert Hoover appointed Moffett to an unprecedented third term as chief of aeronautics. Moffett continued to fight for more money from Congress to bring his fleet up to the level needed to fight a war. Hoover wanted to reduce naval power. Moffett served as an advisor to the Naval Conference of 1930 in London, England. He made some points and lost some but was generally pleased with the London Naval Treaty of 1930 because it did not limit aircraft. Another interest Moffett had was dirigibles. He obtained funding for two large rigid aircraft, the *Akron* and the *Macon*. Moffett was uncertain as to the usefulness of rigid aircraft for either military or commercial purposes, but he was open-minded. True to his nature to try out new aircraft, he went up in the *Akron*; however, he was killed when it was caught in vertically opposed air currents off the coast of New Jersey on April 4, 1933.

Moffett is remembered as the man who brought the navy into the modern era. He had the ability to understand the technical aspects of the machinery and the personal charisma to convince Congress to fund the projects. He understood political power as well as the value of publicity to get his projects done. He understood what he could get done and what he could not. Historians contend that the navy would not have been as prepared for World War II with its excellently trained personnel and carriers if it had not been for Moffett's persistence. Will Rogers deemed him the "propeller of the navy."

### **Books**

*Dictionary of American Biography*, Supplement One, edited by Harris E. Starr; Supplement Two, edited by Robert Livingston Schuyler, Charles Scribner's Sons, 1958.  
*Technology and Culture*, University of Chicago Press, 1995.

### **Periodicals**

*The American Neptune*, Winter 1991, pp. 23-32. □

## **John Montagu, Fourth Earl of Sandwich**

**John Montagu, the fourth Earl of Sandwich (1718-1792), played an important role in the history of the Royal Navy from 1744 to 1782, which included the American War of Independence and the discovery of Australia and islands of the Pacific Ocean. He supported Captain Cook's exploratory voyages and, in return, Cook named the Sandwich Islands for him. Montagu worked extremely long hours in his various government posts and often ate salted beef between toast at his desk, thus giving birth to the sandwich.**

Born into a position of nobility, John Montagu, Earl of Sandwich was not handed an ideal life. He was born on November 13, 1718, to Edward Richard Montagu, viscount Hinchinbroke and Elizabeth Popham Montagu. His father died when he was four years old. His grandfather, the third earl, was feeble-minded and eventually confined to the Yorkshire home of his uncle, Wortley Montagu, to whom he had mortgaged his estates. His mother appears to have abandoned John and sent him to Eton at the age of seven. She remarried when he was nine and he and his brother William became wards of the Court of Chancery. His grandfather died just before his eleventh birthday. He became the fourth Earl of Sandwich at age ten but had little money to back up the title. His younger brother William was sent to sea at the age of eleven. His grandmother, the countess, had gone to Paris to support the exiled Stuart dynasty and taken what was left of the family's money. His grandmother threatened to disinherit him if he supported King George II, and his friends were suspicious of him because of his connections to the exiled Stuarts.

### **Schooling and Travel**

Public schools in the eighteenth century were not bastions of learning. Montagu proved to be the exception. He had a first class mind and emerged as head of the fifth form in 1732. When he left Eton he had a thorough knowledge of Latin and a working knowledge of Greek. He attributed his success to his tutor Dr. Summer. In April 1735 Montagu entered Trinity College, Cambridge, where he remained for two years. He left without a degree and began a grand tour of Europe. He spent a year in France and then proceeded to Italy, Greece, the Greek islands, Turkey, Smyrna, Egypt, Malta, Spain, and Gibraltar. This journey was quite impressive, as most English nobles did not venture much beyond France and Italy at that time. Seven years after his death a book which may have been his journal was published under the title *A Voyage Performed by the Late*



*Earl of Sandwich Round the Mediterranean in the Years 1738 and 1739.*

Montagu met Dorothy Fane while he was in Florence, Italy, in 1737 through her brother the Honorable Charles Fane, the British minister at the court of the Grand Duke of Tuscany. They were married on March 3, 1741, in St. Margaret's, Westminster. Friends and acquaintances declared that they were an admirable pair who lived modestly and avoided the temptations of the fashionable world. The couple had five children. Their eldest child, John, was born in 1742 and died soon afterward. His second son and heir, also John, was born in 1744, Edward was born in June 1745, Mary in February 1748, and William Augustus in February 1752. After this Lady Sandwich's mind began to decline and ultimately the two separated in 1755. She was declared insane by the Court of Chancery and became a ward of the court.

### Joined House of Lords

Montagu joined the House of Lords in 1739 upon his return to England from his European travels and threw himself into party politics. He became a friend of the Duke of Bedford who appointed him a lord commissioner of the admiralty. In August of 1745 Montagu was sent to Holland on a mission, and soon was appointed captain in the Duke of Bedford's regiment. He became an aide-de-camp to the Duke of Bedford on September 27 and a colonel in the army on October 4, all in the same year. He also became a second colonel in the Duke of Montagu's foot regiment on

November 22, 1745. By the time of his death he was a senior general on the list. It is probable that his military service was nominal as he was frequently absent from England on diplomatic missions and was involved with the admiralty. He had a capacity for hard work and ran the admiralty with efficiency in the absence of the Duke of Bedford. In July 1746 Montagu was nominated plenipotentiary at the conferences at Breda and continued in that post until 1748 when the treaty at Aix-la-Chapelle was completed. The French thought they could take advantage of him because of his youth, but he was smart and represented his country well.

When the Duke of Bedford was promoted to the post of secretary of state, Montagu became first lord of the admiralty. He delegated his duties to Lord George Anson who proceeded to clean up the dockyards and naval establishments. Anson also regulated the discipline of the navy with the support of Montagu. His career at the admiralty was derailed when Bedford got into a political fight with the Duke of Newcastle. King George II notified Montagu that his services were no longer needed and he returned to his home on June 12, 1751, and was out of political life until 1755 when he was appointed joint vice-treasurer of Ireland, along with two others. He held this office until 1763.

### Invented the Sandwich

After Montagu separated from his mentally ill wife, his reputation was sullied. A story was spread in Grosley's *Tour of London* that a minister of state gambled for twenty-four hours with only a piece of beef between two slices of toasted bread. The new dish was named after the minister who invented it. There is no evidence that Montagu engaged in heavy gambling. He did bet on cricket and a few other sports, but there is no record anywhere of excessive betting. The truth is that he was extremely fond of salt beef. He worked long hours when he was a cabinet minister in 1765 and often missed dinner, which at that time was served at 4:00 p.m., but there is no doubt that he did invent the sandwich.

John Wilkes also attempted to destroy Montagu's reputation with lies and half truths about a club that they belonged to called the Medmenham along with the Earl of March, Sir Francis Dashwood, and others. Apparently the men engaged in some scandalous behavior involving women, offensive poetry, and blasphemy. Wilkes was eventually prosecuted and convicted of blasphemy, but Montagu's name never quite recovered from the scandal. He was even immortalized in the play *The Beggar's Opera* as Jemmy Twitcher. He was considered sinful, greedy, ambitious, and vain. This depiction of his character did not seem to bother Montagu in the least. He continued to live his life as he pleased. The men who counted were pleased with his defense against Wilkes and welcomed him back into politics after an absence of twelve years.

A more balanced picture of Montagu may have been given by an old friend of his, Lady Mary Fitzgerald. According to her, Montagu needed ambition and vanity in order to succeed. He had a penetrating intelligence, a good understanding of character, and the ability to work with those

around him. He had excellent judgment and the ability to foresee difficulties. He liked to be flattered but understood it for what it was. He tended to be either too formal or too familiar. He was happiest when his head ruled his heart. Physically, as shown in the famous Gainsborough painting, Montagu was a big tall man who was somewhat awkward. He had a reputation for breaking china and had a shambling gait that made it appear that he was walking down both sides of the road at once.

Montagu loved classical music, especially Handel, and played the drums in the Hinchinbrooke Orchestra. He founded the Noblemen and Gentlemen's Catch Club, a group that promoted the writing of canons, catches, and rounds and which continues to exist. He was considered the most important and influential amateur musician of eighteenth-century England. Through his interest in music, he met his longtime mistress, Martha Ray, when she was a seventeen-year-old milliner's apprentice. She had an excellent voice that he proceeded to have trained by the best teachers of the day. She sang most of the female solos in his orchestra. She also bore him five children. Divorce was not allowed in the eighteenth century except by a private act of parliament, and Montagu did not have the money and was concerned about public opinion. The two lived together for seventeen years as man and wife and Montagu's life was happy and stable. However, Martha Ray wanted Montagu to make a settlement on her and her children so that they would be protected if he died. He did not have the money, so she may have had an affair with James Hackman, who wanted to marry her. She refused and he shot her in the head on the steps of Covent Garden in 1779. Montagu was devastated and did not appear at social events for a long time.

### Returned to the Admiralty

Under the Duke of Grafton, Montagu accepted the office of postmaster-general in January 1768 where he served alternate months with Lord de Spencer. Between them they increased the efficiency of the post office. In December 1770 he became one of Lord North's secretary of states. On January 12, 1771, Montagu returned to the admiralty as first lord where he remained for eleven years. He returned to an admiralty in chaos. The dockyards were in disrepair, the ships were suffering from dry rot, and there was not enough English wood to make repairs. The English were embarking on the American war at this time and did not have enough good ships to fight America and her European allies. The most important decision Montagu made in his career in the admiralty was to hire Captain Charles Middleton to reform the navy. During Montagu's tenure at the admiralty a great deal of bribery and stealing apparently occurred, but modern research has proved that Montagu was not personally involved and probably had little knowledge of these events. The American War for Independence was lost partly due to an inefficient navy under his watch, but it is also true that Canada, India, and the West Indies would not have remained in the English sphere without Montagu's work in rebuilding the English fleet.

### Supported Captain Cook's Explorations

During Montagu's tenure at the admiralty, England became interested in all things below the equator. Montagu was especially interested in the Pacific voyages of Captain James Cook. When Cook proposed a voyage to discover whether Terra Australis existed, Montagu supported him and helped get his ships outfitted in 1778. Cook named the Sandwich Islands after him.

After the fall of North as prime minister, Montagu returned to private life. He continued to promote ancient music and entertain at Hinchinbrooke. Lack of money and bills to pay followed him until his death in 1792. His lasting contribution to England was the reform of naval administration which enabled England to rule the seas for the next hundred years.

### Books

*The Dictionary of National Biography*, edited by Sir Leslie Stephen and Sir Sidney Lee, Oxford University Press, 1960.  
Rodger, N. A. M., *Insatiable Earl: A Life of John Montagu, Fourth Earl of Sandwich 1717-1792*, W.W. Norton and Company, 1993. □

## Berthe Morisot

**Berthe Morisot (1841-1895) was one of the influential painters of the French Impressionist school of art. Her delicate and subtle style won her the respect and praise of her colleagues, but she was denied international recognition until long after her death.**

Berthe Marie Pauline Morisot was born on January 14, 1841, in Bourges, France, into an upper class family. Her parents were married in 1835 when her mother, Marie Cornélie Thomas, was 16. They had two daughters, Marie Elisabeth Yves and Marie Edma Caroline, before Berthe was born. A son, Tiburce, was born between 1845 and 1848. Her father, Edme Tiburce Morisot, was a high-ranking civil servant in the French government. He had studied painting and architecture as a young man. Her grandfather was Jean-Honoré Fragonard, an important artist of the Rococo school, who painted aristocratic gardens. Their artistic influences were a major part of Berthe's upbringing. Blessed with a talent for art, she decided at an early age to become a painter. Throughout her life, Berthe's closest relationship was with her sister Marie Edma, who was also an artist. She relied upon her older sister as her strongest critic and best friend.

In 1851, when she was only ten, Morisot moved to Paris, where she was given classical art lessons by Joseph-Benoit Guilchard. Initially, the works of classic French landscape artists such as Jean Baptiste Guillement influenced her. As her skills developed, her artistic choices changed also. By 1860 she had become dissatisfied with the teaching of Guilchard.



From 1862 to 1868 she continued her classical studies under the guidance of Guilchard's friend, noted landscape artist Camille Cordot. During this time Morisot began to exhibit her work, with her first show at the Salon in Paris in 1864. Cordot was pleased with his protegee's work and allowed her to sign her paintings as a "student of Cordot." Morisot went on to exhibit her paintings at Salon shows in 1865, 1866, 1868, 1870, 1872 and 1873.

### The Influence of Manet

In 1868, Morisot was introduced to artist Edouard Manet and soon became his pupil. His influence drew her away from classical art and into a new form of art that would come to be known as Impressionism. Manet and Morisot complemented one another, expressing mutual admiration as well as influencing each other's style. Morisot, who was a beautiful woman, frequently appeared in Manet's work. His most famous portrait of her is *Berthe Morisot with a Bouquet of Violets*. Among others are *The Balcony* and *Repose*.

Morisot was influential in arousing Monet's interest in outdoor painting. She encouraged him to abandon the use of black and experiment with the Impressionist "rainbow" palette instead, even though Morisot did not emphasize color as much as most of her Impressionist colleagues. Her paintings continued to show the influence of Manet even after they stopped working closely together.

From the moment she met and began studying with Manet, she followed the Impressionistic style. Her subjects, however, differed from those of her colleagues. She shun-

ned the brothel scenes that were popular with Degas and avoided locations where respectable women would not be found alone, such as train stations. Renowned artists such as Edgar Degas, Claude Monet and Pierre-Auguste Renoir accepted her as an equal.

### The Morisot Technique

Morisot pursued a style that, while unquestioningly Impressionistic, was also uniquely her own. She applied large touches of paint to the canvas in all directions. This technique produced a transparent quality in her work. She omitted detail if it was unnecessary to the overall subject, thus producing a truly impressionistic work.

Her work portrayed scenes of everyday life, often with women and children. She also painted landscapes, again incorporating women and children. Her mother and sister made frequent appearances in her paintings. Morisot worked in various mediums, including oils and watercolor. She is best known as a watercolorist. She integrated figures into the design of her paintings using a pastel hue. Her subject, style and frequent use of these pastels produced an intimate atmosphere in her work. Some of her best known works include *The Artist's Sister Edma and Their Mother*, (1870) *The Cradle* (1873), *Madame Pontillon Seated on the Grass* (1873), *In a Park*, *Hanging out the Laundry to Dry*, *Girl with a Basket*, *Woman at her Toilet*, and *La Lecture* (1888).

### A Late Marriage

Through her relationship with Edouard Manet, Morisot met his older brother, Eugene, in 1868. She married him in December 1874. Eugene Manet was a writer and political activist who encouraged her to continue with her work. Their home at 4 rue de la Princess in Bougival on the Seine soon became a gathering place for artists and the literary lions of the day. Among her closest friends was the Symbolist poet Stephane Mallarme.

Morisot and Manet had a daughter, Julie, born in 1878. As a result of her marriage and motherhood, she began focusing increased attention on domestic and family scenes in her paintings.

### An Impressionist Leader

For the most part, the Impressionists recorded garden and landscape scenes. While the classical artists such as Jean-Honore Fragonard, Morisot's grandfather, had been drawn to the elegance and grand scope of aristocratic gardens, the Impressionists took to public parks, common gardens and everyday locations.

Initially, the public and the press rejected the Impressionists as a band of renegades and revolutionaries. Among the Impressionists, only Degas and Morisot were accepted each time they submitted works to the prestigious Salon exhibition, while others, such as Frederic Bazille, Camille Pissarro, Renoir, Monet and Paul Cezanne were often rejected.

The Salon exhibit of 1868 resulted in many favorable reviews for the Impressionist artists despite the decision of

the hanging committee to place many of their pictures in unflattering locations. There were still detractors, however. By 1870 there were still mixed reviews for the Impressionist artists.

After the Franco-Prussian war, funding for artists evaporated. This, coupled with disenchantment for the Salon system, encouraged the Impressionists to formulate plans for an independent show. On April 15, 1874, the "Premiere Exposition" of 165 works of art opened to the public. This was a corporation composed of artists funded the exhibition. Morisot was one of the charter members of the group. Although the group included artists of the Academic style, the Impressionists were the driving force. Morisot's paintings were featured in the show. Except for 1879, she continued showing her works annually until the last group exhibition in 1886.

A small group representing the Impressionists, including Morisot, Renoir, and Monet, organized their own auction to sell their work. On March 24, 1875, 72 paintings went on sale. The auction was a dismal failure, as was a similar sale in May 1877. It took time and continued effort before the Impressionists gained acceptance.

### Belated Recognition

Morisot's style continued to develop in her later years. Her brother-in-law, friend and mentor, Edouard Manet, died in 1883. After his death, Berthe Morisot came under the influence of Renoir.

Morisot's husband died on April 13, 1892, after a lengthy illness. In 1895, while nursing her sick daughter, Morisot developed a fatal case of pneumonia. She died in Paris on March 2, 1895 and was buried at Passy cemetery next to Eugene and Edouard Manet.

Morisot believed in the capabilities of all women. "I don't think there has ever been a man who treated a woman as an equal and that's all I would have asked, for I know I'm worth as much as they," she once said. But she lived in a time when equal treatment was rare. Even though she produced more than 860 paintings, her death certificate states she had "no profession."

Morisot left her collection of Degas, Monet and Renoir paintings to her daughter, Julie Manet. After her death, she became known more for being a friend and model of Edouard Manet than an artist in her own right. Although Morisot's work was generally well reviewed when it was exhibited, she did not become known internationally as an artist until 1905, when the London Impressionist exhibition displayed 13 of her paintings. It took almost a full century before Berthe Morisot's work received the credit it deserved.

### Books

*A Day in the Country*, edited by Andrea P.A. Belloli, Los Angeles County Museum of Art, 1984.  
*Dictionary of Art*, edited by Bernard S. Myers, McGraw-Hill, 1969.  
*Encarta Encyclopedia*, Microsoft, 1998.  
 Higonnet, Anne, *Berthe Morisot*, Harper and Row, 1990.  
*Hutchinson Dictionary of the Arts*, Infonautics, 2000.

Janson, H.W. and Anthony F. Janson, *History of Art*, Harry N. Abrams, 1997.

*Oxford Companion to Art*, edited by Harold Osborne, Clarendon Press, 1996.

Simon, Matila, *Shorewood Art Reference Guide*, Shorewood Reproductions, 1970.

*World Book Encyclopedia*, World Book, 2000.

### Periodicals

*Art Journal*, September 22, 1994.

*Entertainment Weekly*, July 13, 1990.

### Online

"Berthe Morisot," *art.com*, <http://www.hearts-eas...h-c/impressionist/morisot/bio.html> (November 24, 2000).

"Berthe Morisot," *WetCanvas.com*, [http://www.wetcanvas.com/Museum/Artists/m/Berthe\\_Morisot/](http://www.wetcanvas.com/Museum/Artists/m/Berthe_Morisot/) (November 24, 2000).

"Berthe Pauline Morisot (1841-1895)," *crossview*, <http://www.mcs.csu Hayward.edu/~mal...Impression/Morisot/Morisot1cv.html> (November 24, 2000).

"Morisot, Berthe," *Britannica.com*, <http://www.britannica...cle/3/0,5716,55113+1+53761.00.html> (November 24, 2000). □

## Eadweard Muybridge

**One of the most innovative pioneers of photography, Eadweard Muybridge (1830-1904) is perhaps best known as the man who proved that a horse has all four hooves off the ground at the peak of a gallop. He is also regarded as the inventor of a motion-picture technique, from which twentieth cinematography has developed.**

Muybridge was born Edward James Muggeridge on April 9, 1830, in the town of Kingston-on-Thames in Surrey, England. When he was 20 years old, he changed his first name to conform to the Saxon spelling and a possible Spanish lineage; he became "Eadweard." His surname was altered in stages; it went from Muggeridge to Muygridge and finally Muybridge.

### Relocated to San Francisco

Despite his affinity for British antiques, styles, and customs, Muybridge saw his future in the United States. After a brief stay in London, he immigrated to the United States in 1851. He found work as a commission merchant, initially for the London Printing and Publishing Company and later for Johnson, Fry and Company (for whom he acted as business agent). He was involved in the importation from England of unbound books, which were then bound, sold, and distributed in America. By all accounts, Muybridge was a good businessman who, in just a few years, had set himself up nicely.

During this time he made the acquaintance of Silas T. Selleck, a daguerreotypist (a photographer who makes a



photo on a plate of chemically-treated metal or glass). Selleck, no doubt, opened up the world of the image to Muybridge. In the meantime, gold fever infected Selleck, who headed west. He eventually established a photography studio in San Francisco, and the lure of California became stronger to Muybridge. In 1855, he decided to join his friend.

By the time Muybridge arrived, the first boom of the great California gold rush had subsided and San Francisco itself was in a recession. An astute businessman, Muybridge still managed to thrive. He opened a bookstore downtown through which he sold material supplied to him by the London Printing and Publishing Company. Above the bookstore he opened an office as the commission merchant for the company.

Muybridge's business opened up new avenues to him. He became a board member of San Francisco's Mercantile Library Association, which promoted reading by sponsoring a library and lectures, and San Francisco's intellectuals frequented his business. He also brought his two younger brothers, first George (who died in 1858), then Tom to San Francisco.

By the late 1850s, Muybridge's attention began to turn away from business. Travel in California and new techniques in photography had spurred his interest in landscape photography. Muybridge was not a pioneer in this field. The photographs of Charles L. Weed, Robert Vance, and Carleton Watkins were already for sale in San Francisco. Still Muybridge hoped to photograph California more exten-

sively than they had done. Subsequently, he gave up both his businesses. The bookstore was turned over to a music publisher, while his brother Tom became the San Francisco commission merchant for the London Printing and Publishing Company.

After giving up his businesses, Muybridge set out on an extended trip to Europe. His plan was to travel east via stagecoach, before sailing abroad. Along the way, the stagecoach crashed and Muybridge was injured. He remained unconscious for several days. His vision and senses of taste and smell were affected. Arriving in New York City, he sued the company, and then sought medical treatment in London. He briefly returned to New York to settle his lawsuit, but eventually returned to Kingston-on-Thames to recuperate further.

While in Kingston-on-Thames, Muybridge befriended Arthur Brown, a man who furthered Muybridge's already keen interest in photography. Muybridge at this time also tried his hand at invention and improvement on already existing patents. He himself sought a patent on a washing machine and though it was never granted, Muybridge did receive other patents in the United States and England.

In his book *Muybridge: Man in Motion*, Robert Bartlett Haas describes this time period (1860-66) as Muybridge's "lost years." In fact, Muybridge was really developing a plan. He devoted more and more time to his craft just as new photographic techniques were being developed. He eventually decided the United States, as both subject and market, offered the best opportunity for a budding photographer.

### Full-Time Photographer

Muybridge made his way back to San Francisco, now much changed and even more to his liking. If he had had any second thoughts about returning to his old business ventures, they quickly vanished. He was now a professional photographer, and briefly shared a studio with his old friend, Selleck.

He first concentrated on scenes of San Francisco, a city of approximately 200,000 people in 1870. He began taking cityscape photographs of San Francisco in 1867 and would continue to do so until 1881. Many of Muybridge's early photos were of San Francisco Bay from various vantage points, but he also took numerous photographs of city life, notably the architecture. Among his better known photographs at this time were "Pacific Bank, Sansome Street," "Merchant's Exchange, California Street," "Montgomery Block," "Montgomery Street, north from California," "Maguire's Opera House," "Trinity Church and Jewish Synagogue," "The Cliff House," "Russian Hill from Telegraph Hill," and "Montgomery and Market Street, Fourth of July." These photos reflect the growing city, as it emerged to become the most important cities in California.

In 1872 and 1873, Muybridge began to photograph what has become his signature series, a galloping horse. Legend has it that a \$25,000 wager between former California Governor Leland Stanford and a rival was involved, but Muybridge's own account makes no mention of the bet. It is believed that Stanford hoped to use the information to breed

and train better race horses, while Muybridge was interested was in animal locomotion. But as the *Masters of Photography* website noted that “The experiments were interrupted when Muybridge was tried in 1874 for murdering his wife’s lover.

### Marriage and Murder

In 1872, Muybridge married Flora Stone, 22 years his junior, whom he had met when she had worked as a photographic re-toucher at another studio. Their brief marriage would culminate in one of the city’s biggest scandals of the decade. Into their circle came Harry Larkyns, a former major in the British army who in 1873, had become theater critic for the *San Francisco Post*. Larkyns possessed all of the outgoing qualities Muybridge lacked, and it wasn’t long before he had thoroughly charmed Flora.

While Muybridge also returned to his original photographic purpose, taking photographs in America’s Northwest, Flora and Larkyns became lovers. Muybridge ideas expanded, and he photographed members of the Modoc tribe, Vancouver Island, and Alaska, as well as produced a series of photographs that followed the Central Pacific and Union Pacific railroads from San Francisco to Omaha, Nebraska. Meanwhile, back in San Francisco, Flora became pregnant, and Larkyns was rumored to be the true father of her child.

When the rumors as well as the with near undeniable evidence came back to Muybridge, he set out to kill Larkyns who had already fled San Francisco. In October of 1874, Muybridge shot and killed Larkyns. He was indicted for premeditated murder, and his trial was held in early 1875. He was found not guilty after a short trial.

Muybridge decided he needed a change of scenery and decided to take his camera to Central America. He spent 1875-76 primarily in Guatemala and Panama, concentrating his camera lens on cities such as Colon, Panama City, and Guatemala City, as well as the surrounding countryside, which yielded completely fresh subject matter.

While he was in Central America, Flora died and her child, Floredo, was placed in an orphanage. Upon his return to California, Muybridge learned of her death. Though he was convinced he was not the boy’s father, he did regularly visit Floredo at the orphanage. In 1877, Muybridge resumed his work with Stanford.

Muybridge photographed Stanford’s racehorse, named Occident. The purpose of the photos was to determine whether all four of a horse’s hooves are off the ground at some point in a gallop. Muybridge had already developed automatic shutters, which he then set up in a dozen cameras along a Sacramento racecourse. (The *Washington Post* noted that “Muybridge’s studies are so cleanly, almost starkly, done that it’s easy to forget the endless drudgery involved.) As Occident galloped past, the horse tripped wires that were connected to the shutters. The photo series of Occident proved that all four of a horse’s hooves are off the ground at some point.

In 1877, Muybridge photographed another of his masterpieces. He set up his camera on the San Francisco’s

famed Nob Hill, where he had already been commissioned to photograph the mansions, and took a panorama of the city using eight by ten-inch plates. The result was a magnificent view of the city on 11 panels that stretched to seven and a half feet in length. Muybridge published this as “Panorama of San Francisco from California Street Hill.”

### Early Motion Pictures

Muybridge was not only fascinated by animals in motion, he was intrigued with devising a method of having photographs depict motion. The *Masters of Photography* website described this as “stop-action series photography.”

He had already experimented with various automatic shutters to quickly capture movement when in 1879, he developed what he initially called the zoogyroscope, which later became known as the zoopraxiscope. As defined by the *Masters of Photography* website, a zoopraxiscope was a “primitive motion-picture machine which recreated movement by displaying individual photographs in rapid succession.”

Muybridge used glass disks with sequential photos on each disk of a horse in motion as the “slides” for his projector. This pioneering method predated Thomas Edison’s Kinetoscope and even influenced it. Many now believe that Edison’s work was a refinement of Muybridge’s, albeit a vastly improved refinement.

Muybridge spent much of his later career at the University of Pennsylvania. He took photographs between 1884 and 1887, demonstrating animal and human motion and movement. The result was *Animal Locomotion*, published in 1887. The *Masters of Photography website* described it as “the most significant work was the human figure.”

The website added that it was “a visual dictionary of human and animal forms in action.” The 11-volume series showed male and female models, both nude and clothed, photographed in all kinds of activities—walking, running, playing games, climbing stairs, etc. Muybridge even photographed a girl throwing a bucket of water over another girl, and a mother spanking a child.

By now Muybridge was well known on the lecture circuit, not only in California, but on the East Coast and in Europe. He continued his studies of animal motion, and displayed the zoopraxiscope at the Columbian Exposition of 1893.

In his last years, he returned to Kingston-on-Thames where he died on May 8, 1904. The *Washington Post*, concluded that Muybridge “showed the world how people and animals actually move and permanently altered our perception of time and space.”

### Books

Hass, Robert Bartlett, *Muybridge: Man in Motion*, University of California Press, 1976.

### Periodicals

*Washington Post*, July 5, 1991.



**Online**

"Eadweard Muybridge," *Masters of Photography website*, <http://www.masters-of-photography.com/M/muybridge/muybridge.html> (March 11, 2001).

"Eadweard Muybridge," *The Film 100-website*, <http://www.film100.com/timelinepages/1990pg.shtml> (December 11, 2000).

"Eadweard Muybridge—Father of the Motion Picture," *Michael Linder website*, <http://linder.com/muybridge> (March 11, 2001).

"Freeze Frame—Eadweard Muybridge's Photography of Motion," *Smithsonian FreezeFrame: Virtual National Museum of American History website*, <http://americanhistory.si.edu/muybridge/index.htm> (March 11, 2001).

"UCR/CMP: Eadweard Muybridge," *UCR/California Museum of Photography website*, <http://photo.ucr.edu/photographers/muybridge> (March 11, 2001). □

# N

## Bronko Nagurski

**Known as the toughest player in the National Football League in the 1930s, Bronko Nagurski (1908-1990) was a legendary two-way star during the formative years of professional football. His name became synonymous with tenacity. Nagurski also had a long and successful career as a wrestler.**

**R**ed Grange, the biggest star in the early decades of professional football, called Nagurski, his teammate on the Chicago Bears, the “best football player of all time.” Nagurski became a legend as a fullback, and it was said that no single opponent could bring him down. But he also played on defense his entire career, as an intimidating lineman with a reputation for mayhem. “You could have played him at any position,” claimed sportswriter Grantland Rice.

### Versatile All-American

Nagurski was born on November 3, 1908 near the small Canadian border town of Rainy River, just across from International Falls, Minnesota. His parents, Michael and Amelia Nagurski, were Ukrainian immigrants and farmers; Bronislaw was one of four children. Surrounded by wilderness and enduring long, cold winters, the brawny young boy loved the outdoors and athletics. He ran four miles each day to and from school.

In high school, Nagurski took up wrestling and boxing. His mother didn’t want him to get injured and tried to get him to give up those sports, but with little success. He soon grew interested in football.

In 1926, Nagurski entered the University of Minnesota. From 1927 through 1929, he starred at four different positions on that school’s football team—end, guard, tackle and fullback. Nagurski tore apart the Big Ten, establishing a fearsome reputation on offense and defense. For three seasons, he was named an All-American. He was the first college player in history to be named an all-star at two positions—fullback and defensive tackle.

### Underpaid Bulldog

Legendary Chicago Bears head coach George Halas scouted Nagurski and signed him in 1930 to a \$5,000 contract, a hefty sum in those days. After returning home from the contract signing, Nagurski found an offer for \$7,500 a season from the New York Giants.

After an excellent rookie season, Nagurski had to take a pay cut to \$4,500 because the Great Depression was cutting into the Bears’ revenue. Wearing the uniform number 3, Nagurski quickly became one of the National Football League’s stars, but he did not complain when his salary was cut again, to \$3,700.

The Bears were the top team of their era, with the game’s top players, Grange and Nagurski. In 1932, the Bears finished first in their division. One of the classic games that season was played at Staten Island, New York, against that borough’s Stapletons. Both teams played tremendous defense and Nagurski was held to 52 yards rushing on eight carries. At one point, Nagurski felled the home team’s quarterback by smashing him in the face with both hands, and the fans rode him for the rest of the game, which ended in a scoreless tie.

A month later, in a rematch in Chicago, the Bears won 27-7 and Nagurski scored two touchdowns. The Stapletons’



touchdown was the first the Bears had allowed in five games.

Early in 1933, wrestler Tony Stecher, who managed his wrestler brother Joe, convinced Nagurski to try professional wrestling. Nagurski made his debut in February and took only four minutes to pin his opponent, Tag Tagerson. Tony Stecher became his manager, and Nagurski began wrestling regularly, sometimes even during the football season.

In 1933, the Bears repeated as league champions, and Nagurski led the team with 533 yards rushing. The key to the divisional championship was a late-season game at Wrigley Field in Chicago against the Portsmouth Spartans. A penalty to Nagurski for holding on defense gave the Spartans a first down late in the game, and they used it to their advantage on a touchdown drive to put them in the lead. Nagurski was enraged. He took the kickoff and ran it back to the Bears' 45-yard line. In the huddle Nagurski reportedly said: "This is my fault. Give me the ball!" He then bulldozed his way through several defenders. Crossing the goal line with the game-winning touchdown, he never slowed until slamming into a concrete wall. Legend has it that Nagurski said: "That last guy hit me awfully hard."

In the league championship game that year, Nagurski ran for a game-high 65 yards and even threw two touchdown passes. The second pass gave the Bears the victory over the New York Giants.

### Running over the Opposition

Nagurski always played all-out, making bone-crushing tackles as a defensive lineman and on offense fearlessly running the ball into enemy lines like a bulldozer. "He probably broke more bones, legitimately, than any other player," said biographer Harold Rosenthal. "Contact with him, either trying to stop him as a runner, or trying to block him as a lineman, was extremely costly. If he hit you right, you suffered a broken shoulder." Nagurski was also a fearsome blocker, often clearing the way for smaller running backs.

Almost no one could bring him down alone. Even his own linemen sometimes cleared away so they would not trip him up. "Bronko runs his own interference," New York Giants coach Steve Owen once said.

"Tackling Bronko was like trying to stop a freight train running downhill," said Ernie Nevers, a running back with the Chicago Cardinals. Owen said famously: "The only way to stop him is to shoot him before he leaves the clubhouse." Owen once tried a five-man line against Nagurski, bringing in an extra linebacker. Nagurski carried the ball on the first play of the game. "Two things happened that we hadn't counted on," Owen said. "One, Nagurski gained eight yards. Two, the linebacker had to be carted off the field."

Nagurski didn't dance and dive. He ran straight through potential tacklers, employing his massive body like a battering ram. "If you went at him low, he would stomp you to death," recalled Mel Hein of the New York Giants. "If you went at him high, he just knocked you down and ran over you." Grange said: "Tackling Nagurski was like getting an electric shock." Several players tried rolling into Nagurski's feet in hopes of tripping him up, but that tactic had its price. "You ended up wearing cleat marks for weeks," Giants player Ken Strong said.

For his era, Nagurski was an enormous man. His hands and wrists were monstrous, and his neck was thick. Most linemen weighed only about 210 pounds in the 1930s. Nagurski stood six feet three inches tall and weighed 225 pounds when he broke into the pro ranks. After a few years his weight was listed as 238 pounds. That was large even for a lineman, and Nagurski's size was unheard of in a running back. Despite his size, Nagurski accelerated rapidly when he was handed the football.

Sportswriter Rice once insisted that Nagurski was superior to the two men generally accepted as the greatest football players of the first half of the twentieth century, Jim Thorpe and Grange. Rice said: "Eleven Bronko Nagurskis would have beaten eleven Thorpes or eleven Granges."

### Giving His All

Nagurski did not pile up any records for rushing yardage. The Bears under Halas were a team, not a collection of stars. None of them, including Nagurski, had much use for individual statistics. During only one game in his nine seasons with the Bears did Nagurski carry the ball for 100 yards or more. He averaged less than ten carries a game and never led the league in rushing yardage.

"Halas stockpiled backs and he believed in spreading it around," Nagurski explained during an interview before the 1984 Super Bowl. "Plus he wanted to keep me fresh for defense, where I'd put in a full afternoon."

In that interview, Nagurski told Paul Zimmerman of *Sports Illustrated* that his method of running the ball wasn't fancy, but it was still intimidating to any potential tacklers. "Just before they got to me, I'd knock 'em out of the way and keep running," he explained.

Nagurski suffered his share of injuries, but in those days, the work ethic dictated that players continue to play through pain. Nagurski was extremely casual about his own knees. If something hurt, he would whack one side of the knee to try to get cartilage back in place.

In 1935, Nagurski sat out almost the entire season with a back injury after breaking two vertebrae in an over-enthusiastic play. "I threw a cross-body block on an end—a stupid block—and I plowed into his knees with the small of my back," he later recalled.

In 1936, Nagurski married his childhood sweetheart, Eileen Kane, in a ceremony on December 28, just after the end of the football season. On June 29, 1937, Nagurski won a world wrestling title by defeating Dean Detton in a match in Minneapolis. "He was a pretty big draw," recalled wrestling expert Stu Hart. "He was pretty tough to bring down in wrestling."

In 1937, with the Depression waning, Nagurski finally was raised back to \$5,000 by Halas. He had another outstanding season. On Christmas Day that year, Eileen and Bronko had a son, nicknamed Junior. They would have five more children in coming years. With a family to raise, Nagurski could no longer afford to be so forgiving about his salary. In 1938, he asked for a raise to \$6,000, but the tight-fisted Halas refused to give him the money. Nagurski quit and became a wrestler full-time.

"I wanted to go home anyway," he told Zimmerman in the 1984 interview. "I was tired of knocking myself out, going on the wrestling tour between games to make extra money."

In wrestling Nagurski earned more money but was not as happy. He didn't like the showmanship aspect of wrestling. "Bronco, a down-to-earth, no-nonsense person, never cared for the capers and antics," said biographer Harold Rosenthal. "He said they tended to degrade." Instead, Nagurski wrestled without much embellishment. He didn't try many fancy tricks, but simply used his tremendous brute strength to bring down opponents. He won the National Wrestling Association title twice, in 1939 and in 1941.

### The Toll of Tenacity

In 1943, Nagurski came out of retirement for one last season to help out George Halas, who because of World War II was desperate for players. He was used mostly as a tackle but then was pressed into service as a fullback. The Bears won their division and Nagurski scored a touchdown to help Chicago win the league championship game over the Washington Redskins. Officially, for his career, Nagurski is listed as having 3,863 yards in 840 carries, but

there is doubt about his actual totals due to poor record-keeping in his early years.

In 1951, Nagurski was among the first class of inductees to the College Football Hall of Fame. In his later years, he suffered from arthritis and endured many knee operations to try to salvage what was left of his much-abused knees. Still, he kept wrestling until 1960, then went home to Rainy Lake to become a fishing guide.

In 1963, Nagurski was among the original 17 men inducted into the National Professional Football Hall of Fame in Canton, Ohio. He attended the ceremonies with the ten other inductees who were still alive at the time. All the men got rings, but the jeweler had to make a new mold to accommodate Nagurski's record ring size of 19 and a half inches.

For years after retiring from sports, Nagurski ran a gas station in International Falls. In his later years, he also delighted in following the career of his first son. Nagurski Jr. played eight seasons with the Hamilton Tiger Cats in the Canadian Football League. Bronko Nagurski died on January 8, 1990 in International Falls, Minnesota.

### Books

Korch, Rick, *The Truly Great: The 200 Best Pro Football Players of All Time*, Taylor Publishing, 1993.

Rosenthal, Harold, *Fifty Faces of Football*, Atheneum, 1981.

Sullivan, George, *The Great Running Backs*, J.P. Putnam's Sons, 1972.

### Periodicals

*Sports Illustrated*, September 11, 1989; November 24, 1997.

### Online

"The Bears met their match in Stapleton," *Staten Island Live*, <http://www.silive.com/si2000/games/1226y2kstape.html>.

"Bronco [sic] Nagurski," *SLAM! Wrestling Canadian Hall of Fame*, <http://www.canoe.ca/SlamWrestling/nagurski.html>.

"A century of college football: Most important players (pre-1960)," *CBS SportsLine*, [http://www.sportsline.com/u/ce/feature/0,1518,1270343\\_56,00.html](http://www.sportsline.com/u/ce/feature/0,1518,1270343_56,00.html).

"September Classic Moments," *ESPN Sports Century*, <http://espn.go.com/sportscency/moments/9809.html>. □

## James Naismith

**Basketball is the only major modern sport that was "invented" by an individual. It did not evolve from another sport, such as football and soccer did, but rather was created in almost the identical form that it is played in today by a man named James Naismith (1861-1939).**

James Naismith (who had no middle name but later adopted the initial "A") was born on November 6, 1861, in Almonte, Ontario, Canada. His parents, John and



Margaret (Young) Naismith, were Scottish immigrants who died in a typhoid epidemic when Naismith was nine years old, leaving him an orphan. He was raised by his strict, religious grandmother and later by a bachelor uncle. Naismith enjoyed hunting, the outdoors, and sports. He dropped out of high school to work as a logger in lumber camp for five years, then returned to finish his secondary education and entered McGill University in Montreal in 1883. He graduated in 1887 with an A.B. degree in theology. Intending to be a minister, he continued his theology studies at Presbyterian College in Montreal for three years and graduated from there in 1890.

Naismith had always been an athlete. He played football and lacrosse at McGill and directed undergraduate gymnastics classes during his last year at Presbyterian College. His interest in athletics contributed to his decision to go into physical education rather than the ministry; he decided he could do more good working with youth on the athletic field than he could as a clergyman. So in 1890 he enrolled in a two-year course in physical training at the new Young Men's Christian Association (YMCA) Training School in Springfield, Massachusetts. He served as the director of physical education at that school from 1890-1895.

### From Peach Baskets to the Olympics

It was at Springfield that Naismith came up with the idea for basketball. One of his assignments as a student there, given by Luther Halsey Gulick, superintendent of the physical education department, was to create a game that

would occupy the students during the wintertime, between the seasons for football and baseball in the fall and lacrosse in the spring. Naismith worked out a game that prohibited the roughness of football and eliminated the bunching of players around a goal, such as in hockey or soccer. Basing the game on the tossing principle, he tacked up a peach basket at each end of the gymnasium, 10 feet off the ground, and devised 13 simple rules for a game that involved throwing a soccer ball into the baskets. The class of 18 split into two teams of 9, and the first game of basketball was played in December 1891. Naismith did not want the game named after him—he thought the label “Naismith Ball” would be a severe detriment to the game’s popularity. He approved of a name that seemed appropriate to its initial creation using peach baskets: “basketball.”

Many of the same rules that Naismith created in 1891 apply to the game today, and 10 feet is still the standard basket height. Some changes that occurred included, in 1895, the standardization of number of players per team—five for men, six for women—and the introduction of dribbling in 1900 (originally, Naismith required only that the ball be passed before a shot). Another change that came about occurred somewhat accidentally when Naismith attended one of the first women’s games at Smith College. The coach for the team was using Naismith’s original rulebook, which contained a diagram of the playing court. On the diagram, Naismith had drawn three dotted lines, only to simplify the picture. The coach, however, had interpreted the lines as indicators of playing areas, and the women were playing on only half the court. When Naismith realized what the coach was doing, he decided that even though this was not his original intention, it made sense (women in the 1890s were not particularly athletic, as a general rule) and said that the division of field rule applied to women, but not to men. Thus the division-of-the-field rule was added.

Other changes to the game were put in place by a rules committee later, such as the initiation of a time limit of ten seconds for the defensive team to move the ball beyond midcourt (in 1932), and the elimination of the center jump after each score (in 1937). Naismith was not thrilled with these changes to the game, especially the elimination of the center jump, which he felt gave a disadvantage to the team that had scored. Naismith did suggest some revisions that he thought would help move the game along and make it more exciting. Two of these suggestions later were enacted as the modern shot clock, which allows a team only a certain amount of time to shoot the ball, and the three-point shot, granted for baskets made outside a certain boundary. Naismith told Bob Broeg of the *Saturday Evening Post* about what he thought was vital to the game. “Scoring is important,” he said, “but not all-consuming. I think speed is. Speed, passing, and the unexpected.”

The game also evolved physically; for instance, within two years the peach baskets had been replaced by a wire cylinder, and by 1894 soccer balls had been replaced by regulation-size basketballs. At one point chicken-wire netting under the cylinder caught the ball, which then of course required manual retrieval; later the basketball net was put in, which allowed the ball to fall through the cylinder but

stay in the same general area. In 1895, backboards, as a safeguard to keep the ball from flying into the audience, were initiated.

The game's popularity spread rapidly, and by 1939 almost every high school and college in America had a basketball team. Nineteen thirty-nine was also the year the National Collegiate Athletic Association began its annual postseason tournament, now known as the Final Four, which has become one of the most watched television sports events in the United States. In 1936 basketball was included as one of the Olympic games, held in Berlin, thanks in large part to the efforts of a former student of Naismith's and later a highly successful basketball coach at the University of Kansas, Forrest "Phog" Allen. Allen insisted that Naismith attend the first Olympic basketball game as guest of honor, and the National Association of Basketball Coaches agreed. To raise the money to send Naismith, the coaches urged colleges and universities to charge an extra penny for admission to their 1935-36 basketball games. Enough was raised to send Naismith to the game, who proclaimed it as "the happiest moment of my life." In the rainy outdoor game, the Americans won against the Canadians by a modest score of 19-8. Naismith stated after his trip to Berlin that basketball had "grown tremendously [overseas]" and predicted that it would continue to grow "perhaps not in this country, but in foreign countries." He was partly right. Basketball is now played competitively in more than 120 countries but is also a major sport in the United States.

### An Interest in Body and Soul

While at Springfield, in 1894, Naismith married Maude Evelyn Sherman, with whom he would have five children: Margaret Mason, Hellen Carolyn, John Edwin, Maude Annie, and James Sherman. They moved to Colorado in 1895, where Naismith attended the Gross Medical College (later the University of Colorado Medical School) in Denver. While working on his M.D., which he received in 1898, he served as physical director for the Denver YMCA. After receiving his medical degree, he was hired as the first physical education instructor at the University of Kansas in Lawrence. Although he coached the University's basketball and track teams until 1905, his focus while at Kansas was more on intramural sports, and he maintained the belief that basketball should be played for fun, not taken as a serious competition. He was interested in sports' contribution toward a healthy body and soul, and he conducted physical exams and maintained medical records for all male undergraduates. He was also responsible for creating a comprehensive student health service.

As a Christian moralist, Naismith's interest was in sports and moral development. He believed athletics could lead people toward both spiritual and physical development and away from immoral conduct. As one of his students said, "With him, questions of physical development inevitably led to questions of moral development, and vice versa." His views led to the publication of several articles in physical education journals and a chapter on athletics in the book *The Modern High School* (1916). He also wrote two

books: *The Basis of Clean Living* (1919) and *Basketball: Its Origin and Development*, published posthumously in 1941.

In 1916 he was ordained as a Presbyterian minister, and he directed daily chapel services at the University of Kansas for several years. During World War I, in 1916, he spent four months as chaplain and chief hygienic officer for the First Kansas Regiment (National Guard), which was stationed on the Mexican border, and from 1917 to 1919 he served a similar capacity in the YMCA. In his latter stint, he spent time at U.S. army bases and 19 months in France, using hygiene training and athletics to help maintain and protect U.S. soldiers' morale. Naismith was naturalized as a U.S. citizen in 1925.

Naismith remained at Kansas as a faculty member until his retirement as professor emeritus in 1937. He is remembered by his students and colleagues there as a kind-hearted and considerate professor, albeit somewhat rough around the edges intellectually and not especially adept at practical matters such as money managing. He lost two houses to foreclosure, and the royalties he received from a basketball named for him later in life did not cover what he had spent. Shortly after Naismith's retirement from Kansas, his wife died, and two years later he married Florence Mae (Kinsley) Kincaid, a widow friend. Naismith died in Lawrence, Kansas, of a heart attack on November 28, 1939.

Naismith created other games besides basketball later in his life, but none gained popularity; however, he is credited for designing the first safety headgear used in football. He served in honorary capacities as head of the International Basketball Federation, the Basketball Coaches Association, and the Basketball Rules Committee. The Naismith Memorial Basketball Hall of Fame in Springfield, Massachusetts, named in his honor, enshrined him as a charter member in 1959. Naismith's contribution involved not just the creation of a universally popular game but also his influence on thousands of young people who came into contact with him. The eulogy that appeared in *Journal of Health and Physical Education* called Naismith "a physician who encouraged healthful living through participation through vigorous activities" and a builder of "character in the hearts of young men."

### Books

*American National Biography*. edited by John A. Garraty and Mark C. Carnes. Oxford University Press, 1999.  
*Contemporary Authors*. edited by Hal May, Gale Research, 1986.  
*Dictionary of American Biography*, Supplements 1-2: To 1940. American Council of Learned Societies, 1944-1958.  
*World of Invention*. edited by Bridget Travers, Gale Research, 1994.

### Periodicals

*American Scholar*, Winter 1948-49: 87-925.  
*Maclean's*, September 4, 2000: 35.  
*Saturday Evening Post*, 261 (April 1989): 58-62.

### Online

"James Naismith," *Contemporary Authors Online*, The Gale Group, 2000. <http://www.galenet.com>. (December 18, 2000). □

## Rick Nelson

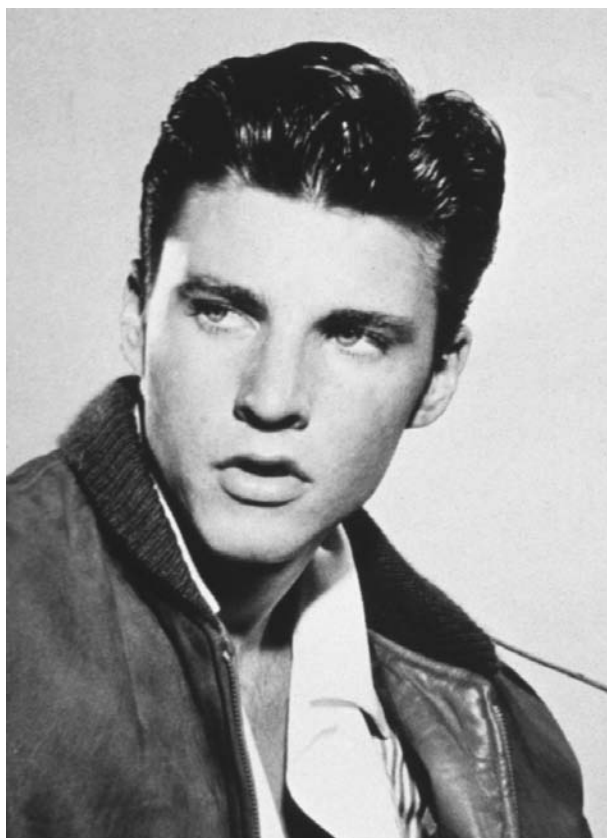
**Eric Hilliard Nelson (1940-1985), known as "Rick" or "Ricky," was a popular singer, actor, and songwriter in the late 1950s and early 1960s. With 40 records reaching the charts from 1957 to 1963, Nelson became the nation's first teenage idol created by regular appearances on television.**

Music and acting were an important part of the family into which Nelson was born on May 8, 1940. His paternal grandfather was an amateur singer and dancer and his paternal grandmother played ragtime piano. On the other side of the family, both his maternal grandparents were itinerant actors. Nelson's parents were also involved in the entertainment industry. His father, Oswald or "Ozzie" Nelson, was a well-known bandleader and his mother, Harriet (Hilliard) Nelson was an actress and singer. Although his mother temporarily gave up her career to care for Nelson and his older brother David, both Ozzie and Harriet could not deny their desire to perform. Consequently, after living briefly in Teaneck, New Jersey, the Nelsons moved to California to pursue their careers in entertainment. Initially the young Nelson remained in New Jersey and was cared for by his grandmother, Ethel Nelson. He joined his family in California in 1942.

### ***The Adventures of Ozzie and Harriet***

Arriving in Hollywood, Ozzie and Harriet secured a contract with NBC to appear on Red Skelton's *The Raleigh Cigarette Show*. Proving themselves a popular act, NBC offered them their own radio show in 1944 after Skelton was drafted into military service, which brought *The Raleigh Cigarette Show* to an end. From its inception, *The Adventures of Ozzie and Harriet* was based on the wholesome, good-natured humor that developed out of life with the Nelsons. At first child actors played the parts of David and Ricky, but by 1949, the brothers took their places in front of the microphones and became a part of the family radio show. Nelson, a handsome boy with blonde hair and blue eyes, was not as extroverted as his brother David, but played the part of the kid brother well, and the family radio show grew in popularity.

In the early 1950s television came on the scene as the new media outlet for entertainment. Ozzie tested the waters with the feature-length comedy film *Here Come the Nelsons*, in which Ricky is kidnapped by bumbling robbers. With the success of the film, Ozzie decided to move *The Adventures of Ozzie and Harriet* to television, airing the first show on October 3, 1952. Continuing to revolve around the idealistic all-American family, the scripts focused on the domestic difficulties of being a family. Problems were always sufficiently resolved within one episode. *The Adventures of Ozzie and Harriet* joined *Father Knows Best* and *Leave It to Beaver* as the first popular comedies of the new television age.



Nelson attended Brancroft Junior High. He played tennis, took drum lessons, played the piano, and joined the school band as a clarinet player. Although he received some of his high school education at Hollywood High School, he spent the majority of his teenage years under the tutelage of studio tutor Randolph Van Scoyk. Billed on *The Adventures of Ozzie and Harriet* as "the irrepressible Ricky," off-camera the young Nelson loved girls, cars, sports, and, most of all, rock and roll. By the time he was 15 years old, he was attending the Saturday night performances of the television show *Town Hall Party*, featuring Tex Ritter, Merle Travis, and Joe Maphis. He also came under the influence of Elvis Presley, along with such rockabilly musicians as Carl Perkins, Jerry Lee Lewis, and Roy Orbison. When he was 17, he acquired a Martin D-35 guitar and began rehearsing with a band.

### **Became a Teen Idol**

Nelson, handsome with a snide grin that appeared often in photos, was destined to become one of the first teenage idols created by television. He launched his musical career in 1957 when his father included a two-minute musical segment at the end of an episode that featured Nelson as an amateur performer at a high school dance. He introduced the television audience to his musical talents with his rendition of Fats Domino's classic hit "I'm Walkin'." The segment, which was installed as a regular feature of the show, became so popular that Nelson began looking to a full-time music career. Nelson's weekly performance met the approval of parents who had watched

Nelson grow up in their living rooms into a clean-cut, respectful young man and the ideal American teenager. Younger viewers were drawn to Nelson's gritty sound and good looks.

With ready access to the television audience, Nelson became an incredible musical success. His first release, "I'm Walkin'" with "A Teenage Romance" on the B-side, sold in excess of 1 million copies in the first day of its release. For a period of several years, with his father watching over his career and negotiating contracts for his son, it seemed everything Nelson touched turned to gold. Over the course of the next six years, he put over 40 songs on the charts, including seven consecutive top-ten hits within a two-year span. The release of "Travelin' Man" with "Hello, Mary Lou" on the flip side rose to number one on the charts and sold over 5 million copies. Other hits released between 1957 and 1963 include "Poor Little Fool," "Lonesome Town," "Stood Up," "Waitin' in School," "It's Late," "Everlovin'," "It's Up to You," "I Got a Feeling," "Never Be Anyone Else but You," and "Teenage Idol." Due to his mass appeal created by television, Nelson was instantly able to draw large audiences to his concerts when he began the tour circuit in his teens. His first show was at the Ohio State Fair before 20,000 fans. By 1963 Nelson had sold over 35 million records.

Along with his musical career and *The Adventures of Ozzie and Harriet*, Nelson also appeared in several movies. In 1953 he was featured in *The Story of Three Loves* along with Ethel Barrymore and Leslie Caron. In 1959, he appeared in the classic John Wayne western *Rio Bravo*, playing the part of a young ranch hand who attempts to find his boss's murderer. The following year he landed a part in the comedy *The Wackiest Ship in the Army*, starring Jack Lemon.

### Popularity Wanes

By 1963, it was apparent that little Ricky was growing up. On April 20, 1963, he married childhood friend Kristin Harmon, daughter of Tom Harmon, a football player, and Elyse Knox, an actress. With *The Adventures of Ozzie and Harriet* still running, the two were included in the script as newlyweds. When the show finally ended its 14-year run in 1966, Nelson was 26 years old. By this time, he preferred to be called Rick rather than Ricky, but he found his image as "the irrepressible Ricky" difficult to shed. By the mid-1960s, the Beatles had arrived on the music scene and revolutionized the world of rock and roll. Unfortunately for Nelson, his days as a teenage idol were quickly coming to a close. Like his music, Nelson's popularity as an actor also waned. He made one more movie in 1965, *Love and Kisses*, costarring with his wife. He tried musical theater, including appearing on stage in *How to Succeed in Business Without Really Trying*. He also worked in television, acting on such shows as *Malibu U*, *Owen Marshall*, and *Counselor at Law*.

Musically, Nelson continued to produce albums in hopes of regaining his audience. Turning to country, he released two albums, *Country Fever* and *Bright Lights and Country Music*, but neither of the releases did well in sales.

In the late 1960s, Nelson toured the Far East, where he tried his hand at a blend of country, rock, and blues. Upon his return, he formed a new group, the Stone Canyon Band, to develop this new style of music. After attaining some success in 1969 with a remake of Bob Dylan's "She Belongs to Me," the following year Nelson released the album *Rick Nelson in Concert*, a mix of some of his previously popular songs and some Dylan tunes. Despite excellent reviews, the release did not sell well.

### "Garden Party" is Released

The origin of Nelson's final popular success, his 1972 single "Garden Party," was a rock and roll revival at Madison Square Garden. According to Nelson, who related the story to Jas Obrecht in a 1981 interview in *Guitar Player* magazine, the show's promoter spent four years trying to convince Nelson to participate in the show. Having just formed the Stone Canyon Band, Nelson finally agreed to do the show in order to showcase his new album *Rudy the Fifth*. He told Obrecht, "I just thought, 'Okay, I've never played Madison Square Garden,' and I started thinking of reasons why I should do it. I never quite convinced myself, really. I felt very out of place being there that night." Expecting to hear the old favorite songs from the peak of Nelson's career, some of the crowd began to boo as Nelson played his new county-rock fusion. Although some later suggested the booing was aimed at rowdy individuals in the crowd, Nelson considered the appearance a disaster. In response, he wrote the song "Garden Party," which dealt with his unfavorable reception. Ironically, the song became a popular success, selling over 1 million copies.

"Garden Party" proved to be Nelson's last commercial success. He continued to tour extensively for the remainder of his life, booking up to 200 shows a year. After several periods of separation followed by attempts at reconciliation during the late 1970s, Nelson's marriage to Harmon came to an end in December 1982, followed by two years of bitter divorce proceedings. The couple had four children, Tracy, twins Matthew and Gunnar, and Sam. Nelson began a relationship with model Helen Blair, and the two were engaged in 1984.

### A Tragic End

In the summer of 1985 Nelson recorded a Sun Records reunion album that featured many of the artists he had first admired in his youth, including Carl Perkins, Roy Orbison, Jerry Lee Lewis, and Johnny Cash. During the summer and fall he toured extensively, playing the Universal Amphitheatre in Los Angeles and then traveling to Australia and Great Britain. Before the end of the year, Nelson's sons, Matthew and Gunnar, who were struggling to deal with their mother's alcoholism, moved in with Nelson and Blair. The boys' time with their father proved to be short. On New Year's Eve Nelson, accompanied by Blair and the Stone Canyon Band, was completing a short after-Christmas tour. On route to a New Year's Eve show at a Dallas hotel, having completed a gig the day before in Guntersville, Alabama, Nelson's private plane crash landed in a field outside DeKalb, Texas. The plane smashed into some trees and,



although the pilot and co-pilot managed to escape, Nelson, Blair, and all five members of the band were killed by the fire that consumed the aircraft.

After Nelson's memorial service, which was attended by more than one thousand people, rumors began to circulate regarding the cause of the fire aboard the 1944 DC-3. Authorities considered several sources, including Nelson and the band members free-basing cocaine. Although toxicology reports showed trace amounts of cocaine in Nelson and other members of the band, the National Transportation Board in May 1987 found the evidence insufficient and reported that a faulty cabin heater or an electrical short was the most probable cause.

Despite his failure to regain the fame of his early career, Nelson held a unique place in American pop culture that he never completely lost. He was awarded a Grammy posthumously in 1986 for his performance on the Sun Records reunion. The following year he was inducted into the Rock and Roll Hall of Fame. His twin sons, Matthew and Gunnar, inspired by their father, became musicians in their own right. According to Erik Meers and Ken Baker in *People Weekly*, "Asked by a fan at the Alameda Fair about his tattoo, Gunnar rolls up his right sleeve and reveals a halo-crowned adult angel floating above two tiny twin angles. 'He's like our guardian,' he says, 'looking over our shoulders.'" All four of Nelson's children collaborated to produce a four-CD box set of their father's music. The set, entitled *Legacy*, was released at the end of 2000, coinciding with the fifteenth anniversary of Nelson's death.

### Books

*The Encyclopedia of Popular Music*, Third edition. Edited by Colin Larkin, MUZE UK, Ltd., 1994.

*The New Encyclopedia of Rock and Roll*. Revised edition. Edited by Patricia Romanowski and Holly George-Warren, Fireside, 1995.

Rees, Dafydd, and Luke Crampton, *Encyclopedia of Rock Stars*. DK Publishing, Inc., 1996.

### Periodicals

*Guitar Player*, September 1981: 16-18.

*People Weekly*, 52 (September 20, 1999):241-242; 54, no.22 (November 27, 2000) 67.

### Online

"Eric Hillard Nelson," *Contemporary Authors Online*, The Gale Group, 2000. <http://www.galenet.com> (December 20, 2000).

"Rick Nelson," *Contemporary Newsmakers 1986*, Gale Research, 1987. <http://www.galenet.com> (December 20, 2000).

"Rick Nelson," *Contemporary Theatre, Film, and Television, Volume 3*, Gale Research, 1986. <http://www.galenet.com> (December 20, 2000).

"Eric Hillard Nelson," *The Scribner Encyclopedia of American Lives, Volume 1: 1981-1985*, Charles Scribner's Son's, 1998. <http://www.galenet.com> (December 20, 2000). □

## Jerzy Neyman

**Jerzy Neyman (1894-1981) was a scholar, teacher, and pioneer of statistical mathematics and probability. He helped establish the field of statistical mathematics through the innovative Neyman-Pearson theory and by being a tireless advocate for its legitimacy.**

Neyman was born on April 16, 1894, in Bendery, Russia. He was the second of four children of Czesław Splawa-Neyman and Kazimiera Lutosławaska, who were Polish and Roman Catholics. Neyman's father was a judge, and the family frequently moved about Russia as required by his father's occupation. Neyman did not begin his formal education until he was ten, when he enrolled in school in Simferopol, located in Crimea. Although he lagged behind his classmates in Russian history and geography, young Neyman displayed advanced knowledge of Polish, Russian, French, German, and Ukrainian, among other subjects.

In 1906, Neyman's father died suddenly of a heart attack. To secure an income, Neyman's mother moved the family to Kharkov in the Ukraine, where she was employed as the manager of an estate belonging to her late husband's relatives. Enrolling in the local school, Neyman proved a superior student and graduated in 1912.

### Moved to Poland

Neyman entered the University of Kharkov (later Maxim Gorki University). Although he intended to study mathematics, he was temporarily drawn to physics by the groundbreaking work of Albert Einstein and Marie Curie. However, when Neyman was introduced to the advancements in calculus made by French mathematician Henri-Leon Lebesgue, he refocused his studies on mathematics and continued in the field for the remainder of his life. Although he did not meet Lebesgue until 1926, Neyman considered him his mentor. For his undergraduate thesis he submitted a paper entitled "Integral of Lebesgue," which was awarded a gold medal. He also studied mathematics and probability under S. N. Bernstein. Graduating in September 1917, Neyman enrolled in the graduate school in mathematics at the University of Kharkov and also became a lecturer in mathematics at the Kharkov Institute of Technology.

The next four years were eventful for Neyman. It was a turbulent period politically in Russia, with the Communist Revolution and subsequent turmoil. During the Russian-Polish conflict, Neyman was imprisoned for a time as an enemy of the state due to his Polish heritage. He also was arrested for selling matches on the black market. On May 4, 1920, Neyman married Olga Solodovnikova, a Russian of the Orthodox faith.

Although official academic degrees were no longer bestowed under Soviet rule, examinations were still given as evidence of educational achievements. In the fall of 1920,

Neyman passed the examinations for his master's degree at the University of Kharkov and remained at the university to teach a variety of mathematical courses. However, by the end of his first year of teaching, Neyman received word that he was about to be arrested again. As a result, he moved with his wife, mother, and grandmother out of Russia to Poland.

### Early Work in Mathematics

In Poland, he accepted a position as the senior statistical assistant for the National Agricultural Institute in Bydgoszcz. During the two years he spent there, Neyman began working on numerous papers that applied mathematical probability to agricultural problems.

In 1923 Neyman accepted an offer to direct the Biometric Laboratory of the Nencki Institute for Experimental Biology in Warsaw and began lecturing at the Central College of Agriculture in Warsaw. He also continued his advanced studies and graduated with his doctoral degree in mathematics from the University of Warsaw in 1924. Continuing his interest in statistical probability, Neyman submitted his dissertation in two papers that addressed issues of probability related to agricultural experimentation. Written in Polish and summarized in French, the papers were titled "On the Applications of the Theory of Probability to Agricultural Experiments" and "Memoir on the Application of Mathematical Statistics on Resolving Some Agricultural Problems." The papers provided a careful analysis of problems in estimation, including a preliminary discussion of "true value." However, because Neyman was at that time unaware of groundbreaking statistical work being done in England, the impact of his work was limited.

Having received his Ph.D., Neyman began teaching mathematical and statistical courses at the University of Warsaw, the Central College of Agriculture, and the University of Kharkov. In the fall of 1925, with the help of a postdoctoral fellowship from the University of Warsaw, Neyman traveled to London to study at the Biometric Laboratory at University College. The laboratory was run by Karl Pearson, author of the influential mathematical work *Grammar of Science* and commonly considered the founder of modern statistics. During his year in London, Neyman worked with those on the leading edge of mathematics, including William S. Gosset.

### The Neyman-Pearson Theory

Neyman's most influential relationship in London was with Karl Pearson's son, Egon Pearson, with whom he would collaborate in the study of hypothesis testing, leading to significant advancements in modern statistical methodology. The two decided to continue their investigation via letters and occasional meetings. What resulted from their combined work between 1928 and 1933 became known as the Neyman-Pearson theory, or the Neyman-Pearson fundamental lemma. Their first joint paper was published in 1928. It was followed by a series of ten published papers that culminated in 1933 with the publication of "On the Problem of the Most Efficient Tests of Statistical Hypotheses." According to L. E. Lehmann in "The Neyman-Pearson

Theory After Fifty Years," his contribution to the *Proceedings of the Berkeley Conference in Honor of Jerzy Neyman and Jack Kiefer* (1985), "Despite the fact that these ideas had their forerunners in the work of [English mathematician R. A.] Fisher, the Neyman-Pearson paradigm formulated for the first time a clear program and provided a completely novel approach to hypothesis testing, the first 'exact' small-sample theory of its kind."

The goal of the Neyman-Pearson theory is to draw conclusions regarding a hypothesis even though there exists the possibility of error. Neyman and Pearson distinguished two error types. A Type I error occurs when a true hypothesis is deemed false (false negatives), and a Type II error occurs when a false hypothesis is deemed true (false positives). When a decision must be made under uncertain conditions, Neyman's methodology provided a means to lessen the occurrence of error, even when the outcome was based solely on chance, by establishing what Neyman referred to as "confidence intervals."

### Economic Struggles

In 1926 Neyman continued his postdoctoral studies, spending the academic year in Paris with the support of a Rockefeller Fellowship. The next year he returned to Poland and assumed his position as faculty docent at the University of Warsaw. He also worked diligently to establish a small biometric laboratory at the Nencki Institute for Experimental Biology. Although his fame as a mathematician and statistician eventually placed him among the elite of the academic world, he was never offered a full professorship in Poland, and his economic situation in Poland proved precarious. In "The Neyman-Pearson Story: 1926-1934," an article in *Research Papers in Statistics* (1966), Egon Pearson quotes Neyman from a personal letter, dated June 23, 1932: "I simply cannot work; the crisis and the struggle for existence takes all my time and energy. I am not sure that next year I shall not be obliged to take some job, I do not know where—in trade, perhaps, selling coal or handkerchiefs."

At the end of 1933, Pearson invited Neyman to join him on the faculty of the University College in London, and Neyman accepted. At first he was a visiting professor, but in 1935 he was promoted to reader. In 1936 he was given a full professorship and put in charge of the university's statistical laboratory. During his tenure at University College, Neyman wrote two significant papers. One, published in 1934, laid the foundation for the sampling techniques that subsequently influenced the development of modern day public opinion polling. The other, published in 1937, expounded on his theory of confidence intervals. Neyman applied his statistical probability methodology, using randomized testing, to such practical areas as the spread of disease during epidemics, agricultural problems, and issues in chemistry, biology, physics, and medicine.

### Years at Berkeley

After a successful speaking tour of the United States in 1937, Neyman the following year accepted an offer from the University of California at Berkeley to join its faculty as a professor of statistical mathematics and to start a statistical

laboratory. Neyman remained associated with the University of California for the remainder of his life. Although he was eager to establish his program at the university, World War II interrupted his plans, and by March 1942, Neyman had turned his attention to military research, namely bomb sights and targeting accuracy and patterns. In 1944, Neyman became a citizen of the United States. In 1950 he and wife, with whom he had one child, separated. They never legally divorced and lived within several miles of each other.

Once his attention was returned to the development of statistical studies at the University of California and its Berkeley Statistical Laboratory, Neyman methodically developed his work. Known as a generous and personable man, Neyman was steadfast in creating an intellectually superior program in mathematical statistics. In 1945 he established the Berkeley Symposia in Mathematical Statistics and Probability, which drew the best statistical minds in the world as speakers. He also diligently pressed University officials for recognition, funding, and resources for his work. In 1954, he succeeded in establishing the Department of Statistics as a separate program, and he was named as chair of the new department. None of his publications, during his tenure at Berkeley, had the impact of his previous published work. Yet he made an indelible mark on the field of statistics and probability as mentor and teacher to 39 Ph.D. students, several of whom became leading statisticians at Berkeley, including Erich Lehmann, Joseph Hodges, and Elizabeth Scott. Neyman retired from teaching at Berkeley in 1961 but remained as director of the Statistical Laboratory.

Neyman was highly influential in the development of statistical mathematics as both a scholar of original thought and as an ambassador for the field of study. His personality won him many friends and inspired him to take some difficult stands on issues outside the field of mathematics. After World War II, when the University of California required all faculty members to sign loyalty oaths, stating that they were not involved in any activities to overthrow the U.S. government, Neyman, who signed the oath, nonetheless supported those who refused to sign it. In the 1960s he became involved in the opposition to American involvement in the war in Vietnam.

For his numerous and important contributions, Neyman was awarded the Cleveland Prize of the American Association for the Advancement of Science in 1958 and the Samuel S. Wilks Medal by the American Statistical Association in 1964. He refused to attend the 1964 medal ceremony because it was held at an army base. In 1968, he was given the National Medal of Science. He was also the recipient of honorary degrees from the University of Chicago (1953), the University of California at Berkeley (1963), the University of Stockholm (1964), and the University of Warsaw (1974). Neyman remained active until the end of his life. He died of a heart attack on August 5, 1981, in Oakland, California.

## Books

*American Men and Women of Science*, Jacques Cattell Press/R. R. Bowker Co., 1972.

*American National Biography*, Volume 16, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.

*McGraw-Hill Modern Scientists and Engineers*, edited by Jay E. Greene, McGraw-Hill, 1980.

*Proceedings of the Berkeley Conference in Honor of Jerzy Neyman and Jack Kiefer*, Volume 1, edited by Lucien Le Cam and Richard A. Olshen, Wadsworth, 1985.

*Research Papers in Statistics*, edited by F.N. David, John Wiley and Sons, 1966.

## Online

"Jerzy Neyman," *Contemporary Authors Online*, <http://www.galenet.com> (January 18, 2001).

"Jerzy Neyman," *The Scribner Encyclopedia of American Lives, Volume 1: 1981-1985*, <http://www.galenet.com> (January 18, 2001). □

# Jean Nidetch

**Jean Nidetch (born 1927) was an overweight homemaker and mother who became a slim, successful businessperson by co-founding Weight Watchers International. Through her personal struggle to lose weight, Nidetch developed a program that worked for her and millions of other people around the world. As she described it in her autobiography, "Weight Watchers does not simply give you a method of losing weight. What it is, is a new way of life."**

Jean (Slutsky) Nidetch was born on October 12, 1927 in Brooklyn, New York. Her father, David Slutsky, was a cab driver and her mother, Mae (Rodin) Slutsky, was a manicurist. Nidetch graduated from Girls High School in Brooklyn and received a partial scholarship to Long Island University. However, she could not accept the scholarship because the family did not have the rest of the money for tuition. Instead, Nidetch took a business administration course at City College of New York. She had only just begun college when her father died in February of 1942.

Due to this unfortunate turn of events, Nidetch had to quit school and get a full-time job. Her first job was with the Mullin Furniture Company in Jamaica, New York, where she earned ten dollars a week. She later worked for Man O'War Publishing Company producing tip sheets for horse players. This job soon ended because of New York City Mayor Fiorello La Guardia's campaign against horse racing. Nidetch then found a job at the Internal Revenue Service.

While working at the IRS, Nidetch began dating a young man from the neighborhood named Marty Nidetch. The couple dated for two years and then married on April 20, 1947. Marty was employed as a blouse salesman and soon after their marriage he transferred to Tulsa, Oklahoma to work as a credit manager. They stayed there for less than a year when Marty was promoted to manager of a store in Warren, Pennsylvania. At first Nidetch helped her husband



at his new store. Then she found her own job in the payroll department at Sylvania Electric. In her autobiography, *The Story of Weight Watchers*, Nidetch described herself at this point in her life as an overweight woman, married to an overweight husband, surrounded by overweight friends. While living in Warren, Nidetch gave birth to their first child, who did not survive infancy. In 1952 she had her second child, David. In February of the same year the family decided to move back to New York to be closer to their families. Marty became a bus driver to support his family. In 1956 the couple welcomed their second son, Richard. During this period, Nidetch was a homemaker, but she devoted much of her time to various organizations and charities. These activities helped her develop her personal and communication skills, which would later benefit her as a spokesperson for Weight Watchers.

### Shared a Personal Struggle with Friends

Nidetch had been overweight most of her childhood and adult life. She had tried various diets, doctors, and medications to lose weight, but none were successful over the long run. In 1961 Nidetch described herself as “desperate” in her struggle to lose weight, so she went to the New York City Department of Health Obesity Clinic. There she was given a strict diet to follow. While she had some success with the diet, she found herself still cheating and eating foods that she was not allowed to have. Nidetch did not feel comfortable discussing her misbehaviors with the woman who ran the clinic because she had never been overweight and could not truly understand why someone

on a diet would cheat. Instead Nidetch decided to invite six overweight friends to her house to share the new diet and her secrets. The original group of six agreed to try the diet and meet weekly to talk about their successes and struggles. From the first meeting, Nidetch suggested that the other women consult their doctors before starting the diet. This rule stayed with Nidetch throughout the development of Weight Watchers. Since she was not a trained dietician, Nidetch did not want to be responsible for other people’s health decisions. From the beginning, she saw her role as an emotional leader rather than a medical expert. As she explained in her autobiography, *The Story of Weight Watchers*, “Compulsive eating is an emotional problem and we use an emotional approach to its solution. To me, this is just plain common sense.”

The group of six quickly grew as friends were invited to the weekly gatherings. Nidetch was a remarkable motivator, an articulate public speaker, and a real life example for the other participants. Her popularity soared because of this. By word-of-mouth, Nidetch was building a large clientele. Soon she was organizing biweekly meetings for hundreds of women, as well as making personal visits to people who could not come to her meetings. While the actual diet remained unchanged, Nidetch improved upon the organization of the program over time. For example, she developed a reward system whereby program participants would earn a gold pin for losing ten pounds and then add a diamond chip for each ten pounds after that. To help cover the costs, members started to pay 25 cents a week to attend meetings.

### Turned Personal Project into Booming Business

By October 1962 Nidetch had reached her personal goal of losing 72 pounds. She never gained the weight back. From that point on she began to refer to herself proudly as a “formerly fat child” or a “formerly fat housewife.” She then reached out to help her family. By following the same diet and attending meetings, Marty Nidetch also lost 70 pounds and Nidetch’s mother lost 57. Among her many clients, Nidetch met Felice and Al Lippert and had helped them and their friends successfully through the weight loss program. Al Lippert was a successful businessman in the clothing industry. He soon convinced Nidetch to turn her program into a business. On May 15, 1963, with Lippert’s financial backing and expertise, Weight Watchers was born. Nidetch and Lippert rented an old movie theater to hold meetings and began to charge a modest fee of two dollars a week to cover expenses, the same price as a movie. As the program grew, Nidetch and Lippert hired ex-participants as lecturers and opened offices in other locations in New York. They carefully selected lecturers who still remembered what it was like to be overweight and could sympathize with and support program participants.

Eventually the business became a partnership between the Nidetches and the Lipperts. Jean focused more on lecturing and let the others handle more of the business decisions. Weight Watchers extended beyond the state of New York when Felice Lippert’s sister opened the first franchise

in Providence, Rhode Island. Since then, Weight Watchers branches have opened all over the United States, Canada, and Europe. In February 1967 Al Lippert decided to work for Weight Watchers full time and helped it grow into an international organization. Lippert oversaw the sales of branded products, such as cookbooks, videotapes, and low fat foods, as well as a syndicated television program called Weight Watchers Forum. In September 1968 Weight Watchers became a publicly held corporation with 81 franchises in 43 states and 10 overseas locations. Nidetch moved to Brentwood, California, but still traveled extensively to support the new company. She appeared on numerous radio and television programs, such as *Good Morning America*, *The Today Show*, *The Merv Griffin Show*, and *The Tonight Show*. She also wrote a monthly column for *Weight Watchers Magazine* that was syndicated to over 300 newspapers worldwide. In 1966 Nidetch published her first book, *Weight Watchers Cookbook*, which she followed with *Weight Watchers Party and Holiday Cookbook* in 1984, and *Quick and Easy Menu Cookbook* in 1988 for Weight Watchers' 25th anniversary. In 1970 she also published her autobiography, *The Story of Weight Watchers*.

When Weight Watchers celebrated its tenth anniversary in 1973, Nidetch decided to step down as company president. However, she continued to work as a consultant. In 1978 Al Lippert negotiated the sale of Weight Watchers to the H.J. Heinz Company. Heinz paid \$24 a share for a total of \$71.2 million. Nidetch received over seven million for her share of the company. As part of the sales agreement, Nidetch could not start another weight loss business, but she stayed employed at Weight Watchers. In the 1980s Nidetch put her name on a line of clothing designed especially for larger women.

### Contributed to Educational Community

In 1981 Nidetch moved back to New York to be closer to her grandchildren. Ten years later she moved to Las Vegas and continued to travel as a consultant for Weight Watchers. Nidetch was elected to membership in the Horatio Alger Association, an organization that recognizes people from disadvantaged backgrounds who become successful. She also made a public commitment to self-improvement and higher education with the Jean Nidetch Foundation for economically disadvantaged teenagers who wanted to continue their education and scholarship programs at the University of California Los Angeles and the University of Nevada Las Vegas. In May of 1993 the University of Nevada Las Vegas awarded Nidetch an honorary doctorate degree. In 1994 they established the Jean Nidetch Women's Center, a facility to help older and nontraditional students obtain a college education.

### Weight Watchers Changed with Time

Since the Heinz takeover, Weight Watchers has changed its food plan to reflect nutritional changes over time as well as the changing lifestyles of consumers. In 1978 Weight Watchers added an exercise plan to the program. In the late 1980s and early 1990s Weight Watchers' market

share was threatened by competitors. Other weight loss programs and companies began selling food products to consumers trying to lose weight. Weight Watchers was able to meet this challenge by continuing to recognize the needs of its consumers. For example, it developed special meetings for teenagers and workplace meetings to more easily fit people's busy schedules. Weight Watchers also changed its marketing strategies. It focused more on program participants and their need to avoid regaining weight once they reached their target goal. In 1997 the company received a large marketing boost when the Duchess of York agreed to be a spokesperson for Weight Watchers.

Although Nidetch is now retired, the company that she co-founded is continuing to grow. It was worth 28 million when sold to Heinz in 1978 and had grown to 42 million by 1998. By the year 2000 there were over 25 million Weight Watchers members in 29 countries.

### Books

Nidetch, Jean, *The Story of Weight Watchers*, W/W Twentyfirst Corporation, 1970.

### Periodicals

*Advertising Age*, March 8, 1999.  
*Atlanta Journal and Constitution*, November 18, 1991, p. F3.  
*Changing Times*, August 1989.  
*Chicago Sun-Times*, December 17, 1995, p. 57.  
*Daily Telegraph*, March 6, 1998, p. 27.  
*Direct Marketing*, August 1993, p. 24.  
*Los Angeles Times*, January 21, 1988.  
*New York Times*, June 12, 1973, p. 53; May 5, 1978, p. 4.  
*Prevention*, September 2000, p. 157.  
*San Diego Union-Tribune*, April 1, 1985.  
*Saturday Evening Post*, November 1988, p. 48.  
*Times*, March 4, 1998.  
*Toronto Star*, February 18, 1988, p. L1.  
*USA Today*, May 18, 1993, p. 1D.  
*Washington Post*, March 7, 1998, p. D06.

### Online

"Jean Nidetch's Home Page," <http://www.wwphl.com/jneiditch.html> (December 8, 2000).  
 "History of Weight Watchers," <http://www.dottisweightlosszone.com/historyofww.html> (December 11, 2000).  
 "Weight Watchers Online," <http://www.weightwatchers.com> (January 3, 2001). □

## Gerald Nye

**Gerald Nye (1892-1971) was a U.S. Senator from North Dakota for 19 years. During his tenure, Nye gained national headlines for his leadership in several Senate investigations, including the Teapot Dome scandal and the inquiry into the business practices of munitions makers during World War I. He was a strong voice for American isolationism and vehemently opposed to U.S. involvement in World War II.**



Gerald Prentice Nye was born in Hortonville, Wisconsin, on December 19, 1892, the first of four children born to Irwin Raymond and Phoebe Ella (Prentice) Nye. Nye's mother, always rather frail, died two months before his fourteenth birthday. Two years later, his father remarried, and Nye developed a warm relationship with his stepmother, Annie Semple. It was his father, however, that affected Nye's life most intensely. Soon after Nye's birth, his father, the editor of the weekly newspaper in Hortonville, moved his family to Wittenberg, Wisconsin to become the editor of that town's weekly newspaper, the *Enterprise*. A devote Republican and a strong supporter of Wisconsin progressive governor Robert M. LaFollette, the senior Nye used his newspaper to support numerous causes and reforms, not the least of which was political corruption. As Wayne S. Cole noted in *Senator Gerald P. Nye and American Foreign Relations* (1962), "As Gerald grew up he was immersed in the mores and values of the protest and reform movements that enlivened the western political scene during those years. When Gerald later took up the cudgels against big business, Wall Street, and special interests on behalf of the common man and the farmer, he was in a real sense continuing his father's earlier crusades."

Nye attended Wittenberg High School, where he was only an average student, but a leader of many extracurricular activities, including baseball, basketball, football, and the debate team. Graduating with his ten classmates in 1911, Nye planned to attend Marquette University to study dentistry, but financial hardship prevented his enrollment, and he subsequently never attended college. Having

learned the newspaper business from his father, Nye became the editor of the Hortonville *Weekly Review*. Only 18 years old, what he lacked in experience, Nye made up for in enthusiasm and intensity. Campaigning for "clean government" in Hortonville, Nye targeted the local saloons. Although he was fairly successful in creating an anti-saloon movement in the small town of eight hundred, Nye's aggressive and relentless attacks cost him advertising money, printing business, and subscriptions. Compounded by his habit of spending beyond his means, Nye, who had purchased the newspaper in 1912, found himself in debt over \$2,500 by September 1914. The following month, with a promise to pay his creditors, Nye closed down the newspaper.

The now-wiser 22-year-old Nye moved to Creston, Iowa, to become editor of the daily newspaper, the *Plain Dealer*. During the year that he spent in Creston, Nye tackled local, regional, national, and international topics in the eight-page spread. Writing as many as four editorials every day, Nye continued to campaign for temperance and prohibition. He also gave high priorities to the issues surrounding World War I, calling on the country to support President Woodrow Wilson. Considering his own strict isolationist policy before World War II, it was somewhat ironic that in 1915 Nye denounced former Secretary of State William Jennings Bryan for his isolationist views. Nye left the *Plain Dealer* to become a circulation manager for the *Des Moines Register and Leader*. However, he did not like the work, and in May 1916 he moved to Fryburg, North Dakota, as the new owner and editor of *The Pioneer*, which became the first privately owned newspaper in the state to tender its support to the Nonpartisan League, a newly formed progressive agrarian reform movement. In the same year, he married Anna Margaret Munch. They had three children and later divorced in 1940. After three years, Nye moved to Cooperstown, North Dakota, where he purchased and operated the *Griggs County Sentinel-Courier*. Continuing to support the Nonpartisan League and agrarian reform, Nye campaigned for LaFollette in his 1924 bid for the presidency as the candidate for the Progressive party. In the same year, Nye made his first step toward becoming a politician, losing a bid for a seat in the House of Representatives.

In 1925 Nye was appointed to the U.S. Senate by North Dakota governor, A.G. Sorlie, to fill a vacancy created by the death of Senator Edwin F. Ladd. One week after being named to the Senate, Nye left for Washington, D.C. It was the first time he had ever traveled farther east than Chicago. Although his credentials were presented on December 7, 1925, Nye did not take his seat in the Senate until January 12, 1926. A controversy arose over his appointment as some questioned the governor's authority to make the appointment. The official issue was that the North Dakota legislature had failed to bestow on the governor the power to make federal appointments. Little more than a technicality, the legal question was overshadowed by political considerations. As a progressive Republican, Nye did not garner the support of the conservative Republican senators who feared Nye would vote with Democrats and weaken the Republic hold on the Senate. After returning from a

recess over the holidays, the Senate debated for five days before confirming Nye's appointment by a two-vote margin.

After winning a special election in June 1926 and then the primary and general election of 1926, Nye established himself as a duly elected U.S. senator. He would win reelections in 1932 and 1938, serving for a total of 19 years in the Senate. Youthful in appearance, conscious of his small-town background and lack of education, and slightly awed by his position, 33-year-old Nye, the second youngest senator at the time, looked the part. Nonetheless, little time passed before Nye, handsome, with unquestionable integrity, and the ability to speak powerfully and convincingly, earned the respect of his colleagues. During the first eight years in office, he focused on domestic policy, particularly those issues addressing the midwestern and western farming communities. Believing that the farmer was the backbone of the country, Nye was critical of any special favors or privileges allotted to the big businesses of the East. Although he originally vowed to support the Republican caucus, Nye was publicly critical of numerous conservative Republican policies. He supported numerous New Deal measures proposed by President Franklin D. Roosevelt, but he vehemently opposed Roosevelt's National Recovery Act, which Nye argued created monopolies and preyed on the masses. He remained a vocal opponent of the National Recovery Act until the Supreme Court eliminated it in 1935. Often aligning himself with progressive Senators Robert M. LaFollette of Wisconsin and George W. Norris of Nebraska, Nye pushed for agricultural reforms and argued for the adoption of the McNary-Haugen bill, which created governmental price supports for basic crops.

Well-respected by progressives in his home state, Nye began building a national reputation in the 1920s as a skilled conductor of Senate investigations. As chairperson of the Committee on Public Lands and Survey, he presided over the investigation of the Continental Trading Company in what became known as the Teapot Dome scandal. The investigation revealed that President Warren G. Harding's interior secretary, Albert B. Fall, had leased an oil field valued at \$100 million to Harry F. Sinclair of the Mammoth Oil Company without opening the offer to fair, competitive bidding. In return for the privileged lease, a large contribution was made to the Republican National Committee. As a result of Nye's investigation, the government revised the lease and recouped more than \$7 million in tax money. Nye also chaired a committee appointed to investigate Senate campaign expenses in 1930. Once again Nye made headlines by exposing corrupt campaigning.

In 1932 questions began to arise within peace societies over the role of munitions companies in World War I. Based on rumors and reports that munitions makers had provoked war scares, opposed peace initiatives, and controlled corrupted public officials, the public began to call for an investigation. With most unwilling to undertake the project, fearing injury to their political careers, Nye was the only Senator who would agree to take on the influential munitions manufacturers. Having long believed in the dangers of big business and considering munitions companies as merchants of death, he felt morally obligated to investigate.

According to John E. Wiltz in *In Search of Peace: The Senate Munitions Inquiry, 1934-36* (1963), when Nye agreed to chair the investigating committee, "At that moment, Nye began a new phase of his career. He would earn a reputation as the country's most eloquent isolationist. He would become a leader in the campaign to preserve peace for the United States at almost any cost—to put America first." Having supported the war effort during World War I, Nye, disillusioned with the ability of war to create viable solutions for peace, became one of the country's leading voices of isolationism, lambasting munitions makers and military personnel for attempting to push the United States into another world war.

On April 12, 1934, the Senate adopted Senate Resolution 206, also known as the Nye-Vandenberg Resolution, which directed the U. S. Vice-President to appoint a seven-member council to investigate individuals, associations, and corporations engaged in the manufacturing, distribution, sale, and import or export of munitions. Public interest was aroused, and numerous articles and editorials kept the public's attention throughout the hearings. From the start, Nye anticipated the guilt of the munitions manufacturers. According to Wiltz (1963), just days before the resolution was passed and before any investigation had been organized, Nye told a national radio audience of his feelings while watching a parade of 5,000 marching by the U. S. Capitol the previous week in celebration of Army Day: "Yet, even in that inspiring moment, I could not fully restrain myself and be blind to the fact that those glistening steel helmets, for example, were the profit-returning products of American manufacturers, a product intended to protect those fine heads under the helmets against shrapnel and shells which the same manufacturers had sold to the military departments of other nations which might some day be our foe in war. What madness. What rotten commercialism. Name a more inhumane trade. Was ever a more insane racket conceived in depraved minds or tolerated by an enlightened people?"

In part due to the public dissatisfaction with big business caused by the Great Depression, many in the country believed Nye's assessment. The committee hearings caused a national stir and resulted in sensational headlines. Although the committee could not prove the munitions makers pushed the United States into World War I, they did uncover unsavory connections between the military, munitions makers, and the huge wartime profits of numerous manufacturers and bankers. Although no legislation offered by the investigating committee was adopted, the findings did raise public awareness and interest in keeping the United States out of another war. Subsequently Nye was actively involved in the passage of the neutrality legislation passed in 1935, 1936, and 1937. These laws, in an attempt to avoid the U.S. involvement in another war, made illegal arms sales or loans to nations at war and permitted sale of nonmilitary goods only if the countries at war paid cash and did not transport the goods on American ships. During these years of national exposure as chair of the munitions investigation, Nye was at the peak of his senatorial career, gaining national acclaim for his public speeches denouncing the arms dealers and the need for American isolationism.

By 1939 war was already breaking out across the sea and the United States itself was torn between the desire to help its allies and the desire to stay out of the conflict. When Roosevelt attempted to repeal the neutrality acts, wishing to extend all aid short of war to U.S. allies, Nye became a leading voice opposing the president. In 1940 Nye was appointed to the Senate Foreign Relations committee and became a spokesperson for the newly formed America First Committee, an independent organization that opposed U.S. involvement in World War II. In March 1940, his first marriage ended in divorce, and in December of the same year, Nye married Marguerite Johnson, a schoolteacher.

On December 7, 1941, Nye was speaking before a large America First crowd at a rally in Pittsburgh when he learned of the Japanese attack on Pearl Harbor, Hawaii. Noninterventionist activities were halted abruptly. Despite his commitment to neutrality, as a patriotic American, Nye called for support of the war effort. After Pearl Harbor, public opinion shifted dramatically and those who opposed U.S. intervention were examined with suspicion. Thus, when Nye, the voice of non-interventionism, ran for reelection in 1944, he lost. After running a consulting business in Washington, D.C. for a time, Nye became the president of Record Engineering. In 1959, he accepted an appointment

as the special assistant in charge of housing for the elderly for the Federal Housing Administration. In 1963 he resigned from his job and became a staff member of the Senate Committee on Aging. He retired in 1966 and died in Washington, D.C., on July 18, 1971.

### Books

- American National Biography*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.
- Cole, Wayne S. *Senator Gerald P. Nye and American Foreign Relations*. University of Minnesota Press, 1962.
- Encyclopedia of American Biography*. Second edition. Edited by John A. Garraty and Jerome L. Sternstein, HarperCollins Publishers, 1996.
- Lamar, Howard R., *The Reader's Encyclopedia of the American West*. Thomas Y. Crowell Company, 1977.
- Noggle, Burl. *Teapot Dome: Oil and Politics in the 1920s*. Louisiana State University Press, 1962.
- Wiltz, John E. *In Search of Peace: The Senate Munitions Inquiry, 1934-36*. Louisiana State University Press, 1963.

### Online

- "Gerald Prentice Nye," *Dictionary of American Biography, Supplement 9: 1971-1975*. Charles Scribner's Sons, 1994. <http://www.galenet.com> (December 20, 2000). □





## Willis O'Brien

**The father of “stop-motion” animation, Willis O'Brien (1886-1962) was a Hollywood special effects innovator most famous for his work using miniature models of a gorilla in *King Kong*. O'Brien's pioneering efforts transformed the possibilities of filmmaking, inventing a new kind of visual language later exploited by others in movies such as *Jaws* and *Alien*.**

Starting with his models in animated shorts and in the original dinosaur movie, 1925's *The Lost World*, O'Brien gave American filmmakers new latitude in creating monstrous fantasies. Although he won an Academy Award for the special effects in *Mighty Joe Young* in 1949, O'Brien labored largely in obscurity, gaining neither fame nor fortune. Many of O'Brien's fantastic, elaborate film ideas were never realized.

### Conjurer of Movie Tricks

Born in Oakland, California, in 1886, Willis Harold O'Brien worked short stints as a cowboy and a boxer before becoming a cartoonist for the *San Francisco Daily News*. Soon, he grew interested in sculpting, making mostly small human or animal figures. In 1913, his sculptures were displayed at the San Francisco World's Fair. Soon after that, he used wooden figures with moveable joints, molded rubber to them, and began making his sculptures move.

In 1914, O'Brien realized he could make short films by moving his figures and filming them one frame at a time. He began experimenting with his clay models and within a year

had produced *The Dinosaur and the Missing Link*, a “caveman comedy.” For Edison's Biograph Company, he made four more shorts, including *The Birth of a Flivver*, *Prehistoric Poultry*, and *R.F.D. 10,000 B.C.*, with prehistoric creatures the customary subject and a light comic touch always evident. After leaving Edison, O'Brien wrote, directed, and did special effects for four more films, including *The Ghost of Slumber Mountain*, released in 1919, which for the first time strove to make prehistoric animals look realistic and combined stop-action animation with live action. O'Brien has a cameo role in the short film.

O'Brien's fascination with prehistoric creatures found an outlet in the 1925 feature film *The Lost World*, directed by Harry Hoyt. Based on a novel by Sir Arthur Conan Doyle, the movie stars Wallace Beery as Professor Challenger, who, with a party of adventurers, finds a hideaway where dinosaurs still survive. O'Brien's dinosaurs not only moved and fought in the jungle, they “breathed”—using a bladder inside the skeleton model that could be inflated and deflated. At the film's end, a brontosaurus terrorizes London, constructed as a miniature set by O'Brien, who is credited with “research and technical direction.”

The film's real stars were O'Brien's dinosaurs. A reviewer in *Bioscope* called the prehistoric monsters “marvels of ingenuity both in design and in the method of animation their movements are so supple and natural that it would be easy to believe them to be huge living creatures.” The magazine *Picturegoer* called them “the most startling and intriguing monsters who have ever invaded screenland.” Audiences loved the movie, and most viewers never realized that the huge monsters were miniature models. The studios never shared the secret.

O'Brien immediately started work on a project called *Atlantis*, but it was canceled by First National studio before

production began. The same fate befell O'Brien's next project, *Frankenstein*. O'Brien's run of bad luck continued at RKO, where O'Brien teamed up with Hoyt again to make *Creation*, another dinosaur film that was a spin-off from *The Lost World*. O'Brien was listed as "scenarist" and "chief technician and animator." Two reels of film were shot before financial problems and personnel changes at RKO led to the film being scrapped.

### The Magnificent Monster

By the early 1930s, Hollywood had become fascinated with jungle movies, particularly after the release of *Tarzan the Ape Man* in 1932. Producer Merian Cooper decided that O'Brien's work should be joined to a good jungle story. Cooper commissioned writers to work on a story idea he had about a giant ape, hired director Edward Schoedsack, and shot a test reel using O'Brien's sets and dinosaurs that had been made for *Creation*. Eventually the film was named *King Kong*.

For the new project, O'Brien put a year's worth of effort into his models and sets. He spent days in zoos, studying the behavior and movements of gorillas. He also went to wrestling matches to get ideas of how Kong would battle the dinosaurs of Skull Island. O'Brien used 18-inch-high models constructed on metal skeletons with joints formed of balls and sockets. He padded the skeletons with foam rubber and cotton and covered them with rabbit skin. He also contributed to the story line, adding touches of realism and fantasy as "chief technician."

*King Kong* caused a sensation. The story about a giant ape who is brought to New York and escapes to terrorize the city was a box-office blockbuster and a cultural phenomenon. It was the first "monster movie." O'Brien and his team constructed elaborate miniature sets that were used in almost all the scenes of Kong in the jungles and the city. He made audiences really feel that New York was under attack. In only a few scenes did he use a life-sized bust of Kong or a life-sized Kong hand or foot. The scene with Kong atop the Empire State Building, holding Fay Wray and being attacked by planes, is one of the most famous in film history.

Despite the crudeness of film techniques of the day, many critics consider O'Brien's work on *King Kong* to be the greatest use of stop-motion animation in movie history. It certainly was the most successful. The film was re-released 15 years later, unchanged, and again raked in huge amounts of money. Six decades later it remained a staple of television. It inspired countless films. Critics were exuberant over the monsters and baffled by the production techniques. Long after the movie and its sequel *Son of Kong* were released, details about how the animals were constructed and shot were kept secret. Even into the 1950s, many people believed that Kong was a man in a gorilla suit.

The sequel, *Son of Kong*, was released the same year (1933) as the original, with a lower budget and a smaller ape, Little Kong. O'Brien thought it was cheesy. "He asked them to not put his name on it and he didn't do any more than put in appearances each day, so he would get his check," recalled his second wife, Darlyne O'Brien, in a 1982 interview. "He did no animation and was a little

unhappy with some of the humor." Nonetheless, O'Brien was credited again as "chief technician."

During the filming of *Son of Kong*, O'Brien experienced a profound personal tragedy. His first wife, Hazel O'Brien, who was separated from him, became anguished after the older of their two sons went blind from a disease. She fatally shot both the boys and then tried to commit suicide; she died from her self-inflicted wounds a year later. In 1935, O'Brien married Darlyne.

### Flops and Aborted Projects

O'Brien teamed again with producer Cooper and director Schoedsack to make *The Last Days of Pompeii* in 1935, a gladiator movie that ends with the spectacular eruption of a volcano. O'Brien's special effects were stunning and would be widely imitated in future disaster movies. O'Brien built a miniature model of the temple at Pompeii, mounted it on a platform with motors beneath it, put rods in the pillars, and made it shake but remain standing.

In 1936, Cooper produced *The Dancing Pirate*, O'Brien's first film shot in Technicolor. Directed by Lloyd Corrigan, it was a musical romance-adventure for which O'Brien was credited for "photographic effects." He did no animation for the film, which was a flop.

Cooper hired Schoedsack and O'Brien again to do a spectacular new project called *War Eagles*. The film was to feature modern adventurers rediscovering Vikings. Cooper described the unusual idea as "a super western of the air" involving incredible special effects. O'Brien did many sketches, produced models, and was involved as a test reel was shot. But the story never went into production, and the project was shelved after Cooper left his job to help organize mercenary pilots to fight for Chinese nationalist Chiang Kai-shek. O'Brien had put nearly a year's work into building models, doing sketches and planning scenes.

O'Brien next decided to sell his own film project to RKO. Called *Gwangi*, it was about cowboys who encounter a prehistoric animal in a "lost" valley. O'Brien was to co-produce the film with his longtime model-builder assistant Marcel Delgado as effects technician. He had glass paintings made and Delgado produced a detailed allosaurus model. But O'Brien couldn't get the studio's full backing. Schoedsack commented: "This was a rodeo with a dinosaur, what the hell."

### Mighty Joe and Beyond

After years of disappointments, Cooper and John Ford hired O'Brien to help Schoedsack on *Mighty Joe Young*, another movie about an ape who is wronged by the civilized world. After some false starts, the film was finally shot in black and white. This was a more heartwarming story than *King Kong*, with a gorilla who was more playful, heroic and expressive. O'Brien's collaborator on the special effects was young animator Ray Harryhausen, who would go on to work on many films. Sequences showing Joe going on a drunken rampage in a nightclub and rescuing children from a burning building were especially impressive.

O'Brien finally got recognition with an Academy Award for special effects for *Mighty Joe Young*. Ironically, by this stage in his career O'Brien was doing mostly planning and preparation, with animators like Harryhausen supervising the actual shooting. Not even an Oscar got O'Brien's stop-motion career completely into full gear. O'Brien and his wife had a rough outline of a script for a film he called *Emilio and Gulo*, about a young Mexican cowboy and a bull. Retitled *Valley of the Mist*, it was optioned by producer Jesse Lasky, and O'Brien and Harryhausen were hired to do special effects. But once again the project fell through.

O'Brien was "never a good promoter," according to his wife Darlyne. Though he had plenty of ideas, he could not figure out how to get them produced in Hollywood. In 1952, Cooper got O'Brien hired at the new Cinerama corporation and talked about a remake of King Kong using the new wide-screen techniques. It was never made; instead, O'Brien played a small, uncredited role in making the film *This Is Cinerama*, a travelogue-style feature.

In 1956, O'Brien wrote the script but did none of the animation for the first color film to combine animation and live action photography, *The Beast of Hollow Mountain*. A low-budget independent production, it is about two young Mexican children and their encounter with a prehistoric beast which rises out of a swamp. That same year, O'Brien worked as supervisor for the dinosaur sequence in the acclaimed nature documentary film, *The Animal World*, with Harryhausen as the animator. In 1957, O'Brien was hired for *The Black Scorpion*, a low-budget monster movie about giant rampaging scorpions. O'Brien and collaborator Peter Peterson did the special effects. The two also worked together on *The Giant Behemoth*, a 1959 movie about a radioactive sea monster who terrorizes England. O'Brien helped build the sets and the models.

O'Brien was listed as the effects technician for the 1960 remake of *The Lost World*, which used live lizards with rubber fins attached rather than animated dinosaurs. Beyond a few storyboards, O'Brien actually contributed little to the project and did no animation. He thought the method was inferior to stop-motion animation, and many critics agreed.

O'Brien spent much of his later career unable to find work or sell ideas such as *King Kong vs. Frankenstein*, which would pair the two famous movie monsters in a colossal fight. A Japanese film company ended up appropriating the idea and turning it into *King Kong vs. Godzilla*, in which O'Brien was not involved.

O'Brien was hired as a special consultant and director of animation on the climactic sequence of the adventure-comedy *It's a Mad, Mad, Mad, Mad World*, released in 1963. He worked on the scene for several months but died at the age of 76 during the production of the film. His widow told an interviewer: "Well, he was a kid right up to the day he died, still just a boy and a dreamer. He never seemed to grow up."

## Books

- Archer, Steve, *Willis O'Brien: Special Effects Genius*, McFarland, 1993.  
 Halliwell, Leslie, *Halliwell's Who's Who in the Movies*, Harper, 1999.  
 Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.  
 Smith, John M., and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.  
 Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

## Periodicals

*Time*, December 28, 1998.

## Online

- "The Films of Willis O'Brien," <http://www2.netdoor.com/~campbab/obie2.html>  
 "Film 100," <http://www.film100.com>  
 "Willis O'Brien, Special Effects Genius," *Missing Link*, <http://www.missinglink.free-online.co.uk/archer.htm> □

# Al Oerter

**Al Oerter (born 1936) is the only athlete ever to win a gold medal in the same event at four consecutive Olympic Games. He won gold in the discus in 1956, 1960, 1964, and 1968. Oerter set and broke many Olympic records.**

Alfred Adolph Oerter, Jr. was born in Astoria, New York, on August 19, 1936. He grew up in the nearby town of New Hyde Park, a suburb of New York City, and his athletic talent became apparent early. While still in high school, where athletes used a lighter discus than that used by adult competitors, he hurled it 184 feet, 2 inches, setting a national prep record.

After high school, Oerter attended the University of Kansas, where he set an NCAA record. He never won a major international competition, but qualified for the 1956 Olympics in Melbourne, Australia, when he was a college sophomore. At the time, he was ranked sixth in the world in the discus.

## "Everything Built Up Inside Me"

At the 1956 Olympics in Melbourne, Australia, he didn't expect to win, since he was up against some tough competition. He knew he had a chance at a medal, however, and resolved to do his best. "Everything built up inside me," he said, according to Corder Nelson in *Track's Greatest Champions*. I really was keyed up and inspired." He looked out over the field, where a flag marked the Olympic record of 180-6 1/2. Then he went into the windup, spun, and released the discus, astonishing his competitors and 100,000 spectators by throwing 184-10 1/2, on his first toss. The distance was a personal best for Oerter, and an Olympic record. The competition was not over, however, and



Oerter was still worried about his competitor, Fortune Gordien, who held the world record at the time. "Naturally, I kept my fingers crossed," he said, according to Nelson. "I was always afraid Fortune would beat me. I knew he could."

Gordien's best throw was only 179-9 1/2, more than five feet short of Oerter's mark. Overall, Oerter ended with the three best throws of all the contestants—including Fortune Gordien. "I don't know how I did it," he said later, according to the IAAF Website. "Everything just went right and this throw came out." He also said, according to Ron Flatter in *ESPN.com*, "I'm not going to quit until I win five gold medals."

Oerter was involved in an almost-fatal automobile accident in 1957, but he fought back, recovered fully, and worked hard to get back in shape. He graduated from the University of Kansas in 1958, and continued to compete under the sponsorship of the New York Athletic Club. At the same time, he was working for Grumman Aircraft, doing information processing. Although it's difficult for many athletes to train, have a family, and work, Oerter balanced all these responsibilities. He alternated weight training and throwing practice, and didn't compete in many meets. Still, he kept improving.

In 1960, he made the Olympic team again, but this time the competition looked even tougher than in 1956. American Richard "Rink" Babka threw a toss that beat Oerter's in the Olympic trials—Oerter's first defeat in over two years.

## Returned to Olympics

At the 1960 Olympics in Rome, Oerter did well in the qualifying round, throwing farther than the world record distance of 196-6, but he didn't do as well in the finals. Babka was ahead of him by 15 inches—Babka's best throw was 190-4, while Oerter's was 189-1. Babka was a true teammate, however, and gave Oerter some advice before Oerter made his final throw. He had noticed that Oerter's left arm was not in the correct position before he threw. He advised Oerter to adjust his windup. Oerter thanked Babka for the advice, changed his windup and hurled the discus 194-2, setting a new Olympic record and personal best. He wished Babka good luck, but Babka didn't beat Oerter's throw. Oerter won the gold, and Babka took home the silver.

Although Oerter had set Olympic records, he had never set a world record. This changed on May 18, 1962, when he threw 200-5 in Los Angeles and became the first person ever to throw the discus over 200 feet. He beat his own record in that same year when he threw 204-10 1/2 in Chicago; in 1963, he threw 205-5 at Walnut, California, and in 1964 he threw 206-6 at Walnut. Oerter was still balancing work, family, and training, and at about this time, according to Nelson, he said, "Technique and strength can be maintained over prolonged periods of time with minimum effort. As I become older, it becomes more satisfying to be able to maintain a world class condition while having a wife and family and a job that's rather demanding."

## Competed Despite Severe Injuries

Oerter was scheduled to compete in the 1964 Olympics in Tokyo, but six days before the competition, he tore cartilage in his lower ribcage during practice. His doctors told him that if he didn't wait six weeks before competing again, he might suffer internal bleeding. He ignored their advice, and headed for Tokyo. He was wrapped in bandages and ice packs to prevent the bleeding, and taking Novocain shots to dull the intense pain, so he was not expected to win; onlookers had transferred that expectation to his rival, Ludvik Danek, a Czech who had won 45 meets in a row.

During warm-ups, the pain was severe, and he thought about dropping out. Despite his injuries, on his first throw during the preliminaries, he threw 198-8, setting another Olympic record. After this, he said of the finals, "If I don't do it on the first throw, I won't be able to do it at all," according to Flatter. In the finals, however, he didn't throw well on his first few tries and was in third place by his fifth throw. Danek was in first place, and David Weill was in second place.

Oerter wound up slowly on his last throw, looking heavy and labored. Inside his mind, however, he had a plan, according to Nelson; he later said, "I was using a slow spin and trying to stretch the tendons to get a little higher. I had been throwing too low and I was trying a very easy turn to correct the problem. The sixth [throw] was to have been my best effort with a faster turn." He didn't have to wait until his sixth throw, however, because his fifth throw flew to 200-1 1/2, a new Olympic record—beating the one he had set during the preliminaries. His gold medal for this event made

him only the second person ever to win the same Olympic event three times.

### Wons Gold for the Fourth Time

At the 1968 Olympics in Mexico City, Oerter was suffering from a dislocated cervical vertebra, for which he had to wear a neck brace, and he had a pulled thigh muscle. During the previous four years, he had not done well, and he was not expected to win. His competitor, Jay Silvester, was expected to take the gold, but Silvester was not as certain. "When you throw against Oerter, you don't expect to win," he said, according to the IAAF Website. "You just hope."

Hope was not enough. During the qualifying round, Oerter took off his neck brace—partly because he knew doing so would ignite fear in his competition—ignored the tremendous pain he was feeling, and hurled the discus to his fourth Olympic record of 212-6. This distance beat his own personal best by over five feet. His other throws included distances of 212-5 and 210-1. Silvester finished in fifth place, with a throw of 202-8. With his gold medal at these Games, he became the only person ever to win a gold medal in the same event in four consecutive Olympic Games.

Oerter's win at Mexico City demonstrated his skill at using what many athletes are only now beginning to harness—the power of the mind. Nelson noted that he said, "Once in the Olympic Village you can't improve on your strength or speed. The only thing still possible is to improve your mental attitude. In the weeks before an Olympic competition, I mentally simulate every conceivable situation for each throw. For example, I imagine that I'm in eighth place, it's my fifth throw, and it's pouring rain. What do I do? An inexperienced thrower might panic or be thinking, 'Gees, I hope I don't fall down.' [But] I know ahead of time what I will do under every circumstance."

### Oerter Retired, Then Came Back

Oerter retired in 1969 to work full-time and raise his young family. In 1976, however, he was divorced, and his two daughters were grown. He planned to return in 1980 at the age of 43 and threw a 227-10 1/2, a new personal best that allowed him to qualify as an alternate on the Olympic team. He might have reached his goal of five gold medals, but that year, because of political tension between the United States and the Soviet Union, where the Olympic Games would be held, the U.S. team boycotted the Games and Oerter didn't get to show what he could do. In 1984, he hoped to compete at the Olympics in Los Angeles but couldn't compete in the trials for the Games because he had a torn Achilles tendon. Less than a year before, he had thrown 222-9, a distance that would have brought him a gold medal if he had been able to attend the Los Angeles Games and do it again. He said he might try again for the Atlanta Olympics in 1996, when he would be 60 years old. He missed the goal-directed life of an athlete, always reaching out for improvement and a new record. "I miss going for something elusive," he said, according to the IAAF Website.

### "A Soaring, Creative, Competitive Genius"

According to Corder Nelson in *Track's Greatest Champions*, Oerter once said, "The Olympics are unique, a world community . . . what men have been trying to achieve for centuries. There is no job, no amount of power, no money to approach the meaning of the Olympic experience. It's unfortunate they only happen once every four years. They are so special." He preferred Olympic competition to world-record-hunting, and once said, "I don't chase world records. If they come during the competition, fine. But the competition is first," according to James D. Whalen in the *Biographical Dictionary of American Sports*.

Oerter worked for Grumman Aircraft Corporation as a computer specialist for 26 years, then worked for Reebok. In recent years, he has divided his time between Long Island, where he lives in the summer, and Florida, where he spends the winter months.

Oerter once described the reasons he loved competing in the discus throw. "I like the beauty, the grace, and the movement. I can feel myself through the throw and can feel the discus in flight." According to Nelson, Oerter is "a soaring, creative, competitive genius, the like of whom has seldom been seen at any time, or any place, in any sport." He has been elected to the U.S. Track and Field Hall of Fame and the Olympic Hall of Fame.

### Books

*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.

*Encyclopedia of World Sport*, edited by David Levinson and Karen Christensen, ABC-CLIO, 1996.

Nelson, Corder, *Track's Greatest Champions*, Tafnews Press, 1986.

### Online

"Al Oerter," *IAAF Website*, <http://www.iaaf.org/athletes/legends/AlOerter.html> (December 20, 2000).

"Three-peating Wasn't Enough for Oerter," *ESPN.com*, <http://espn.go.com/sportscentury/features/00016388.html> (December 20, 2000). □

## Lee Harvey Oswald

**Lee Harvey Oswald (1939-1963) had an unexceptional life until the fateful day of November 22, 1963 when he allegedly assassinated President John F. Kennedy. Two days after the momentous event Oswald was killed by Jack Ruby, before he could be tried. A year later the Warren Commission, headed by Chief Justice Earl Warren, reported that Oswald was the lone assassin of President Kennedy. That assertion is still the center of much controversy as many believe the assassination was a conspiracy.**

Lee Harvey Oswald was born on October 18, 1939 in New Orleans, Louisiana. He was named Lee after his father, Robert E. Lee Oswald; Harvey was his grandmother's maiden name. His father was an insurance premium collector who died of a heart attack just two months before Oswald was born. His mother, Marguerite Claverie Oswald, was left as a single mother with two young sons and a third on the way. The family experienced financial difficulties and the children were placed in the New Orleans Evangelical Lutheran Bethlehem Orphanage. Oswald lived in the orphanage for over a year, though he visited his mother and other relatives regularly.

In 1944 Oswald's mother married Edwin A. Ekdahl, an electrical engineer. She and the children moved to Fort Worth, Texas. Ekdahl treated the Oswald boys as if they were his own and he was the only father that Lee Harvey Oswald ever knew. In 1945 the two older Oswald boys were sent to a military academy. Ekdahl traveled a lot on business, leaving Lee Harvey Oswald alone with his mother. This relatively stable family life only lasted a few years, since his mother divorced Ekdahl in 1948. For the rest of his childhood, Oswald and his mother moved frequently. By the age of ten Oswald had attended six different schools. He was diagnosed with dyslexia, a reading disorder, and did poorly in school.

Because of these problems Oswald often skipped school. In 1952 school officials sent him to the New York City Youth House for truancy. Initial assessments at the Youth House indicated that Oswald was withdrawn, socially maladjusted, not properly cared for at home, and in need of psychiatric care. At the age of 16 Oswald was released from the Youth House and placed on probation. He was ordered to go to the Big Brothers organization for counseling, which he did not do.

Throughout his childhood, Oswald showed signs of aggressive behavior. He often fought at school. Once he threatened his brother and sister-in-law with a knife. At the age of 16 he wanted to quit school and join the Marines, but was still too young. He obtained a false affidavit from his mother stating that he was 17 years old, but it did not pass and Oswald had to wait a year. While he was waiting he studiously read the "Marine Manual" which he got from his brother. He also had a few part-time jobs working as a messenger boy.

### Military Career

On October 24, 1956, at the age of 17, Oswald was still in the tenth grade. However, he was finally old enough to join the Marines. He signed up for a three-year tour of duty and was assigned to the Second Training Battalion in San Diego for boot camp and then sent to Camp Pendleton for advanced infantry combat training. He was also trained in radar, aircraft surveillance, and aviation electronics.

Oswald was first assigned to Yokosuka, Japan, near Tokyo, to work as a radar operator. His job was to direct aircraft to their targets by radar and radio communication. He was also responsible for scouting for incoming foreign aircraft. Oswald was considered a loner and did not get along well with his fellow Marines. He also had trouble with

military authority and was court-martialed twice. In the first incident Oswald purchased a .22-caliber handgun and wounded himself in the left arm while playing with the gun. He was charged with having an unregistered weapon and demoted from private first class to private, as well as fined \$50 and sentenced to 20 days hard labor. The second incident occurred a few months later when he used profanity in an argument with an off-duty technical sergeant. Oswald was drinking at the Bluebird Cafe in Yamato and he accidentally spilled a drink on the sergeant. This led to an altercation during which Oswald insulted the superior officer. For this second infraction he was fined \$55 and sentenced to 28 days in military prison. Oswald ended his military career three months early by applying for a hardship discharge to care for his mother.

### Defected to Soviet Union

Oswald became interested in Communism when he was in the ninth grade and began reading library books on the subject. While in the military, Oswald openly expressed his views on Communism and taught himself Russian. According to Gerald Posner in *Case Closed: Lee Harvey Oswald and the Assassination of JFK*, Oswald told his brother that he believed "Communism was the wave of the future." After finishing his three-year tour of duty, Oswald was expected to spend three more years as an inactive reserve. He was not allowed to travel abroad during this time without a good reason, so he applied to a liberal arts college in Switzerland. He lied on the application and was accepted. This allowed him to apply for a passport. Upon leaving the Marines, Oswald traveled to Europe and eventually ended up in Moscow. Once in Russia, he contacted Richard E. Snyder, the United States consul, to renounce his United States citizenship. He publicly made anti-American statements and applied for Soviet citizenship. The Russian government did not trust Oswald and denied him citizenship. However, he was given an apartment and a job at the Belorussian Radio and Television Factory in Minsk.

In a little over a year Oswald began to realize that life in the Soviet Union was not living up to his Communist ideals. In February of 1961 he contacted Richard Snyder again and expressed his desire to return to the United States. A month later, Oswald met his future wife, Marina Prusakova, at a trade union dance. Prusakova was a 19-year-old pharmacology student living on her own in Minsk. A month after they met, Oswald proposed and the couple married on April 30, 1961. On February 15, 1962 their daughter, June Lee Oswald, was born. A few months later the young family moved back to the United States.

### Returned to the United States

The Oswald family settled in Fort Worth, Texas. Oswald worked sporadically at different jobs, such as a sheet-metal worker and a photoprint trainee. He and his wife were having marital problems and Oswald was becoming very secretive. In March 1963 Oswald used a false identity to purchase an Italian 6.5-caliber Mannlicher-Carcano rifle with a telescopic sight from a mail-order company. A month later, on April 10, Oswald used this rifle to

try to shoot retired General Edwin A. Walker of Dallas, Texas. Oswald missed his target and escaped unnoticed. He then moved his family to New Orleans to avoid further investigations into the shooting.

Oswald worked for the Reily Coffee Company in New Orleans and became politically active again. He started the New Orleans branch of the Fair Play for Cuba Committee (FPCC), a pro-Castro organization that argued for free trade and improved diplomatic relations between the United States and Cuba. Oswald tried to establish himself publicly as pro-Cuban. In September 1963 he traveled alone to Mexico City and applied for both Cuban and Soviet citizenships. When both governments refused him, Oswald moved his family back to Dallas, Texas. Upon arriving in Texas, Oswald assumed the name O.H. Lee. An acquaintance helped him get a job at the Texas School Book Depository, earning \$1.25 per hour. A few days later, on October 20, 1963, Oswald's second daughter Audrey Marina Rachel Oswald was born.

### Assassination

On November 22, 1963 Oswald wrapped his rifle in paper and took it to work at the Texas School Book Depository. Later that day President John F. Kennedy, Texas Governor John Connally, and their wives were travelling through Dallas in an open motorcade. As they drove through Dealey Plaza, they passed the Texas School Book Depository at 12:30 p.m. At this time shots were fired from the sixth floor window of the building, killing President Kennedy and seriously wounding Governor Connally. Oswald escaped from the building and headed toward his house. Less than an hour later Dallas police officer J.D. Tippit tried to question Oswald near his house; Oswald shot and killed the man. He then fled to the nearby Texas Theatre where he was apprehended by police around two o'clock.

Oswald was charged with the murder of Officer Tippit. On November 23, he was charged with the assassination of President Kennedy. While in custody, Oswald denied his involvement in the assassination during police interrogations. He was never able to explain his behavior or motivation fully because he too was killed the following day. On November 24, while being transferred from the police station to the county jail through a basement parking lot, Oswald was shot and killed by Jack Ruby, a night club owner. Ruby was convicted of first degree murder on February 17, 1964 and sentenced to death. Two years later his conviction was overturned. Before a new trial could begin, Ruby died of cancer on January 3, 1967.

### The Aftermath

Since Oswald never had an opportunity to tell his own story, there has been a lot of speculation as to his motive for killing the president. Some believe that he was disgruntled with society in general and President Kennedy was the key representative of that society. Others say that he was upset by his inability to travel to Cuba, which he blamed on the politics of the Kennedy administration. Still others contend that Oswald wanted to make his mark on history and immortalize himself.

All of these arguments assume that Oswald planned and executed the murder by himself. However, this is the subject of much controversy, as some believe Oswald was just a small player in a larger conspiracy to kill the president and alter the American political scene. Proponents of the conspiracy theory argue that the Mafia, political opponents of President Kennedy, or foreign players such as the Soviet Union devised the plan to assassinate the president. They argue that Oswald was just one of several shooters in the event.

These various arguments, as well as detailed reviews of the evidence, are the subject of many books and articles. Hollywood filmmaker Oliver Stone even made a film on the subject, called *JFK*, which ignited the discussion once again. As a result of this controversy, Congress passed the John F. Kennedy Assassination Materials Disclosure Act of 1992, which declassified thousands of documents related to the case. In 1999 Russian President Boris Yeltsin also gave the United States some declassified KGB documents on Oswald.

Despite the new information, the circumstances surrounding the assassination of President Kennedy, and Oswald's role in the event, are still one of the great mysteries of history. It is clear, however, that the death of John F. Kennedy had a profound impact on the course of American history.

### Books

- Canal, John A., *Silencing the Lone Assassin*, Paragon House, 2000.
- Davison, Jean, *Oswald's Game*, W.W. Norton and Company, 1983.
- Ford, Gerald and John R. Stiles, *Portrait of the Assassin*, Simon and Schuster, 1965.
- Groden, Robert J., *The Search for Lee Harvey Oswald*, Penguin Studio Books, 1995.
- Mailer, Norman, *Oswald's Tale: An American Mystery*, Random House, 1995.
- Oswald, Robert L., *Lee: A Portrait of Lee Harvey Oswald by His Brother*, Coward-McCann, Inc., 1967.
- Posner, Gerald, *Case Closed: Lee Harvey Oswald and the Assassination of JFK*, Random House, 1993.

### Periodicals

- Humanist*, March-April 1997, p. 19.
- Ladies Home Journal*, May 1993, p. 156.
- Texas Monthly*, November 1998, p. 135; November 1998, p. 146; March 1995, p. 104.
- U.S. News and World Report*, July 24, 2000.

### Online

- "The Kennedy Assassination," <http://mcadams.po0soc.mu.edu/home.html> (January 6, 2001).
- "Lee Harvey Oswald Photo Gallery," <http://www.parascope.com/nexus/oswaldo/oswaldgallerymain.html> (January 6, 2001).
- "Lee Harvey Oswald Research Page," <http://www.madbbs.com/~tracy/lho/index.html> (January 6, 2001).
- "The John F. Kennedy Assassination Homepage," <http://www.informatik.uni-rostock.de/kennedy/body.html> (January 6, 2001). □

## Nikolaus Otto

**Despite a lack of technical training, Nikolaus August Otto (1832-1891) had the ingenuity to make the first practical internal combustion engine. He later devised the four-stroke engine, known as the Otto cycle, which was widely used for automobile and other motors.**

**N**ikolaus Otto was born in Holzhausen auf der Heide, a small village on the Rhine River in Germany. Although his father, the village postmaster, died soon after Otto was born, his mother raised him well. Young Otto excelled in school, and his mother planned for him to continue with a technical education, but the failed German revolution in 1848 and declining economic conditions made his mother believe that he would be better off as a merchant.

Otto left high school and got a job as a clerk in a grocery store. He soon was working as a clerk in the nearby city of Frankfurt. His older brother Wilhelm owned a textile business in Cologne, and he helped Otto get a job as a sales representative. Otto sold tea, sugar, and kitchenware to grocery stores along the western border of Germany.

### Otto's First Engine

Though he spent a great deal of time travelling between his home in Cologne and the many small towns he served, he still had time to meet and begin a long courtship with Anna Gossi. Their courtship lasted nine years, due to his travelling and a new interest of Otto, engines. What little we know of his early interest and experiments with engines comes to us from the love letters that Anna received and saved after they married.

While he was traveling as a salesman, Otto first learned about the new gas-powered engine invented by Etienne Lenoir. It was the first workable internal combustion engine. Before that, the energy to run an engine usually came from external combustion, such as in a steam engine. In a steam engine, a fire was used to heat water. The resulting steam was compressed and, upon expanding, pushed a piston, fitted to a cylinder, that transferred the power to a crankshaft. Then steam was directed to the other side of the piston, forcing it back. Thus, every stroke of the piston contributed power.

Although a great advance, the Lenoir engine was never an efficient and practical invention. It used the same principal as a steam engine, except that the piston was moved not by steam pressure, but by the ignition of a mixture of air and gas. When the mixture was ignited, an explosion and rapid expansion pushed the piston back. But it was noisy, used far too much expensive fuel that needed to be stored or transported in a gaseous state, and produced too much heat. It was initially popular as a replacement for steam engine applications but soon fell from favor.

Otto was sure that the Lenoir engine would be more flexible if it ran on liquid fuel. Although he had been de-



prived of a technical education, Otto invented a carburetor for this engine and worked to improve it in other ways. He tried to patent the carburetor in Prussia in 1861 but was denied a patent. In 1861, Otto built his first gasoline-powered engine.

### Partnership with Langen

In 1864, Otto was lucky to meet Eugen Langen. Langen had interests in manufacturing and sugar production and had designed much of the equipment that his businesses owned. He was looking for new interests, and Otto's engine intrigued him. Langen saw that, though imperfect, the engine had possibilities, and agreed to invest in Otto and his engine. Together they formed N.A. Otto and Cie. Langen brought cash to the relationship, Otto brought his expertise. The company began work on improving the engine and building a factory for its manufacture.

Three years later, they had developed a much-improved engine. It bore little resemblance to either the Lenoir engine or to Otto's early prototypes. When they decided to exhibit the engine at the 1867 Paris Exhibition, it was almost a disaster. The French judges at first ignored the engine in favor of more familiar styles. An old school friend of Langen sat on the board of judges, and he convinced the others that efficiency should be part of the decision. When tests showed that the Otto-Langen engine was using less than half the energy that the other engines were using, the machine was awarded the gold medal.



The resulting publicity created a demand for their engine that the partners could not meet. Seeking capital, they entered into a partnership with Ludwig August Roosen-Runge, a businessman from Hamburg. The company became Langen, Otto, and Roosen in March 1869, and its factory moved to the Cologne suburb of Deutz. Roosen-Runge's money helped, but demand still outstripped supply. Langen convinced his brothers and their partners in the sugar business to invest. Their combined investment was more than 13 times what Roosen-Runge had invested, and it enabled a new company, Gasmotoren-Fabrik Deutz AG, to be incorporated in January 1872. Otto, who had never invested money in the business, received no stock in the new company and accepted a long-term employment contract instead.

Langen made one very important hiring decision at Deutz. Gottlieb Daimler had trained as a gunsmith before he became an engineer. He had years of experience in factories across Europe, and Langen saw him as the man who could run the new, larger factory. Daimler was appointed technical director to the Deutz works. Daimler brought with him his protege, a young engineer named Wilhelm Maybach. Over the next ten years, Maybach, who would become one of the great engine designers, would work closely with Otto on many projects, including developing the internal combustion engine for use in road vehicles.

### The Four-Stroke Engine

Deutz became the premiere engine manufacturer in the world and was soon licensing its design around Europe. In 1876, Otto's newest invention was built, and the internal combustion engine was never the same. Otto knew that the engines based on Lenoir's basic design had reached their limitations. They were noisy, vibrated a lot, and were limited in the amount of power they could produce. He knew that more power and efficiency could be reached if the fuel mixture could be better controlled and compressed. He saw that the way to do this was to use only one piston per chamber and spread the cycle of combustion over four strokes.

In the four strokes of the Otto cycle, the first outward stroke of the piston draws a mixture of air and fuel into the piston through a valve into the cylinder. The second stroke compresses the mixture, preparing it to be ignited. Ignition of the fuel-air mixture causes an explosion, and the rapid expansion of the resulting gases provides the power for the third stroke. On the fourth, inward stroke, the piston forces the exhaust gases out of the cylinder through another valve.

This design went against what was considered prudent at the time. Most engineers believed that every stroke had to provide power, as in the steam engine. They thought Otto's design would be inefficient if only one stroke out of four provided power. But of greater importance to Otto was the concept of the stratified charge. While watching how smoke left a chimney densely, then spread out into the air, he realized that he could use the same principle within a cylinder to make an engine run cleaner and smoother. Although the four-stroke engine was an immediate success, the strati-

fied-charge theory was disputed and discredited. In this, Otto was a century ahead of his time, for the Honda Motor Company of Japan would find great success with a stratified-charge engine in its automobiles beginning in the 1970s.

The four-stroke engine became known as the Otto engine, and the concept was called the Otto cycle. It was another big success for the Deutz works, and once again the factory fell short of the capacity needed to meet demand. It was the peak of the worldwide Industrial Revolution, and Deutz was able to sell 8,300 Otto engines between 1876 and 1889, more than eleven a week on average.

### Patent Fights

The concept of the Otto engine was so advanced that there was little that competing manufacturers could do. Deutz protected its position as the world's sole supplier and licensor of Otto engines, taking any infringement of Otto's patent to court and protecting the patent against spurious claims. In 1884, Deutz's competitors got a lucky break. An old French pamphlet detailing the concept of the Otto cycle but published before Otto had built his engine was discovered by a lawyer, C. Wigand, a friend of a pair of engine manufacturers from Hannover, Ernst and Berthold Korting. The pamphlet was based on an 1862 patent filed by French engineer Alphonse Beau de Rochas. It did not matter that Beau de Rochas had not built an engine nor that he had let his patent lapse by failing to pay his annual patent tax. (In many countries, an annual fee is required to maintain a patent.) And Beau de Rochas had never tried to defend his patent, even though the Otto engine was famous, selling in great numbers, and had won a gold medal at the 1878 Paris Exposition. Even so, with the help of Wigand, the Korting took the case to the courts.

Although the case was weak, the atmosphere in Germany was not in Otto's favor. There was no national patent registry, and patents could be held in any or all provinces. Often, one province would grant a patent while another would deny it. So Wigand could choose to fight the patent in the most cooperative province. Some historians speculate that the German government did not want to limit who could hold patents because it wanted to decrease monopolies and spread wealth. Whatever the reason, Otto lost the case. Although more than 30,000 four-stroke engines were built before 1886, and Deutz marketed them with the widely accepted "Otto engine" name, Otto's German patent was revoked. The Kortings were free to manufacture Otto cycle engines. Otto was able to retain his patent in England.

Because they did not see eye-to-eye with Otto, in 1882 Daimler and Maybach left Deutz to set up their own company. Daimler and Maybach were successful with their automotive application in 1889. They placed their engine, an Otto-cycle four-stroke engine, into a horse carriage, producing the first four-wheeled automobile. They set to work improving the vehicle so it could be offered for sale. The first Daimlers were sold in 1890.

Otto died on January 26, 1891 in Cologne, a rich man thanks to the licenses he shared in and the patents he held. The company he and Langen began became one the largest

companies manufacturing internal combustion engines: Klockner-Humboldt-Deutz AG. A memorial honoring Otto stands in the forecourt of the neo-baroque Deutz train station in Cologne.

It has often been said that this person or that person “put the world on wheels.” Perhaps more than anyone, that is true about Nikolaus Otto. Though only Daimler’s name is recognized by most of the world as the maker of the first

automobile, historians and those inside the automobile industry recognize the man who was responsible for the ingenuity that gave us the Otto-cycle engine.

### Books

Cummins, C. Lyle, *Internal Fire*, Carnot Press, 1976.

Suzuki, Takahashi, *The Romance of Engines*, Society of Automotive Engineers, 1997. □

# P

## Alexander Parkes

**Although he never perfected his product, Alexander Parkes (1813-1890) invented one of the earliest forms of plastic. It eventually led to the commercial and manufacturing success of plastic products. A talented metallurgist and inventor, Parkes held 66 patents on processes and products related to electroplating and plastic development.**

**T**he son of a brass lock manufacturer, Parkes was born on December 29, 1831, in Birmingham, England. He apprenticed to a brass founder at Messenger and Sons before going to work at Elkingtons, the company that invented the electroplating process, which used electricity to deposit a layer of metal. Parkes was put in charge of the casting department, and his attention soon began to focus on electroplating, a recently discovered process.

Parkes took out his first patent (No. 8005) in 1841 on a process for electroplating delicate works of art. His improved method for electroplating fine and fragile objects, such as flowers, was granted a patent in 1843 (No. 9807). Parkes first dipped the object to be electroplated in a solution of phosphorus contained in bisulfide of carbon, and then placed it in nitrate of silver. Once covered with the nitrate of silver, the object was placed in yet another solution, which was connected to a battery. The result was a process by which a layer of copper, silver, or gold could be deposited on the object in varying amounts. When Prince Albert visited Elkingtons, Parkes presented him with a spider's web coated with a layer of silver. So attentive to the skill of his work was Parkes that on his early patent applica-

tions he identified himself as an artist. Only later did he adopt the title of chemist.

### **Perfected Desilverisation and Waterproofing**

Parkes's most important development related to metallurgy came during the three years he spent as the superintendent of the construction of an Elkington and Mason copper smelting plant in Pembrey, South Wales. He invented a process by which silver is extracted from lead by using molten zinc, a method that became known as the Parkes process. His desilverisation process was first patented in 1850 (No. 13118), with further developments receiving patents in 1851 (No. 13673) and 1852 (No. 13997). The Parkes process gained considerable attention in Germany and was widely used in the United States for some time.

His next project was an improved method for printing calico. To this end, he developed and manufactured seamless metal tubes and cylinders, again receiving numerous patents on his inventions.

Although Parkes was a prolific inventor and was awarded 66 patents during a period of 46 years, most of which related to metallurgy, he also contributed to advancements in other areas. In 1846 he was granted a patent for the invention of a cold vulcanization process. Used extensively by Goodyear in the United States and Hancock in England, it was a means by which materials could be rubberized with a cold solution, replacing the need for natural rubber to be treated in sulfur at high temperatures. Using his vulcanization process, material such as cloth could be rubberized by using a solution of rubber in bisulfide of carbon, which produced a thin, waterproof article. Elkington and Mason used the process for waterproofing

before selling the patent rights to Macintosh and Company, who became famous for their waterproofing products.

### Discovered Parkesine

Parkes is best remembered for his invention of what would later be developed into plastics. He was not the first to develop a plastic substance, but before his work plastics were primarily curiosities created and displayed in scientific laboratories. Cellulose nitrate, the basic substance of Parkes's creation, was itself a new invention. Henri Bracconet, the director of the Botanical Gardens in Nancy, France, was the first to prepare it in 1833, by mixing sawdust cellulose with nitric acid. In 1855 Christian Schonbein, a professor at Basle University, imitated Bracconet's method by treating simple paper made from wood cellulose with nitrite acid. The result was a transparent, highly flammable substance, which Schonbein named cellulose nitrate and marketed as an explosive.

Soon it was discovered that cellulose nitrate, when mixed with ether and alcohol, became soluble. Because it shrank as it dried, the solution, which became known as collodion, was marketed for use in medicine to seal minor wounds. Other ideas for marketing forms of collodion were explored. In 1851 F. Scott Archer placed a thin layer of collodion on a sheet of glass. When the collodion dried, it could be peeled from the glass. The sheet was transparent and could hold an image. It was thus the precursor to modern film. Also, dye was added to collodion, which was then sold as finger nail polish.

Parkes began to experiment with the creation of a substance that could replace ivory, which was getting rarer because it could only be obtained from an expensive and dwindling supply of elephant tusks. He noted the behavior of an old jar of collodion in his medicine cabinet. When exposed to air for an extended period of time, it turned into a moldable form. Working from the basic concept of collodion, Parkes experimented with a new substance. It was at first called xylonite or parkesine and later celluloid. According to Sylvia Katz in *Plastics: Designs and Materials*, "[Parkes] took cellulose nitrate in the form of cotton fibre or wood flour dissolved in nitric and sulfuric acids, and mixed it with vegetable oils such as castor oil and wood naphtha. The combination made a dough which could simulate ivory and horn, and could be textured and painted. He fully realized the potential of his discovery and first exhibited a few moulded household goods—knife handles, combs, plaques, and medallions—at the 1862 International Exhibition in London, where they aroused sufficient interest for him to receive a bronze medal." Parkes also received recognition in 1867 at a similar exhibition in Paris.

Parkesine was softened by heat and then placed in molds or carved by hand. It could also be painted or inlaid with ornamentation. Much less expensive than its counterparts in leather or rubber, the product had more potential for economic success. Parkes created a list of all the devices he believed could be replaced by products made of parkesine. These included brush backs, shoe soles, whips, walking sticks, buttons, brooches, buckles, decorative work with inlay and piercings, tubes, umbrellas, treated cloth,

counters, and balls, (especially billiard balls, which at the time were made of ivory). Parkes also added dye to parkesine and created mottled effects by mixing different batches of red, yellow, green, and orange parkesine, resulting in a brightly colored product. Some of Parkes's early productions using parkesine are displayed at the Plastics and Rubber Institute in London. More than a century after their creation, the colors remained brilliant.

### Business Began and Ended

Using Parkes's process, the cost of producing cellulose nitrate was reduced from 12 shillings to seven pence a pound, a considerable savings that pointed to its commercial value. As a result, Parkes took out numerous patents on parkesine between 1855 and 1865. In 1866 he founded the Parkesine Company and began the commercial production of his new product. However, his attempts at financial success failed. In *Plastics History U.S.A.*, J. Harry DuBois wrote: "the Parkesine Company operated haltingly till 1868, [Parkes'] failure to succeed commercially being attributed, in part, to an overconcern for low costs, leading to the use of poor quality raw materials. Since Parkes lived more by developing processes than by operating them on a commercial basis, it is perhaps not surprising that this venture into production was unsuccessful."

Parkes enlisted the help of an established businessman, Daniel Spill. A talented chemist, Spill had been awarded a medal for his waterproofing product in 1862 at the Great Exhibition in London. His interest in waterproofing first drew him to Parkes, and in 1866 he became the works manager at the Parkesine Company. When Parkes decided to discontinue his commercial attempts, Spill took over the company. He renamed it the Xylonite Company and began to market celluloid as Xylonite and Ivoride. He also had problems with production and went bankrupt in 1874. Spill reopened in a new location the following year, and in 1877 took on several partners, becoming the British Xylonite Company, which achieved commercial success producing celluloid collars and cuffs.

Celluloid could be molded easily at low temperatures and cured at room temperature. This meant that no expensive machinery was needed to form the product at extreme temperatures or under high pressure. The key problem with celluloid was its combustible nature because it contained nitrate. Any products formed from celluloid were highly flammable, so celluloid products eventually were banned from production, including men's collars and play dolls.

In addition, the parkesine developed by Parkes was an extremely hard plastic, more ceramic or bone-like in consistency. A short time after Parkes quit his business, John Wesley Hyatt of the Hyatt Brothers in the United States discovered that nitrate cellulose mixed with camphor created a much more pliable product. It would be the Hyatt Brothers who would make advancements in Parkes's invention and market it with worldwide success, ushering in the age of modern plastics. Parkes, who never achieved commercial success with his precursor to plastic, retired to London and died at West Dulwich on June 29, 1890.

### Books

- A Biographical Dictionary of Scientists*, edited by Trevor I. Williams, Halsted Press, 1974.
- A Biographical Encyclopedia of Scientists*, edited by John Daintith, Sarah Mitchell, and Elizabeth Tootill, Facts on File, 1981.
- The Cambridge Biographical Encyclopedia*, 2nd edition, edited by David Crystal, Cambridge University Press, 1998.
- The Dictionary of National Biography*, edited by Leslie Stephen and Sidney Lee, Oxford University Press, 1973.
- Dubois, J. Harry, *Plastics History U.S.A.*, Cahners Books, 1972.
- Katz, Sylvia, *Plastics: Designs and Materials*, Cassell and Collier Macmillan, 1978.

### Online

- "Alexander Parkes," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (February 10, 2001).
- "Alexander Parkes," *World of Invention*, <http://www.galenet.com> (February 10, 2001). □

## Louella Parsons

**An obsessive admiration for Hollywood's film stars, unstoppable ambition, and a touch of deceit propelled Louella Parsons (1881-1972) from a small town middle American journalist to one of Tinseltown's most powerful and controversial personalities.**

Louella Parsons was a Hollywood gossip columnist who served as a personal link between millions of movie fans and the stars they went to see on the silver screen. She made her living ferreting out and publishing the secrets of Hollywood's rich and powerful, but ultimately fragile and easily manipulated, stars and moguls. Over time, Parsons came to resemble the people she wrote about. Like them, she worked hard to keep her own dirty secrets hidden.

### Small Town Drama Editor and Teenage Wife

Louella Parsons was born Louella Oettinger in Freeport, Illinois, most probably on August 6, 1881. The birth date needs to be qualified, as Parsons would later steadfastly claim she was born in 1893. In her 1943 book *The Gay Illiterate* Parsons gives August 6 as the date of her birth but glaringly neglects to reveal the year. Parsons began writing at an early age. By the age of ten she had composed a short story entitled "The Flower Girl of New York." She proudly showed the manuscript to the editor of the *Freeport Journal-Standard* who read it but politely declined to publish. Undeterred Parsons continued to follow her journalistic ambitions. By the time she was in high school Parsons had landed her first newspaper job—drama editor for the *Dixon* (Illinois) *Morning Star*. This job paid her \$5 a week.

In 1910, at the age of 17, Louella married John Parsons, a real estate agent. She moved with him to Burlington, Iowa only to supposedly become a widow four years later. Par-



sons would later claim that her husband died while traveling on a transport ship relating to his duty in World War I. The marriage, though short lived, produced a daughter, Harriet, who was born in 1906. Regardless of its ending, the marriage was never a happy one. Most unbiased accounts claim it ended in a divorce brought on by her husband's philandering. There is some evidence that, after John's death, Parsons moved to Chicago and married Jack McCaffrey, a riverboat captain. The McCaffrey marriage also ended in divorce after Parsons took up with one Peter Brady, a married New York labor leader. Brady would later be described as "the real love of her life." Parsons probably expunged these divorces and affairs from her life history when, in middle age, she embraced Catholicism and began practicing it with fervor.

### Big City Journalist

1910 found Parsons working in Chicago as a reporter for the *Chicago Tribune* and as a writer for Essanay Studios, an upstart motion picture production company. Based on her experiences at Essanay, Parsons published her first book *How To Write For the Movies* a manual for would-be screenwriters. Essanay also introduced her to the film community. There she made friendships which were to last a lifetime. In 1912 she sold a script to Essanay for \$25 which was produced as the one reeler movie *Chains* starring Francis X. Bushman. Parsons, who suffered from financial woes for most of her life, soon priced herself out of a job with Essanay Studios. Still considering herself more of a journalist than a screenwriter, she boldly proposed a movie column to

the *Chicago Record-Herald*. Decades later Parsons' assistant, Dorothy Manners, told *Vanity Fair* about the proposal. "All the movie stars of the day had to pass through Chicago on their way from New York to Los Angeles," she told the magazine. "There was a two hour wait in Chicago. Louella's idea was to go down to the train station and interview the stars while they waited." She was soon hired. While her column thrived, the paper didn't. Parsons, however, was establishing herself as a journalist and a budding movie business insider. This landed her a job at the *New York Morning Telegraph*.

Once in New York Parsons' career took a giant step forward in 1923, when she became the movie editor for the *New York American*. She so impressed its owner, William Randolph Hearst, that he made her movie editor for the Universal News Service in 1925. It was at this time that she began writing about Hedda Hopper, then an aspiring actress, but eventually Parsons' arch-rival gossip columnist.

### Illness Turned Into Good Fortune

Parsons contracted a life threatening case of tuberculosis in 1925 and moved to Palm Springs, California to recuperate. By early 1926 she had made a complete recovery. Parsons, then 45, called Hearst and told him she was ready to return to her east coast desk at the *New York American*. Hearst, however, wouldn't hear of the move. "Louella, the movies are in Hollywood-and right now I think that is where you belong." Hearst and Parsons shrewdly recognized the growing influence of Hollywood on mid-20th century American culture. Both set out to exploit this glamorous, compelling, and economically rewarding phenomena. Hearst presented Parsons with another career boosting surprise. Her column would henceforth be syndicated and eventually would appear in over 400 newspapers. Syndication greatly enhanced Parsons' influence in Hollywood while shoring up her always flagging personal finances. Her salary was increased to \$350 a week; by 1929 she was making \$500 a week.

In 1928, as a sidebar to her column, Parsons began a radio show featuring interviews with film stars. The show soon ended, with Parsons blaming its failure on the inarticulateness of her guests. She disparagingly explained that many of them couldn't speak English "and I don't mean the foreign importations." Another radio program, five years later, also failed. However, in 1934 she effectively exploited the medium with another show called *Hollywood Hotel*. Sponsored by Campbell's Soup each guest received a case of soup for their appearance. Repeat guests were allowed to specify the kind of soup they wanted. *Hollywood Hotel* introduced the "sneak preview" concept with guests being offered the opportunity to read parts of scripts about to become movies.

### Louella First

Once ensconced in Hollywood, Parsons quickly laid down the law: "You tell it to Louella first." Necessary to a successful column, especially a gossip column, is the daily gathering of information. Parsons had a couple of assistants who helped her collect material for her column, but she was

also very dependent on a cadre of irregular informants who passed along tips, rumors, and gossip. According to *Vanity Fair*: "Her informants could be found in studio corridors, hairdresser's salons, and lawyers and doctors offices." It was said that Parsons often knew of a starlet's pregnancy before the starlet herself did. Ever jealous of the "big scoop" Parsons was said to not be beyond "kidnapping" the subject of a big story and holding them "hostage" until she was sure her story and only her story was "speeding across the wires". Her reputation for getting the "big scoop" was cemented when she was the first to report on "the biggest divorce story in the history of Hollywood"—the breakup of the Douglas Fairbanks Jr./Mary Pickford marriage, then the undisputed "king and queen" of Hollywood.

With readership approaching 20,000,000 at the height of Parsons' popularity she wielded a pen that was sometimes entertaining and sometimes vicious. More often than not, she merged fact with fiction and reality with illusion. Parsons was often genuinely fond of the people she wrote about but was not above using them for her own ends. Her power and influence came from what she wrote about and, not surprisingly, what she chose not to write about. One major story Parsons kept from the public was the long-term love affair between Katherine Hepburn and the married Spencer Tracy. All stars had a "moral turpitude" clause in their contract and the studios were not above using this clause to keep them in line and away from scandals that could damage ticket sales at the box office. "The studio bosses used Louella and Hedda as a weapon of intimidation to keep their employees in line," *Vanity Fair* quotes one Hollywood insider as saying. "But if there was a real problem with a star they could always buy these women (Parsons and Hopper) off." Buyoffs could be in the form of information exchange or nefarious cash deals. Twentieth Century Fox, for instance, purchased the film rights to Parsons' 1943 memoir *The Gay Illiterate* for \$75,000 with nary an intention of ever making the movie. At other times, however, Parsons could take a moralistic but manipulative and potentially destructive stand when writing about Hollywood love affairs. Parsons became outraged when she learned that Grace Kelly, "a well brought up Catholic" was having an affair with the married Ray Milland during the filming of *Dial M for Murder*. Parsons, who fancied herself as something of a mother hen, feared that if the affair continued and caused the break-up of Milland's marriage Kelly's honor and career would be forever be compromised. She reported the story forcing Kelly to quickly end the affair with her reputation still intact.

### Another Marriage

In 1930 Parsons married again, this time to Dr. Harry Martin, a urologist and a notorious but friendly drunk. Addressed as "Docky" by everyone in Hollywood from studio heads to parking lot valets, Martin had the unlikely sobriquet of "Hollywood's clap doctor" as he was particularly adept at curing venereal disease. He also had a well-deserved reputation for hitting the bottle. A party guest once pointed out the drunk and semi-comatose Martin to Parsons as he lay underneath their piano. "Let Docky sleep," Parsons replied, "He has surgery at seven tomorrow morning."

With Parsons' help Martin was soon made chief medical officer at Twentieth Century Fox where his job, according to one Hollywood observer, was to "shoot the stars with anything to make them perform."

### Louella vs. Hedda

No article on Louella Parsons can be complete with some mention of the intense rivalry between her and fellow gossip columnist, Hedda Hopper. Unlike Parsons, who always wanted to be a journalist, Hedda Hopper was an ex-chorus girl and "B" grade movie actress who didn't start writing until she was 50. Ironically, Parsons introduced Hopper to William Randolph Hearst who had a friend who was looking for someone to write for the *Washington Times-Herald*. Hearst recommended Hopper who got the job but wasn't much of a rival to Parsons until the *Los Angeles Times* bought the Washington paper and moved Hopper to Hollywood. Parsons and Hopper were, at least outwardly, studies in contrast. Whereas Hopper was outgoing and known for her outrageous hats and stylish clothes Parsons was more introspective and almost matronly in appearance. Although they were fierce competitors Hopper did not take their rivalry as seriously as did Parsons, who considered herself to be Hollywood's doyenne and didn't take kindly to this second rate actress *cum* columnist. Nonetheless one observer characterized their 25 year rivalry as two scorpions flailing about at one another.

### Her Last Column

Parsons wrote her final by-line in 1964. By then her column's post-mortem was long overdue. By the late 1950s her power along with Hollywood's "tinsel town" and "silver screen" glamour and allure had begun to fade. A new morality coupled with the advent of teen-age idols and rock-and-roll stars were emerging on the national scene, leaving Parsons moribund in the Hollywood of the 1930s and 1940s. Parsons died December 9, 1972 in a Santa Monica nursing home following a long illness and a stroke. It is sadly said that she ended her powerful and influential gossip column career confined to a bed and spouting provocative questions to long dead movie stars flitting across her television screen in movie re-runs.

### Books

- Eells, George, *Hedda and Louella*, G.P. Putnam's Sons, 1972.  
*Notable American Women: The Modern Period*, edited by Barbara Sicherman, Belknap Press of Harvard University, 1980.  
 Parsons, Louella, *The Gay Illiterate*, Doubleday, Doran and Co., 1944.  
 Parsons, Louella, *Tell It To Louella*, G.P. Putnam's Sons, 1961.  
*Vanity Fair's Hollywood*, edited by Graydon Carter, Viking Studio, 2000.

### Online

- "Hedda Hopper vs. Louella Parsons," *One Hundred Years Feuds*, <http://fp2.eonline.com/Features/Specials/Century/Oct/06.b.html> (January 4, 2001).

"Louella Parsons and Hedda Hopper: Hollywood's Gossip Queens," *AMC Behind the Scenes: Pat's Grapevine*, [http://www.amctv.com/behind/patsgrapevine/pg\\_0499b.html](http://www.amctv.com/behind/patsgrapevine/pg_0499b.html) (January 4, 2001). □

## Sam Peckinpah

**Known for the graphic violence and beauty of his challenging films, director Sam Peckinpah (1925-1984) was a Hollywood maverick whose movies were highly controversial. He was best known for such bloody, exquisitely crafted westerns as *The Wild Bunch*. Peckinpah's much-imitated films were among the first to employ highly stylized cinematic techniques to depict the extremes of human brutality.**

Heavily criticized for allegedly glorifying violence on screen, Peckinpah always maintained that his purpose was to sensitize audiences to unspeakable acts. "I'm a great believer in catharsis," he explained in one interview. "When people complain about the way I handle violence, what they're really saying is, 'Please don't show me; I don't want to know.'"

### Jeans vs. the Suits

Peckinpah was descended from early settlers in California who became ranchers and mill owners. His father and grandfather were judges, but Peckinpah grew up on a ranch. The independent spirit of his background and upbringing infused his entire life and career. As a teenager, Peckinpah was such a troublemaker that his father sent him to military school to try to rehabilitate him. Peckinpah served in the U.S. Marines during World War II.

After the war, at Fresno State College, Peckinpah became involved with Marie Selland, who was active in theater groups. He enrolled in drama classes, started directing plays, and married Selland. Their marriage lasted 15 years and produced three daughters and a son.

After earning a master's degree in drama from the University of Southern California, Peckinpah took a job handling props for network television. He was fired from the musician Liberace's TV show for refusing to wear a suit on the set. He next worked as a dialogue director and occasional writer for movies. As an assistant to director Don Siegel, Peckinpah helped write the script and had a small acting role in the 1956 film *Invasion of the Body Snatchers*. He then returned to television, working on scripts for such westerns as *Gunsmoke*. By 1960, Peckinpah was writing and directing his own TV series, *The Westerner*, but it was cancelled after 13 episodes.

Even in his early days in Hollywood, Peckinpah's fascination with violence made for a rocky career. He once offered a script to Disney studios, which rejected it with the criticism: "Too many shootings, not enough animals." The



first film Peckinpah directed was *The Deadly Companions*, a 1961 western with a fresh and audacious viewpoint. But it had a limited release and earned little attention. The following year he received more acclaim for another cowboy movie, *Ride the High Country*, which starred Joel McCrea as a former lawman trying to regain his lost integrity. "This movie celebrates a hero of self-control," noted critic Michael Sragow. "But each frame is energized with a sense of what that self-control has cost the man in love, friendship and glory."

Peckinpah's prickly personality and his penchant for creative disagreement got him fired from a job directing *The Cincinnati Kid*, and he feuded with his producer over his next film, *Major Dundee*. As a result, the film was extensively edited over Peckinpah's objections, and it failed at the box office. Peckinpah had become almost an outcast in Hollywood. Unable to find another directing job, Peckinpah wrote the scripts for the films *The Glory Guys* and *Villa Rides*, a film about Mexican revolutionary Pancho Villa. He also continued to work in television as a writer and director.

"When he was making movies it felt, for some of us, as if we were watching an ongoing street accident," recalled critic Pauline Kael in an interview for a 1999 Peckinpah retrospective. "We felt helpless; he was determined to be doomed. He liked the helplessness of it all; the role he played was the loser. And though the competition is keen, he's probably the greatest martyr/ham in Hollywood history." In Kael's view, Peckinpah was largely to blame for his

legendary battles with studio executives: "He needed their hatred to stir up his own. He didn't want to settle fights or to compromise or even, maybe, to win. He wanted to draw a line and humiliate the executives. He simply wasn't a reasonable person."

### ***The Wild Bunch***

In 1969, Peckinpah's *The Wild Bunch* was released. At the first screening, dozens of people walked out during the film's first ten minutes. This landmark film had a mixed but profound impact on audiences, many of whom came into theaters expecting a mainstream western and felt themselves challenged at every turn. On the surface, the story concerned what critic Sragow called "grizzled outlaws escaping railroad bounty hunters and barging into the Mexican Revolution." But it was much more than that. Writer Charles Ramirez Berg termed the film a "frontal assault to cinematic sensibilities." After a European release, it did poorly at the box office in the United States, and the studio cut eight minutes from every American print of the film.

*The Wild Bunch* marked a dramatic departure for Hollywood in its depiction of violence, away from what Berg called the "sanitized, 'bang-you're-dead' movie convention-no splattered blood or contorted body spasms" to a more terrifying, in-your-face hyper-reality. The film's carefully choreographed, slow-motion bloodletting would be much imitated in years to come by directors from Martin Scorsese to Quentin Tarantino. To admiring critics, Peckinpah's approach to violence in the *The Wild Bunch* was visionary. "Peckinpah's treatment of individual acts of violence is electrifyingly ambiguous," asserted Sragow. "Peckinpah cuts among speeds-and between parallel displays of mayhem-as he shifts perspectives. The results challenge a viewer's powers of perception and empathy."

More than any Hollywood movie made up to that point, *The Wild Bunch* seemed designed to rile audiences. "The idea was challenge," wrote critic Louis Black. "The intention was confrontation. The essence was conflict." Kael said Peckinpah's own attitude toward his goals in the film was ambivalent. "I remember his talking to me, when he was planning *The Wild Bunch*, saying that he was going to make a picture so ferocious that it would rub people's noses in the ugliness of violence. They would never want to see anything violent again. But when the picture came out and there were insensitive people who cheered the bloodshed, he seemed delighted, he acted vindicated."

*The Wild Bunch* divided Peckinpah's audiences and critics into two camps: those who adored the moral ambiguity and technical daring of his work, and those who abhorred his obsession with violence and considered his skills overrated. For *The Wild Bunch*, Peckinpah received his only Academy Award, for best original screenplay.

### **Feuds and Furor**

Peckinpah's next film, *The Ballad of Cable Hogue*, suffered editing cuts by producers after more feuding between the studio and the director over its contents. Next, Peckinpah went to England to film *Straw Dogs*, starring Dustin Hoffman. Released in 1971, it was a brutal story



about rape and revenge, filled with what seemed to most critics as gratuitous violence. It was attacked by many for its unflinching portrayal of sexual violence but hailed by Peckinpah fans for its uncompromising attitude.

Peckinpah's notoriety had grown to the point that he had become a magnet for social critics. *Straw Dogs* especially called attention to Peckinpah's often crude and degrading portrayals of female characters in his films. "Peckinpah on screen was a terrible misogynist," wrote biographer David Thomson. "His women are bitches, whores, whore-saints, sluts, betrayers, naive madonnas—they are also riveting. [T]hese women are so passive, so silent, so fit for male paranoia."

Teetering between cult status and controversy, Peckinpah softened his hard-edged style when he agreed to direct two top Hollywood stars of the era, Steve McQueen and Ali McGraw, in the romantic action thriller, *The Geta-way*. This film, more accessible and less offensive to mainstream audiences, was his biggest box-office hit. Having paid some bills, Peckinpah returned to his more adventurous mode with *Pat Garrett and Billy the Kid*, a beautiful but obtuse western that was severely cut by MGM Studios during the usual post-production disputes that dogged Peckinpah's efforts. Thomson called *Pat Garrett and Billy the Kid* "one of the great American films, entrancing, perplexing, the beauty redeems the boorish attitudes."

Most of Peckinpah's fans were disappointed with his later work, including his grisly mid-1970s films *Bring Me the Head of Alfredo Garcia*,—a story of a man carrying a decapitated head—*The Killer Elite*, and *Cross of Iron*. These movies lack the vitality and freshness of his earlier work and seem to show a frustrated director who is stewing in his own juices. With his career on the decline, Peckinpah next directed a knockoff comedy called *Convoy*, a film based on a pop song. His final effort was the ill-received *The Osterman Weekend*, a creative but unfocused work released in 1983.

### His Own Man

Throughout his career, Peckinpah's efforts to bring his uncompromising vision to the screen were constantly thwarted by studio executives who blanched at the excesses of his style and content. The battles were the stuff of Hollywood legend. Peckinpah's approach always took on the dimensions of a director-against-the-world crusade. "His anti-authoritarianism went beyond radical chic," Sragow wrote. "He curried favor with no one, whether movie mogul, ideologue, or tastemaker."

Peckinpah's turbulent personal life mirrored the macho images he put on screen. He was a hard-drinking, rugged individualist who refused to follow many of society's social conventions. Following a divorce from Selland, he married Mexican actress Begonia Palacios, and they had a daughter together before divorcing. Peckinpah next married an Englishwoman, but that marriage was short-lived. He returned to Palacios; they again married and again divorced.

Black noted how the director's screen protagonists seemed to represent his own frustrations: "Peckinpah cherished failure, celebrating it as an act of defiance. Peckinpah's heroes were aggressive losers, men out of time

who were proud of it, who wouldn't have it any other way, as though they knew that there would never be a really good time for such dreamers, such visionaries." Thomson agreed, pointing out that the plots of his movies, though usually set in the dying days of the American frontier, seemed to mirror the director's own predicaments: "Through Peckinpah's work there is the theme of violently talented men hired for a job that is loaded with compromise, corruption and double-cross. They strive to perform with honor, before recognizing the inevitable logic of self-destruction."

Self-destruction was a constant motif in Peckinpah's life. He battled alcoholism and a rash of illnesses and physical limitations. Because of the excesses of his lifestyle, Peckinpah developed heart disease. He eventually had to wear a pacemaker.

In December 1984, a blood clot was discovered in Peckinpah's lung and he was flown from Puerto Vallarta, Mexico, to Los Angeles, for treatment. He died at the age of 59 in a suburban Los Angeles hospital, with Palacios at his side.

Battles over his work continued beyond his death. When a "director's cut" of *The Wild Bunch* was released in 1994, restoring sections edited out by studio executives in 1969, the Motion Picture Academy of America slapped an NC-17 rating on it, even though the original film had been rated "R." The rating doomed the re-release, because most major theater chains and some video retailers refused to carry NC-17 movies. Long after his death, it seemed, Peckinpah still had the power to incite controversy.

### Books

Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

### Periodicals

*Atlantic Monthly*, June 1994.

*New York Times*, December 29, 1984.

*Time*, January 7, 1985.

### Online

"Sam Peckinpah," *All Movie Guide*, [www.allmovie.com](http://www.allmovie.com).

"The Passion of Sam Peckinpah," *The Austin Chronicle*, [http://www.auschron.com/issues/dispatch/1999-10-22/screens\\_feature.html](http://www.auschron.com/issues/dispatch/1999-10-22/screens_feature.html). □

## Benjamin Peirce

**Mathematician, physicist, and astronomer, Benjamin Peirce (1809-1880) has been called the "father of American mathematics." He distinguished himself as superintendent of the U.S. Coast Survey. Peirce was a professor at Harvard College from 1833 until his death, and contributed to the founding of its observatory.**

Peirce is remembered for calculating the exact location and path of the planet Neptune, using a series of lengthy and complex mathematical equations. He also tracked and calculated the paths of many comets and charted the phases of the moon for the United States government. Soon after the discovery of Saturn's rings in 1850, he calculated and published his assessment of the possible composition of the rings. Peirce's work and his writings on practical mathematics extended to the fields of astronomy, mechanics, and geology. His contributions to the field of theoretical mathematics included commentary on hypercomplex number theory.

### A Prominent Puritan

Benjamin Peirce was born in Salem, Massachusetts, on April 4, 1809. He was the third child of Benjamin Peirce and the former Lydia Ropes Nichols and was descended from a long line of Puritans. The Peirce family came from Norfolk County, England, to Watertown, Massachusetts, around 1634. The Peirces were craftsmen, weavers, shopkeepers, farmers, and East India traders. The elder Benjamin Peirce served as a state legislator and later joined the staff at Harvard as a distinguished librarian.

Peirce attended Salem Private Grammar School. There he came under the influence of the mathematician and scientist Nathaniel Bowditch, whose son attended school with Peirce. Bowditch let Peirce read proofs of his English translation of P.S. Laplace's astronomy treatise, *Traite de Mecanique Celeste* (*Celestial Mechanics*). The translation was published as Peirce was graduating from Harvard in 1829. Until 1839, Peirce contributed to revising and refining the Bowditch translation. Peirce had a lifelong professional relationship with Bowditch and later paid tribute to Bowditch in the introduction to a treatise Peirce wrote on analytical mechanics, calling him "the father of American geometry."

### Harvard Professor

After graduating from Harvard, Peirce joined the teaching staff at Round Hill School in Northampton, Massachusetts. After two years at Round Hill, Peirce joined the faculty at Harvard, initially as a mathematics tutor. In 1833 he became professor of mathematics and astronomy at Harvard, and in 1842 he was named Perkins professor at the college.

So complex was Peirce's mind that it was difficult for all but the most proficient mathematicians to understand much of his work. The speed of his mental processes made it difficult for him to describe his work coherently with pen and paper. His lectures were far too advanced for many students to follow. Those students who heard him speak often said they felt awed by his commitment to the discipline of mathematics.

During his tenure at Harvard, Peirce published a variety of mathematics texts. These included *Plane Trigonometry* in 1835, *Spherical Trigonometry* in 1836, and *Plane and Solid Geometry* in 1837. He published his *Treatise on Sound* in 1836. In 1840 he published another text on plane

geometry, followed in 1841 by the first volume of a text on mechanics; a second volume followed in 1846.

Peirce was instrumental in the founding of the Harvard College Observatory in 1839. When in March 1843 he observed a comet, he spearheaded an intensive effort to get a 15-inch telescope at the observatory. The telescope was installed in 1847, allowing Peirce better opportunity to study celestial phenomena. The telescope was instrumental in the discovery of the planet Neptune that year and in calculating its path. As the mathematics editor of the *American Almanac*, Peirce published his calculations and observations of the known orbits of comets in the almanac's 1847 edition.

### Lazzaroni

Around 1840, a small but prominent cadre of American scientists and mathematicians assembled to seek support and funding for national development in science. The group was known sarcastically as Lazzaroni, or beggars. It had close ties to a formidable European scientific community. Peirce aligned himself with the Lazzaroni, who eventually became the nucleus of the American Association for the Advancement of Science. The association solicited leading industrialists for political backing and support for scientific advancement.

In 1843 Alexander Dallas Bache, a self-ordained leader of the Lazzaroni, became the second superintendent of the U.S. Coast Survey. The Coast Survey, authorized in 1807, was the first scientific agency established by the U.S. Government. Under the influence of the Lazzaroni, the Coast Survey helped spur the scientific movement in the United States. In 1852, at superintendent Bache's request, Peirce calculated the longitudes of various places in the United States.

Peirce and his colleagues in the educational and scientific communities persuaded Congress to authorize funding for the publication of the *American Ephemeris and Nautical Almanac*. A bureau for the publication was established in Washington, D.C., in 1849, and the project was delegated to Harvard College, with Peirce as consulting mathematician. The moon tables, as calculated by Peirce, were published in 1853 and described the phases of the moon through 1883.

In the 1840s Peirce joined with one of his former Harvard students, Benjamin Apthorp Gould, and a Swiss naturalist, Louis Agassiz, to lobby for expansion of the science facility at Harvard College. They were instrumental in the opening of Harvard's Lawrence Scientific School in 1847. Peirce, with his high-visibility projects during those years, contributed significantly to the development of a Harvard-based sphere of scientific influence.

In 1863, Peirce and the American Association for the Advancement of Science helped get Congress to establish the National Academy of Sciences. Peirce was among its 50 charter members. He was a member of the organizing committee and served as chairman of the mathematics and physics groups of the academy.

In 1867 Peirce relinquished his post as consultant for the American Ephemeris bureau to become superintendent of the U.S. Coast Survey. His three-year association with the Coast Survey is considered one of his most significant contributions. Among the far-reaching projects undertaken by the Survey under Peirce was surveying Alaska, which had just been purchased from Russia. Peirce also sent representatives worldwide to observe solar eclipses.

### Astronomer of Note

Because of his exceptional competence in performing lengthy calculations and comprehending complex geometric concepts, Peirce made many calculations about objects in space. In 1847 he published a work containing the known orbits of comets. That same year he performed a series of extended calculations to determine the precise location, orbit, and weight of Neptune, which had been discovered in 1846.

In 1850 rings were discovered around Saturn, leading to much speculation about their composition. George Phillips Bond of the Harvard College Observatory, who discovered the rings, suggested that they might be fluid. Peirce contested that theory and put forth a comprehensive set of formulas to disprove it. He published an initial analysis of the nature of the rings in 1851. In 1866 he published his formulas for the rings in *Memoirs of the National Academy of Sciences*.

In 1852 Peirce described a hypotheses concerning probability, which came to be known as Peirce's criterion. Although his premise was ultimately disproved, he left an extraordinary amount of detailed calculations about probability. In the *Astronomical Journal* of December 31, 1858, he published a theory detailing the hyperbolic orbit of comets. His *System of Analytical Mechanics*, which he dedicated to Bowditch, was regarded well into the 20th century as definitive.

Peirce lectured widely, and during his lectures he routinely introduced new concepts. In an 1870 presentation called "Linear Associative Algebra," which he presented to the National Academy of Sciences, he introduced the terms *idempotent* and *nilpotent*. The former describes a number that approaches itself when calculated to a power of two or greater, and the latter refers to a number that approaches zero. He later self-published the speech, which contained his widely quoted statement: "Mathematics is the science which draws necessary conclusions." He also coined the phrase "indeterminate form" to describe the incalculable equation of zero divided by zero.

Peirce died on June 10, 1880, in Cambridge, Massachusetts. His final significant work, *Ideality in the Physical Sciences*, was published posthumously in 1881. It was the text of a lecture that he delivered early in 1879.

Peirce's use of mathematical calculations to predict accurately such phenomena as the recurrence of comets and the phases of the moon demonstrated the practicality of his knowledge. He performed his extensive calculations without the convenience of an adding machine, much less a calculator or computer.

Peirce married Sarah Hunt Mills on July 23, 1833. Together they had five children: James Mills, born in 1834; Charles Sanders, born in 1839; Benjamin Mills, born in 1844; Helen Huntington, born in 1845; and Herbert Henry Davis, born in 1849. The children, like their father, grew to be prominent citizens: a Harvard professor, a noted Harvard-based scientist and philosopher, a mining engineer, the wife of a realtor, and a foreign diplomat respectively.

### Books

*Dictionary of American Biography*, American Council of Learned Societies, 1928-1936.  
Lenzen, V.F., *Benjamin Peirce and the U.S. Coast Survey*, San Francisco Press, 1968.

### Periodicals

*New Solidarity*, August 22, 1986.

### Online

"Earliest Known Uses of Some of the Words of Mathematics," <http://members.aol.com/jeff570/i.html> (February 5, 2001). □

## Willie Pep

**Known as "Will o' the Wisp" and "Willie the Wisp," Willie Pep was a dominant featherweight boxer in the 1940s.**

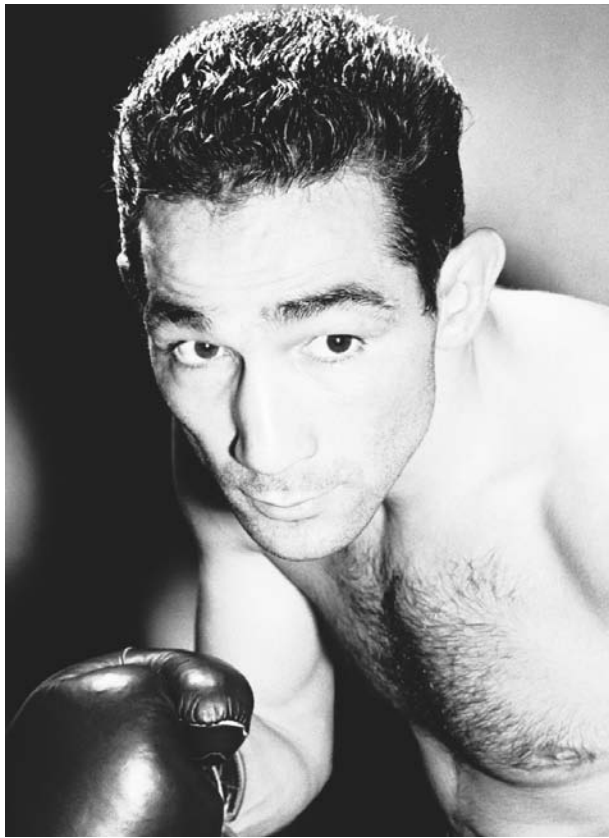
Pep was born William Guiglermo Papaleo on September 9, 1922, in Middletown, Connecticut, near the city of Hartford. He was the son of Sicilian immigrants, Salvatore and Mary (nee Marchese) Papaleo. Pep grew up in a tough neighborhood. He took up boxing, in part, because he was tired of getting beat up by older kids and wanted to defend himself. After dropping out of Hartford High School at the age of 16, Pep made money by selling newspapers and shining shoes.

### Began Amateur Boxing Career

Pep spent much of his time boxing as an amateur based at the Du-Well Athletic Club in Norwich, Connecticut. He boxed in 65 amateur bouts over a two-and-a-half year period, posting a record of 59 wins and three losses. In 1938, he won the Connecticut amateur flyweight championship. The following year, he won the Connecticut amateur bantamweight championship. Pep told Jim Shea of *Sports Illustrated* that "The best advice I ever got was from a kid in the gym who told me, 'When you're in the ring, make believe a cop is chasing you; don't let him catch you.'"

### Entered Professional Ranks

When Pep was only 19 years old, he turned professional. He won his first bout on July 3, 1940, fighting Jim McGovern in Hartford, Connecticut. Pep went on to go undefeated in his first three years as a professional boxer. Pep became the youngest boxer in 40 years to win a world



title. He won his first world title as a featherweight when he defeated Albert "Chalky" Wright in a 15-round bout in New York City on November 20, 1942.

Because this world title was awarded by the New York State Athletic Commission, the National Boxing Association would not recognize Pep as featherweight champion until he defeated their reigning champ, Sal Bartolo. Pep became the consolidated world featherweight champion when he defeated Bartolo by decision in a ten-round bout in Boston, on April 9, 1943. Pep would retain his world champion crown until 1948.

Of his early success, Pep told Peter Heller in *In This Corner*, "I was twenty years old. It was a very big thing for me to win the championship of the world. I didn't realize the strength of it. I didn't know what it was all about. I wasn't mature enough to sense what I had really won until 1948 when Saddler licked me, then when I won it back, I realized the strength and I realized it was a great thing to be a champion of the world."

There were several reasons why the featherweight Pep, who stood 5'5 1/2" and weighing about 125 lbs., was such a dominant fighter in his time. He was a fast, speedy boxer, with dominating footwork and solid boxing skills. He used the whole ring to his advantage. Instead of eluding his opponents, Pep could knock them out after frustrating them. He had a great trainer in Bill Gore who helped Pep use his assets to the best of his ability. James B. Roberts and Alexander G. Skutt wrote in *The Boxing Register* that "Pep developed a ring artistry that veteran boxing observers still

admire. His style of boxing has been likened to tap dancing with gloves on. He once even won a round without even throwing a punch because his tactical movements kept his opponent completely off-balance." The fight Roberts and Skutt refer to took place in 1946 against Jackie Graves in Minneapolis. Pep went on to win the bout by TKO (technical knock out) in the eighth round.

### Lost First Fight

Pep's first defeat as a professional came in a non-title fight with Sammy Angott on March 19, 1943, in New York City. Angott had been a lightweight champion. Until that time, Pep had gone 42 fights without a defeat. After this loss, Pep went on to win 73 consecutive fights. This was a record few if any boxers had matched in the past and would be able to match in the future. By this time, Pep was world famous, a status that continued when he successfully defended his title against Sal Bartolo in 15 rounds on June 8, 1943, in Boston.

During the on-going American war effort in World War II, Pep served in the Navy in 1943 and was discharged with honors in the spring of 1944. He also served in the United States Army in 1945. During his service years, Pep continued his undefeated streak. He successfully defended his title by defeating Wright once again in 15 rounds on September 29, 1944, in New York City. Pep went on to defend it successfully several more times by defeating Phil Terranova in 15 rounds on February 19, 1945, in New York City, and Bartolo on June 7, 1946, in New York City by knock out (KO) in the twelfth round.

### Career Nearly Ended

On January 8, 1947, Pep was flying from a training camp in Miami, Florida, to his home in Hartford, Connecticut, for final preparations for a fight. The plane crashed in woods near Millville, New Jersey, tearing it apart. Three passengers were killed and 18 injured. Pep was among the injured. He broke his left leg and two vertebrae in his back. Many believed Pep's boxing career was over, though Pep did not. As soon as his casts were removed in May, Pep resumed training. Just over six months after his accident, Pep was back in the ring and winning. He defeated Victor Flores by decision in ten rounds on June 17, 1947, in Hartford. Pep continued his defense of the world title. He retained the crown by TKO in the twelfth round in a fight with Jock Leslie on August 22, 1947, in Flint, Michigan. Pep's final successful defense also came by technical knockout, this time in the tenth round, against Humberto Sierra, on February 24, 1948, in Miami.

### Temporarily Lost World Title

Pep lost his world title when he fought in atypical fashion. His opponent was Sandy Saddler, with whom Pep would have several more intense bouts. The fight took place on October 29, 1948, at Madison Square Garden in New York City. Instead of fighting a smart fight, Pep decided to brawl. Scoring a huge upset, Saddler knocked Pep out in the fourth round. But Pep's tenure without the title was short. Saddler and Pep had a rematch on February 11, 1949. The

fight was later regarded as one of the best boxing matches of all time. Though Pep was the underdog, he boxed a more intelligent fight this time. Pep regained his title when he won by decision in 15 rounds, though Saddler had landed many of his punches.

Pep successfully defended his re-gained featherweight crown three times. He defeated Eddie Compo by knockout in the seventh round on September 20, 1949, in a fight staged at Waterbury, Connecticut. The next title defense came against Charley Riley on January 16, 1950, in St. Louis, Missouri. Pep won by knockout in the fifth round. Pep's final defense came against Ray Famechon, the European champion. Pep won in 15 rounds on March 17, 1950, in New York City.

### Kept from Title by Old Foe

Pep's fourth title defense came against Saddler. Because of the fighters' history together, the event was a spectacle, taking place in New York City's Yankee Stadium on September 8, 1950. Saddler won by TKO after mauling Pep. Pep had to leave the match because he was injured with a dislocated shoulder. He did not box again until January 1951, then won his next eight, non-title bouts.

Pep tried to regain his world featherweight crown from Saddler in another major title fight. The event took place in New York City's Polo Grounds (the one-time home of the New York Giants baseball team) on September 26, 1951. Pep again lost because he brawled instead of fighting a smart match. Saddler was also out of control. Each fighter fouled the other repeatedly. Twice one fighter wrestled the other to the floor; during one of these incidents, they took the referee with them to the canvas. Pushing, shoving, tripping, gouging, and heeling marred the match. Pep lost by TKO after the ninth round when he could not come out for the tenth because he had a serious gash under one of his eyes. This injury was allegedly caused by Saddler's thumb. For their behavior, the commission suspended both Saddler and Pep. Pep did not fight again until April 1952.

Though Pep was not in contention for the featherweight crown, he continued to box successfully, winning almost all of his matches. He lost only once in 12 fights in 1952, and defeated all of his 11 opponents in 1953. Pep only fought five times in 1954, losing only once to Lulu Perez in the second round by TKO on February 26. After this loss, the New York State Athletic Commission took away Pep's boxing license because of his age (31). Pep's career continued in other states. He won all but one of his 24 fights between 1955 and 1957.

### Career at Its End

Though Pep won 11 of his first 12 fights in 1958, he lost his final chance at a world title on September 20, 1958. Fighting Nigerian boxer Hogan "The Kid" Bassey in Boston, Pep lost by TKO in the ninth round, though he had been leading on the judges' scorecards. Pep formally retired the day after losing to Sonny Leon by decision in ten rounds on January 26, 1959, in Caracas, Venezuela. He was elected to *The Ring's* Boxing Hall of Fame four years later.

Pep staged a comeback in 1965, winning nine fights that year. The last four were by TKO or KO. Pep's final professional fight came on March 16, 1966, against Calvin Woodward in Richmond, Virginia. Pep lost in six rounds, and admitted that he did not feel he was in shape enough to fight. Over the course of Pep's professional boxing career, he had fought in 241 bouts, winning 164 by decision and 65 by knockout; losing 11, five by decision and six by knockout; and one draw.

One reason Pep had staged his short-lived comeback was his need for money. Though he had made a lot over his career, he spent it wildly, losing much by gambling, and investing poorly. But he also still loved the sport. After his fighting days ended, Pep worked as a second with boxers, boxing inspectors, and a boxing referee. Among his matches as referee was the featherweight championship match between Harada and Famechon. Pep's other sports-related occupations included wrestling inspector and sports columnist. He also managed a nightclub, worked as a brewery customer service representative, restaurant greeter, and a deputy sheriff in criminal court in Hartford, Connecticut. In the 1970s, Pep was employed in Connecticut's Athletic Division in the boxing office, a position he held until the late 1980s. Pep was inducted into the International Boxing Hall of Fame in 1990.

### Books

- Biographical Dictionary of American Sports: Basketball and Other Indoor Sports*, edited by David L. Porter, Greenwood Press, 1989.
- Burrill, Bob, *Who's Who in Boxing*, Arlington House, 1974.
- Heller, Peter, *In This Corner: Forty World Champions Tell Their Stories*, Simon and Schuster, 1973.
- Hickok, Ralph, *A Who's Who of Sports Champions: Their Stories and Records*, Houghton Mifflin Company, 1995.
- Odd, Gilbert, *Encyclopedia of Boxing*, Crescent Books, 1983.
- Roberts, James B. and Alexander G. Skutt, *The Boxing Register: International Boxing Hall of Fame Official Record Book*, McBooks Press, 1999.

### Periodicals

- San Francisco Chronicle*, August 7, 1990.
- Sports Illustrated*, July 16, 1990. □

## George Walbridge Perkins

**George Walbridge Perkins (1862-1920) was a well-known and oft-criticized figure in American business during the early twentieth century. He spent many years in the insurance business, where he established a network of company agents that became the industry standard. Perkins also instituted one of the first-ever pension plans for employees at New York Life Insurance Company. He later worked with Wall Street powerhouse J. P. Morgan, where he supervised the consolidation of smaller firms into some of the biggest names in American industry.**



Perkins was born in Chicago on January 31, 1862, into a family whose roots in America dated back to the 1631 arrival of one John Perkins to New England. His father had been involved in several business enterprises, but was also an active Presbyterian who worked as an occasional prison missionary. At the time of his first son's birth, the elder Perkins was serving as head of Chicago's home for juvenile delinquents. The family lived on the grounds of the facility, as they did when Perkins Sr. became warden of the state prison at Joliet. However, by 1872, Perkins's father decided that his four children should be raised in a more wholesome environment, and took a managerial post at the Chicago office of the New York Life Insurance Company. Not long afterward, his wife, Sarah Mills Perkins died in childbirth, leaving George Perkins the oldest of four motherless children.

Educated at home until the age of ten, Perkins was a rambunctious child and his father did not harbor much ambition for him. He finished school at the age of fifteen, and became an office boy for his father. Two years later he became an official employee of the New York Life Insurance Company at a salary of \$25 a month. In 1880, the family moved to Cleveland when the elder Perkins was made manager of all New York Life policy solicitors on Ohio. As a courtesy to his father's years with the company, Perkins was allowed to succeed him in the job when his parent died in 1886. However, he was soon shunted to Indiana when a more experienced manager coveted the Ohio region. Perkins asked for a leave of absence, and headed to Wichita and Denver, which were both experienc-

ing a massive real-estate boom. He began selling large policies there, and, with these in hand, he asked the company president to be made head of all Rocky Mountain territory. His offer was refused. Perkins returned to Denver and opened an office instead, and continued to sell New York Life policies; soon his total had exceeded \$2 million. Finally, he was named inspector of agencies in several new western states, with a territory stretching from Idaho to New Mexico. He held this position from 1888 to 1892.

### Named Vice President

Perkins was not so tenacious in his personal life. He was engaged more than once, and his formidable stepmother thwarted each one. Finally she relented and agreed that he should marry his first fiancée, Evelyn Ball, whose family lived in Cleveland. The couple was wed in August of 1889, and settled in Chicago, where he took offices in the Rookery Building. In the early 1890s, Perkins rose within the ranks during a period of distress, involving an executive in charge of South and Central American business. The man was accused of embezzlement, and the company was besieged in the press. Its solvency was called into question. The scandal grew to such proportions that New York Life's longtime president resigned. From Chicago Perkins acted swiftly to reassure policyholders and sales agents alike. He created weekly *Bulletins* that went out to agents, and worked to reverse the tide of negative newspaper stories. So effective were his tactics that, when an outsider was named to the presidency, it was done with the agreement that Perkins would be named third vice president for agency matters.

In his new post, Perkins received a salary of \$20,000, with a bonus of \$100,000 for having taken on additional duties in his previous position. He and his family, which included a daughter by then, moved to Riverdale-on-the-Hudson outside of New York City. The house enjoyed a fine view of the Palisades, as the cliffs of the Hudson River were known. Perkins would later play an important role in their preservation. From his new Manhattan office, Perkins continued to write the company *Bulletins* himself. They announced sales contests and bonus prizes to top sellers, and offered encouragement and tips on closing the sale. A typical *Bulletin* contained such exhortations as one from January 11, 1896: "Excuse me from the man who comes in and says: 'Mr. Perkins, I am going to write \$120,000 in 1896,' and let me shake hands with the man who says: 'Mr. Perkins, I am going to write \$10,000 of good, straight business in the month of June.'"

### Established Agency System

In 1892, New York Life was the last among its competitors, Mutual Benefit Life Insurance Company and Equitable Life Assurance Society. By the end of the century, however, it had advanced to first place. This remarkable change came from Perkins's revolutionary new plan for the company to deal directly with agents itself. Prior to this, the company hired territory agents like his father. They, in turn, paid solicitors to sell insurance policies. Much of this was done on a part-time basis, and the solicitors were not paid very

much anyway. Their loyalties were with the territory managers, not the company. Fraudulent practices sometimes occurred as managers moved from place to place.

Perkins began eliminating the general agents by not renewing their contracts with the company. Instead, he contracted directly with the sales agents. This created the agency system, which became the standard in the insurance industry and was still in place a century later. It gave New York Life far more control over its sales force, but competitors still tried to woo the best away. To create a deeper sense of loyalty, Perkins instituted what he called the "NYLIC" system, its letters being an acronym for the company name. It promised agents that after five years with the company and having sold \$25,000 worth of policies, they would advance to the next level and would receive monthly bonuses on their sales. The bonuses increased every five years. After 20 years, an agent might retire and simply live from his bonuses. Somewhat controversially, the NYLIC Association required that its members work as full-time sales agents, which Perkins believed would elevate the job to a more professional status.

### Headhunted by Morgan

Perkins advanced to the post of first vice president and began traveling abroad to conduct company business. He personally negotiated with Sergei Witte, finance minister to the Russian czar, to loan Russia money. This deal attracted the attention of Wall Street. By this time Perkins was already on friendly terms with New York's governor, Theodore Roosevelt. In 1900 the conservation-minded state executive named Perkins as chair of the Palisades Interstate Park Commission. The cliffs were eroding because the rock was being quarried for roads, but Perkins and other Riverdale residents had long complained that the blasting was noisome. The commission set about raising private funds to buy out the quarrying contracts. With this in mind, Perkins went to the office of J.P. Morgan to ask for a donation. Instead, Morgan considered one of the most powerful men in the country at the time offered Perkins a job.

Perkins initially declined, because of the loyalty he felt toward New York Life. But a promise to increase his salary tenfold, plus the prestige of a partnership in the most influential private banking house on Wall Street was too great a lure. He joined the firm in early 1901. During his years there, Perkins handled much of the press for Morgan, who had received much bad publicity over the fantastic profits it earned in the relatively unregulated financial industry of the day. It financed railroads, mining operations, and manufacturing on a massive scale. The rewards it reaped were correspondingly handsome. Editorial cartoonists caricatured Morgan's stout personage as "the Money Trust." Other jibes called into question Perkins's remaining ties to New York Life. One cartoon depicted an enormous Morgan holding Perkins by the legs as he dived into a well marked "N. Y. Life Policy Holders' Dough."

### Historic Employee Stock Plan

Perkins was given responsibility for organizing a new conglomerate created by the consolidation of five separate

farm-machinery companies, International Harvester Corporation. He also oversaw the set-up of the International Mercantile Marine Company and the Northern Securities Company. The year that Perkins became a partner coincided with the Morgan firm's creation of the United States Steel Corporation, the first billion-dollar company in history. For it Perkins devised an employee-benefit plan in which annual offerings of preferred stock would be made to workers on advantageous terms. The strategy was the first of its kind. However, Perkins' motives were far from altruistic. Through it U.S. Steel hoped to avoid problems with organized labor by keeping its employees loyal to the company and thus personally benefiting when it did well. By World War I, some 40,000 workers owned stock, but they only qualified for the bonus dividends if they demonstrated "a proper interest in [the] welfare and progress" of U.S. Steel.

Perkins became embroiled in the growing tide of public sentiment against big business when he came under government investigation for his ties with New York Life. The press vilified him as an egomaniac for taking credit for New York Life's success. His actions as one of the company's executives were also called into question, including a \$48,000 donation to the Republican Party. Policyholders were outraged. Perkins and the other executives were denounced. Some states even revoked New York Life's license. Perkins was forced to resign as a vice president at New York Life, but remained on its board of trustees.

### Leader in Progressive Politics

Perkins left J. P. Morgan in 1910 to devote his time to other interests. He was a well-known public figure by then, and began lecturing on the topic of modernizing American business. He advocated cooperation, not competition. Perkins argued that properly regulated large corporations, such as U.S. Steel and International Harvester, were more efficient enterprises than a multitude of smaller firms competing against one another. He also espoused retirement pensions and stock-option for workers. In 1912, Perkins entered politics formally when he was named head of the national executive committee of the Progressive Party. It was created in time for that year's presidential elections, when Republicans split between Roosevelt and William H. Taft. The Progressives called for women's suffrage, among other reforms. However, Roosevelt's four million votes failed to win him election.

During the First World War, Perkins served as chair of a joint state and municipal food supply commission. His son, George III, enlisted in the U.S. Army and was sent overseas after graduating from Princeton. Perkins doted on his daughter-in-law, who was expecting a child when her husband left. When she contracted a fever, her family called Perkins for help. The war had made most medical professionals scarce, but Perkins found a doctor and hurried to the town of Princeton, where he remained by her side as her condition worsened. Both she and the child died, and Perkins was forced to cable his son with the sad news. Never an introspective man, the tragedy triggered questions about his own life, and whether perhaps he had neglected spiritual matters in favor of business concerns. At the time of death on June

18, 1920, he was a member of 40 philanthropic societies. He was felled by a heart attack that occurred during a stay at a sanatorium in Stamford, Connecticut.

### Books

*Dictionary of American Biography*, Base Set, American Council of Learned Societies, 1928-1936.

Garaty, John A., *Right-Hand Man: The Life of George W. Perkins*, Harper and Brothers, 1957. □

## Francois-Andre Philidor

**Francois-Andre Philidor (1726-1795) was not only a highly talented member of France's royal musical establishment, he was also a chess master of unmatched skill. To this day, he is remembered equally for his comic opera (*opera comique*) compositions, as well as his many contributions to modern chess.**

For almost 50 years, Philidor was the unofficial chess champion of the world. He gained his reputation by winning match after match in Parisian cafes, beating famous philosophers of the time such as Jean-Jacques Rousseau and Francois Voltaire. He dazzled Europe with his amazing ability to play chess blindfolded, and was the author of the influential first book on the subject, *L'analyse des Echecs (Analysis of Chess)*, in which he described strategies and analyzed games. Despite his success and genius in this area, Philidor always claimed music as his primary pursuit. He composed over 20 operas in his lifetime, the most famous of which include: *Le Sorcier* (1764), *Tom Jones* (1765), *Ernelinde* (1766), and *Carmen Saeculare* (1779). His works were mostly farcical operas, but they also embraced a number of motets (sacred music compositions) and a few lyric tragedies. Philidor divided his time between the cities of Paris and London. He died in England at the age of 69, exiled from his homeland.

On September 7, 1726, the composer who came to be known as "Philidor" was born in Dreux, France to 79 year old Andre Danican and his youthful third wife. The father, best known as the organizer of the Philidor Collection, a compilation of famous musical pieces, was a recently retired bassoon player of King Louis XIV. His wife is said to have been greatly unsophisticated. The boy, Francois-Andre Danican, was last to inherit the title "Philidor" that had been passed down in his family for generations since the reign of King Louis XIII in the early 1600's. The king had dubbed an ancestor, Michel Danican, as first in the line of a beloved dynasty of musicians that got their names from a favored Italian player named "Filidori."

### Music at the Royal Chapel

At the age of six, only two years after his father's death, young Philidor was admitted as a page of the Royal Chapel at Versailles. Due to his musical talent and appealingly

good disposition, he entered four years earlier than the proscribed rules allowed, and was put under the strict tutelage of the great composer and Teacher of the Pages, Andre Campra. In 1737, Philidor, at the tender age of 11, was granted permission to play his first piece before King Louis XV. The king was delighted with the performance, and rewarded the precocious musician with a few coins. The boy continued dedicating himself to his studies, and produced four more motets in the years leading up to 1740 when, at the age of 14, his voice changed and he had to leave the Royal Chapel choir.

During his years at the Royal Chapel, Philidor's education extended far beyond music. It was there that he first played the game that was destined to transform the rest of his life. Every morning at the chapel, the King of France heard music with Mass. There were often long waits for the monarch's arrival, during which time it was common practice for the King's 80 musicians to entertain themselves at chess tables near the sanctuary. According to George Allen's description in *The Life of Philidor*, "It was in such sacred proximities, from musicians waiting to accompany with voice and instrument the Holy Sacrifice, that Philidor learned chess." He was ten years old when he played his first game with a musician, many years his senior. As the story goes, Philidor shyly offered to fill in for an absent partner. The man's amusement at being matched with such a young boy quickly turned to rage and astonishment when he discovered that he was being beaten. Philidor narrowly escaped a fist fight, and was greeted the next morning by a line of men, each wanting to play a match with the small prodigy.

### Chess with Legal

At the age of fourteen when his boyish voice changed, Philidor left the royal chapel with the reputation of the best chess player in the band. He took to the cafes of Paris, where he stunned everyone with his mastery of the game. Philidor supported himself by teaching, performing, and copying music. So it was in 1741 that Philidor found himself in the famous Cafe de la Regence, winning matches against the great intellectuals Voltaire and Rousseau. This was also the place where he met the reigning chess champion of France who was soon to become his teacher, M. de Kermur, Sire de Legal. Legal was 40 at the time, and unbeatable. It was Legal that had first challenged Philidor to play a blindfolded game—something the master himself could not do. Philidor had no problem winning games without seeing the board thanks to the nights he spent in bed calculating moves in the dark. When he discovered how easily this mode of playing came to him, Philidor took on two opponents simultaneously. One such feat in 1744, created a huge sensation and resulted in Philidor's inclusion in the *Encyclopedie*. It was one of the principal works of the Age of Enlightenment, edited by the famous French philosopher, Denis Diderot.

### European Travels and *L'analyse*

As a result of neglect, Philidor lost music students during this exciting time as a chess celebrity in Paris, but music



was never far from his thoughts. In 1745, he was given the opportunity to travel to Rotterdam, Holland and assist in presenting concerts. He agreed to go, eager to pursue his musical career, but was hard pressed when the concerts were suddenly cancelled. He found himself stranded and penniless, but stayed in the Netherlands. Philidor supported himself teaching and playing Polish checkers and chess, especially with English army officers at the Hague (the official home of the Dutch government), until he continued on to London in 1747.

The young chess hero was well-received in England and, not surprisingly, he soon found himself in the company of the most celebrated chess players in the nation. Sir Abraham Janssen and Philip Stamma were excellent matches for the French composer, but he was still able to beat both of them in games at Slaughter's coffeehouse in London. Stamma was challenged to an extraordinary ten game match in which draws were counted as victories for his opponent. Even with these rules, Philidor won eight games, lost one, and drew one. From then on, he was considered the unofficial champion of the world.

In 1748, Philidor returned to Holland, where he wrote his legendary treatise on chess. *L'analyse* contained fictional games that showed how to stage a strategic battle on the board. It was in this classic text that Philidor made his legendary statement, "Pawns are the soul of chess." By this he meant to highlight the significance of a supported, mobile fleet of pawns as the essential factor in executing a successful attack. Before the book was published, Philidor went searching for subscribers to cover the printing costs. The British general, Duke of Cumberland, subscribed to 50 copies, while Lord Sandwich (the famous British politician) bought 10, and the English army officers committed to purchase 119 copies. Needless to say, Philidor's book was an immediate success, regarded as a work of genius. The author moved back to London in 1749 when 433 copies went to print. Promptly thereafter, the book was translated into English and German, and Philidor was invited to many of the courts of Europe to play chess in front of royalty. He was also asked by the French Ambassador, the Duke of Mirepoix, to his weekly chess dinners.

### Opera Comique and a Return to Paris

After nine years of being away from France, at the age 28, Philidor returned to Paris. There, he dedicated himself to building his reputation in the two areas in which he possessed the greatest skill. In 1755, Philidor finally won a chess match with his former master, Legal, at their old haunt, the Cafe de la Regence—an honor which he alone could claim. Nevertheless, his profession as a musician was still primary in his mind, and he set about establishing himself thus. His taste and style had been greatly influenced and improved by his travels, but he encountered mixed luck as a composer. A motet he submitted for consideration for a post at the Royal Chapel was judged "too Italian." As a result, the rebuffed Philidor found himself abandoning sacred music and moving in the direction of his true vocation as the first composer of the *opera comique*. It was a form of opera inspired by the farcical characters of the Italian

*commedia dell'arte*, where spoken dialogue was intermingled with self-contained musical interludes. Philidor's first opera of this kind, *Blaise le Savetier*, received much attention when it was produced in 1759. After this, Philidor continued churning out operas, sometimes at the rate of two per year. His work achieved a great deal of success and praise for the virtues of its harmony, originality, and melodic invention.

On February 13, 1760, at the age of 34, Philidor married Angelique-Henriette-Elisabeth Richer, an excellent musician and the daughter of a respectable composer. Theirs was a happy marriage that resulted in the birth of seven children. Familial life did not slow Philidor's accomplishments. In 1764 he composed the popular *Le Sorcier*, for which he was the first French composer to be applauded in person after the premiere. Then, in 1766, he wrote his first tragedy, the wildly successful *Ernelinde*, which was performed for eight nights in a row and was lavished with praise by the King himself.

### Final Years in London and Paris

In 1772, when Philidor was 46, he was drawn back again to England. This time, he frequented the Salopian Coffeehouse. In 1774 the Parsloe's Chess Club was formed in London. Its membership was limited to 100 prominent patrons, who paid annual dues that enabled Philidor to spend a season at the Club each year as a part-time resident master. He gave lessons there for 20 years. His blindfolded games (in which he apparently played up to four opponents at once) were made advertised spectacles attended by distinguished members of the Club. The second edition of Philidor's treatise on chess was published in 1777, and was dedicated "to the illustrious and honourable Members of the Club." Philidor's impact as a chess master was so far-reaching that Dr. Benjamin Franklin, the American inventor, scientist, and diplomat (who also happened to be an avid chess fan), visited him at the Cafe de la Regence in 1781. Franklin went with the express purpose of getting Philidor to autograph a copy of *L'Analyse*. After the eminent American had left, the owner of the Cafe exclaimed, "Francois, you just autographed your book for the American Ambassador!" Philidor glanced up from the game he was playing and said, "That's funny, I never knew that he was a chess player." Throughout these years, Philidor never abandoned his musical calling, and he composed his last work in 1790.

Philidor maintained this lifestyle, commuting from Paris to London until the year 1792. At 65 years of age, he left France for the last time, never to return. He was a supporter of the French Revolution, but his trip to England gave the new French government reason to consider him a traitor. In the beginning of the year 1795, after the bloody Reign of Terror (in which thousands deemed as French "counterrevolutionaries" were executed) had ended, Philidor appealed to the new French government to grant him leave to return home. Unfortunately, he had been placed on the dreaded list of *emigres* who were condemned as supporters of France's enemies and invaders. Thus, Philidor was forced to spend his remaining years away from

the country of his birth. He died in London on August 24, 1795. His obituary read, "For the last two months, Philidor had been kept alive merely by art, and the kind attentions of an old and worthy friend. On Monday last, Mr. Philidor the celebrated chess player, made his last move, into the other world."

### Books

Allen, George, *The Life of Philidor*, Da Capo Press, 1971.  
*The New Grove Dictionary of Opera*, Macmillan Reference Limited, 1997.

### Online

"Chess," *Encyclopedia Britannica*, <http://www.britannica.com> (February 1, 2001).  
 "Philidor," <http://www.pstat.uscb.edu> (January 30, 2001).  
 "Francois Andre Philidor," *A and E Network Biography*, <http://www.biography.com> (February 2, 2001).  
 "The Morals of Chess," <http://www.twinfoats.com> (February 1, 2001).  
 "Francois-Andre Danican Philidor," <http://www.geocities.com> (January 22, 2001). □

## John Pierce

**Electronics engineer John Pierce (born 1910) is a pioneer in the development of communication by satellite. While working for communications giant Bell Laboratories, Pierce proposed the Echo 1, Telstar, and Relay satellites and patented nearly 100 devices, many of which aid in communications technology in the form of amplifiers and vacuum tubes.**

Pierce is a prolific writer as well, having authored more than a dozen scientific books, hundreds of technical papers on science and technology, and even some science fiction stories. Some of his later research focused on the intersection of science and music theory, and he was instrumental in the advance of computers in music composition and performance.

### Early Life

John Robinson Pierce was born March 27, 1910, in Des Moines, Iowa. His parents were John Starr and Harriett Anne (Robinson) Pierce. Pierce attended Woodrow Wilson High School in Long Beach, California, where as a teenager he learned to fly a glider he built himself, inspired by an article he read in *National Geographic*. After five friends were killed in crashes, he sold his glider and bought plywood to build a 14-foot boat that he sailed in the ocean.

His first marriage, to Martha Peacock on November 5, 1938, ended in divorce in 1964 but produced two children: John Jeremy and Elizabeth Anne. Pierce married Ellen R. McKown on April 1, 1964.

Pierce's entire academic career was played out at the California Institute of Technology. He earned a Bachelor of



Science degree in 1933, a Master of Science degree in 1934, and a doctoral degree (magna cum laude) in 1936. In addition, he holds ten honorary degrees from various schools, including Newark College of Engineering, Northwestern University, Yale University, Polytechnic Institute of Brooklyn, Columbia University, Carnegie Institute of Technology, University of Nevada, University of Pennsylvania, and University of Bologna.

### Bell Laboratories

Immediately after earning his doctoral degree, Pierce took a job with Bell Telephone Laboratories in Murray Hill, New Jersey, ostensibly to carry on the work of Alexander Graham Bell, inventor of the telephone. Pierce found himself part of a surge of innovation that would launch communication into the realm of science fiction. At Bell Labs, he was part of a team that developed the traveling wave tube, an amplifier that facilitates satellite communication.

"This has been a century of telecommunication," he later wrote in the introduction to *Signals: The Science of Telecommunication*. "We have come to talk warmly and directly over the telephone rather than writing considered letters and fretting for a reply. Facsimile serves us better than first class or express mail. Through radio, compact discs, and television, we experience directly and movingly people and events far from us in space or in time. Through telecommunication, our world has expanded, and we with it."

One of Pierce's early projects was studying communications satellites. His first technical book, *The Theory and*

*Design of Electronic Beams*, published in 1947, foreshadowed the blossoming of the space age. Pierce first proposed the use of unmanned passive and active communication satellites in 1954, although his early writings were mostly ignored. Within ten years, however, Pierce had convinced the National Aeronautics and Space Administration to launch Echo 1, an early communications satellite. Later projects included Telstar, which relayed signals between Earth stations via radio-wave reflectors in space.

Other Pierce research involved the transistor, and he had the opportunity to coin a now-household word. Engineers were searching for a replacement for vacuum tubes, which process signals in computers. Vacuum tubes are the reason the first computers were roughly the size of mobile homes. Transistors, on the other hand, were more efficient, cheaper, and smaller, making possible such things as the \$10 pocket calculator. Walter Brattain, who with John Bardeen and William Shockley won the Nobel Prize for inventing the device, asked Pierce for ideas on what to name their new gadget. Pierce suggested "transistor," after a number of other similar Bell inventions. The name stuck, and Pierce earned a tiny spot in the history of the English language.

Pierce turned some of his attention to the role of computers and music. In *Electronic Sound: The Past and Promise of Electronic Music*, Joel Chadabe wrote that Pierce "played an essential role" in the development of electronic music. In his role as a director of research, Pierce encouraged his workers to tinker with sound. "Bell Laboratories was in those days a benevolent autocracy," Pierce told Chadabe. "The management was convinced I was a good guy, so I could slip things in." Pierce not only encouraged and aided his workers but also created pioneering electronic music of his own, composing pieces including *Stochatta* (1959), *Variations in Timbre and Attack* (1961), *Sea Sounds* (1963), and *Eight-Tone Canon* (1966).

In 1961 Pierce tried to stir up interest in the project among actual composers. He wrote in his 1983 book *The Science of Musical Sound* that he mailed off copies of *Music for Mathematics*, a record made by one of his employees, to Leonard Bernstein and Aaron Copland. "The implications are dizzying," Copland wrote in response. "If I were 20, I would be really concerned at the variety of possibilities suggested. As it is, I plan to be an interested bystander, waiting to see what will happen next."

By 1965 Pierce was the executive director of Bell Laboratories' Research-Communications Sciences division. During his years at Bell Labs, Pierce wrote or cowrote a number of scientific books, including *Theory and Design of Electronic Beams*, first published in 1949; *Traveling Wave Tubes*, published in 1950; *Electrons, Waves and Messages*, 1956; *Man's World of Sound*, 1958; *Waves and the Ear*, 1960; *Symbols, Signals and Noise*, 1961; and *Science, Art and Communication*, 1968. He also published science fiction stories using the pseudonym of J.J. Coupling.

## California Institute of Technology and the Jet Propulsion Laboratory

In 1971 Pierce retired from Bell Laboratories and returned to Pasadena and his alma mater, the California Institute of Technology, as a professor of engineering. At CalTech, Pierce worked with scientists to develop computers designed to talk, their memories fed with pronouncing dictionaries and tips on mimicking natural speech sounds. "Computers that imitate human speech with a remarkable degree of accuracy already are a reality," Pierce announced in 1972. Recordings of early talking computers amazed the scientific world. One such recording, Pierce said, "so intrigued science fiction writer Arthur C. Clarke that he had Hal, the computer, sing an imitation of it in the motion picture space epic *2001*."

In 1979 Pierce delivered a talk to the American Association for the Advancement of Science in which he foreshadowed the shrinking of computers by way of Large Scale Integration, the technology of cramming thousands of digital computer circuits onto tiny silicon chips. "Above all," he told the audience, "digits and LSI are taking us, or accompanying us, into the information society." He worried that such a shift could mean a "future world rich in information, but poor in other commodities."

Scientists had just begun to develop digital transmission that would allow huge amounts of data to be transmitted by wire. "It is terminal costs and reliability that stand in the way of electronic mail," Pierce said. "At the lowest night rate one could send 6,000 words of digital text from Los Angeles to New York for \$.22. But," he lamented, "who has the terminals that will do this?" Pierce would live to see his question answered in the form of the Internet.

In 1974 Pierce published *Almost All about Waves*. Five years later, he became chief technologist at the Jet Propulsion Laboratory in Pasadena, California, one of America's leading centers for robotic exploration of the solar system. The project is managed by CalTech for NASA.

## Further Research

Pierce retired from CalTech in 1980, continuing to serve as professor emeritus. He continued his own research and exploration, in 1983 publishing *The Science of Musical Sound*, an illustrated introduction to musical acoustics, drawing on his own research and interaction with centers for computer research in music and acoustics. Roger N. Shepart wrote in *Science* that the book "demonstrates once again the wide-ranging wisdom, infectious enthusiasm, and unique flair for rendering the complex comprehensible that John Pierce has manifested in numerous earlier scientific books." In *The Science of Musical Sound*, Pierce demonstrates the transformation of the worlds of music and psychoacoustics. "Pierce," Shepart asserted, "enlivens his presentation with illuminating historical commentaries, personal anecdotes, photographs, and 'microbiographies' of contemporary notables in the fields of electronic and computer music and in the fields of acoustics and psychoacoustics." Shepart was particularly taken with Pierce's description of the work of Manfred Schroeder, D. Gottlob

and K.F. Siebrasse, who studied the acoustic qualities of 20 major European concert halls in an attempt to somehow duplicate the halls' rich, spacious sound in modern concert spaces, which are notorious for beautiful design but sloppy acoustics.

In 1990 Pierce published *Signals: The Science of Telecommunications*, coauthored by A. Michael Noll. The book updated Pierce's earlier work *Signals: The Telephone and Beyond*, and included stories of pioneers including Morse, Marconi, Bell, and Vail, as well as explanations of dozens of communications breakthroughs. *New Scientist* reviewer Barry Fox called the lavishly illustrated book "a basic, readable history of telecommunications, from the telegraph to optical fibre digital links." Pierce includes personal anecdotes about his own experiences on the forefront of technology, writing of his interest in combining space exploration with telephones.

"What makes *Signals* special," Fox wrote, "is the way the authors blend essential theory with practical examples—for instance, how the capacitance of a wire in water effectively soaks up some of the signal. Everyday phenomena, such as the annoying echo you hear on international calls, are also clearly explained."

## Books

Chadabe, Joel, *Electronic Sound: The Past and Promise of Electronic Music*, Prentice Hall, 1997.

*Contemporary Authors*, The Gale Group, 1999.

*Current Directions in Computer Music Research*, edited by Max V. Mathews and John R. Pierce, The MIT Press, 1989.

Pierce, John R., *Science, Art, and Communication*, Clarkson N. Potter, Inc, 1968.

Pierce, John R., *The Science of Musical Sound*, Scientific American Library, 1983.

## Periodicals

*New Scientist*, March 23, 1991, p. 54.

*Science*, October 19, 1984, p. 333.

## Online

"Pierce, John Robinson," *Britannica.com*, (January 26, 2001). □

# Lydia Estes Pinkham

**As her family was struggling to make ends meet, a few women stopped by the kitchen of Lydia Pinkham (1819-1883) and offered to pay cash for some of her homemade herbal medicine. That visit steered the family into a venture that would make them rich and would make Pinkham an advertising pioneer and an American cultural icon.**

Lydia Estes Pinkham, born in Lynn, Massachusetts, on February 9, 1819, was the tenth of twelve children of William and Rebecca Estes, radical Quakers. The Estes encouraged all their children to be freethinkers. Mr.



Estes, originally among the many shoemakers of Lynn, realized enough profit from a saltworks during the War of 1812 that he was later able to make a fortune in real estate. Mrs. Estes introduced the family to the teachings of Emanuel Swedenborg, a Swedish scientist and theologian who claimed to have had contact with the spiritual world. Lydia would attempt to communicate with departed loved ones during her lifetime. Followers of Swedenborg were abolitionists (opposed to slavery), vegetarians, and nondrinkers (they abstained from drinking alcoholic beverages). Swedenborgian teachings and the Estes' opening of their home to reformers (including escaped slave and abolitionist Frederick Douglass) no doubt influenced young Lydia to join social movements and be a reformer and feminist. At 16 she joined the Lynn Female Anti-Slavery Society and was an advocate of women's rights.

After graduating from Lynn Academy, Lydia taught school until she met and married Isaac Pinkham, a widower with a young daughter, in 1843. A shoe manufacturer, Isaac soon was pursuing one speculative venture after another in hopes of attaining his father-in-law's success. Consequently, his fortunes rose and fell as he tried various occupations and moved his growing family about. It was during one of his financially better times that he paid the 25 dollar debt of a Lynn machinist named George Clarkson Todd. Todd gave Isaac the formula for a nostrum (a cure-all) in exchange for the payment. According to legend, the formula was for the vegetable compound Pinkham would later manufacture for sale. At the time, however, many homemakers brewed home medicines. Pinkham herself kept a notebook

with directions for various folk remedies, so the legend may not be entirely accurate.

### **“Saviour of Her Sex”**

The family attained some security during the Civil War, but a financial panic in 1873 resulted in banks in Lynn beginning foreclosure on mortgages. Isaac was sued and threatened with arrest for not paying his debts. Though the suit was eventually dropped, he was left a broken man no longer able to work. All the Pinkham children secured jobs to sustain the household. Two years later the family was nearly destitute when some ladies visited the house and offered to buy a half-dozen bottles of the medicine Pinkham brewed as a cure for “women’s weakness”; she usually gave it away. Pinkham’s son Daniel immediately saw a business opportunity for the family. Soon Pinkham, with son William’s help, was brewing Lydia E. Pinkham’s Vegetable Compound in the cellar and writing advertising copy, and Daniel was peddling it. Children Charles and Aroline helped buy herbs and alcohol with their wages. And Isaac sat in his rocker and folded the four-page “Guide for Women” pamphlet that was distributed with each bottle of the nostrum. William was named proprietor (because he had no outstanding debts) when the Lydia E. Pinkham Medicine Company officially organized in 1876.

The Pinkhams launched their business at a fortuitous time. “Lydia Pinkham began selling her Vegetable Compound in an era marked by medical controversy, public dissatisfaction with doctors, an obsessive concern with women’s weaknesses—a climate ideally suited to promote the success of the Pinkham venture,” remarked Sarah Stage in *Female Complaints*. Despite medical advances, many doctors employed unsafe therapies and actually increased mortality rates by spreading bacteria. Though a simple mixture of herbs and 18 percent alcohol, the Vegetable Compound was touted as a cure for female complaints from menstrual problems to reproductive disorders and was viewed as a safe alternative to a doctor’s medicine. Of the 36 proof alcohol content, Pinkham—herself and her children members of the temperance society (meaning they advocated abstinence from intoxicating drink)—said it was necessary for the therapeutic effect and as a preservative. (Indeed, decades later when the government forced the company to reformulate the compound, it didn’t keep as well with less alcohol.) Pinkham claimed that consumption of the cure-all as directed would not conflict with temperance. However, because it was thought alcohol might aggravate menstrual disorders, by 1881 the company was also manufacturing the compound in pill and lozenge form.

Pinkham, still a reformer, helped dispel the nineteenth-century view of women as being weak. She dispensed commonsense advice on diet, health, and exercise when she answered letters and wrote pamphlets on a range of household topics. Testimonials eventually poured in from women who had heeded Pinkham’s advice and “let doctors alone,” finding relief instead in the compound. There probably was some truth in the reports. According to Dan Russell in “Drug War: Inquisition,” “All [the ingredients of the compound] had been official or semi-official in the U.S. Pharmacopeia

or the U.S. Dispensatory for various female ills.” Scientists analyzing the compound in the 1940s and 1950s found estrogens in the ingredients, which could have therapeutic value to women. (One ingredient, black cohosh, is currently recommended by herbalists to relieve the symptoms of menopause.) “So far from being bunkum, Lydia Pinkham’s Vegetable Compound was probably the best female tonic on the market, although Lydia did go a bit overboard in claiming to cure all female ills, and in advising customers to ‘write Mrs. Pinkham,’ avoid doctors altogether and just guzzle Compound,” concluded Russell. Pinkham likely was echoing her grateful customers when she declared herself the “Saviour of Her Sex” in advertising.

### **Grandmother of Modern Advertising**

The Vegetable Compound may have been a safe alternative to dangerous gynecology, but at first it was just one more nostrum in a sea of proprietary medicines. Daniel did his best to sell Pinkham’s mixture by circulating pamphlets and contacting druggists, yet sales were low. It was an impulsive action by William that catapulted Pinkham’s compound ahead of all the other patent medicines. He stopped into the *Boston Herald* and asked how much it would cost to print the four-page Pinkham pamphlet on the front page. William spent 60 of the 84 dollars he had just collected from a drug wholesaler for the space. The family could be upset with him only a short time. “Within two days new orders came in from three other wholesalers, and the Pinkhams had the first glimpse of their eventual boulevard to fame and fortune,” wrote Donald Dale Jackson in *Smithsonian*.

The Pinkhams had hit upon the perfect way to market their product. Pinkham was one of the first women to write the advertising copy for a product. The compound, she stated flatly, was: “A medicine for women. Invented by a woman. Prepared by a woman.” Most of the early newspaper ads for Pinkham’s had sensational headlines that appeared to be lead-ins for news stories. One ad talked of a clergyman killed by his wife suffering from female complaints. Of course, regardless of the tragedy revealed in ad text, it always could have been prevented if the woman had taken Vegetable Compound. Pain and suffering ads were the most effective; the company’s less sensational ads just didn’t produce sales. Customers preferred to know that it was “the surest remedy for the painful ills and disorders suffered by women everywhere” rather than how it “plants on the pale cheek of woman the fresh roses of life’s spring and early summer time.”

For decades the company would spend a large percentage of its annual sales on advertising, but it paid off handsomely. The brewing operation moved out of the cellar into a building next door in 1878; the building then had to be enlarged. Unsolicited testimonials poured in that were sometimes incorporated into advertising, and upwards of 150 letters a day came in asking Pinkham’s advice; these she answered personally in strict confidence. Her daughter-in-law oversaw answering correspondence after her death.

## Cultural Icon

In 1879 Daniel Pinkham had a brainstorm that would make his mother a cultural icon. Trying to figure out a way to capitalize on the popularity of products made in New England, he hit upon the idea of using his sixty-year-old mother's picture as the company symbol. Pinkham posed for her portrait dressed in her best black silk dress with a bit of ruching (trim) at the neck and her hair swept up in a bun. Her grave, composed countenance exuded caring and competence, a grandmotherly feel. "Lydia's 'cast-iron smile' began appearing in the press at a time when female faces were still rare enough in American dailies to seize a reader's attention. For years hers was one of the few on display; editors lacking a picture of Queen Victoria or other noted women would sometimes use Lydia's portrait as a substitute," noted Jackson. Pinkham's likeness was put on product labels, newspaper advertising, lithographs, trade cards, souvenir plates, and gift items—all of which today are sought-after medical collectibles. Business doubled as a result. It was estimated in the 1940s that some \$40 million had been spent publishing Pinkham's picture.

As with well-known figures today, Pinkham drew ribbing from humorists, especially since her expertise was in female complaints. College boys parodied Pinkham and her advertising copy in songs. The refrain of one song went: "OH-H-H, we'll sing of Lydia Pinkham, / And her love for the human race. / How she sells her vegetable compound, / And the papers, the papers they publish, they publish her FACE!" The verses of another song referred to a product claim: "'There's a baby in each bottle.' / Thus the old quotation ran. / But you read in every textbook / That you still will need a man." All this attention, of course, made the Vegetable Compound even more popular.

## Name Lived On

Distraught over the deaths of sons Daniel and William in 1881 due to tuberculosis, Pinkham held frequent seances hoping to communicate with them. Late in 1882, she suffered a paralyzing stroke; in May 1883 she died and was buried next to her sons. Under the helm of son Charles, and with an enormous advertising budget, the business thrived and expanded into foreign markets. "In 1898 the compound was the most heavily advertised product in the United States, its name as familiar as Coca-Cola and McDonald's are today," reported Jackson. After Charles died, a divisive company power struggle ensued for years among family members. Yet the Lydia E. Pinkham Medicine Company managed to survive the infighting and the passage of the Food and Drug Act, with its attendant regulations. Sales gradually declined after peaking at \$3 million in 1925. In 1968 the heirs sold the company to a large pharmaceutical company, which moved bottling operations to Puerto Rico.

"Biographers, the lusty songs, the national sense of humor, the company's ads, which kept Lydia's spirit marching on, have all combined to perpetuate the name of a shrewd and plucky New England woman who was engaged in the manufacture of patent medicine for only the last eight years of her life," observed Gerald Carson in *One for a Man, Two for a Horse*.

## Books

- Applegate, Edd, *Personalities and Products: A Historical Perspective on Advertising in America*, Greenwood Press, 1998.  
 Carson, Gerald, *One for a Man, Two for a Horse: A Pictorial History, Grave and Comic, of Patent Medicines*, Doubleday, 1961.  
 Stage, Sarah, *Female Complaints: Lydia Pinkham and the Business of Women's Medicine*, Norton, 1979.

## Periodicals

*Smithsonian*, July 1984.

## Online

- "Drug War: Inquisition," <http://www.drugwar.com/inquisition.htm> (January 12, 2001).  
 "Lydia Estes Pinkham," *Women in American History by Encyclopedia Britannica*, [http://women.eb.com/women/articles/Pinkham\\_Lydia\\_Estes.html](http://women.eb.com/women/articles/Pinkham_Lydia_Estes.html) (January 12, 2001).  
 "Lydia Estes Pinkham: Herstory and Genealogy," <http://www.kithandkin.net/pinkham.html> (January 12, 2001). □

# Gavrilo Princip

**It would have been incomprehensible, at the turn of the nineteenth century, to believe that the actions of one man could set in motion a series of events that would reverberate through history for the next nine decades. Yet when Gavrilo Princip (1894-1918) stepped in front of the automobile carrying Archduke Franz Ferdinand and his wife, the Duchess Sophie, putting two bullets into their bodies and killing both, that is precisely the path on which he sent the world.**

The son of a postal worker, Princip was born in Obljaj (Oblej), Bosnia. His father, Petar, was married late in life to a local woman, Maria, also known as Nana, who was fourteen years younger than her husband. Petar and Nana had a total of nine children, four daughters and five sons. Only three children survived infancy. Princip was the fourth child and second son, born seven years after his brother, Jovo. When Princip was born his mother wanted to name him for her brother, Spiro, but the local priest insisted that since he was born on the feast day of Saint Gabriel, he should be called Gavrilo. Neither parent disagreed.

Princip's birth date is recorded as July 13, 1894. When he was baptized a month later a young priest recorded the birth date in the parish register as July 13, 1894, but he recorded the date in the civil register as June 13, 1894. This conflict would play a pivotal role at his sentencing nineteen years later.

Princip left home at thirteen and went to Sarajevo to live with his brother, Jovo. Jovo encouraged his younger brother to apply to the military school in Sarajevo, believing it would lead to a career as an officer. Jovo Pesut, a clothier and friend of the Princip family, spoke against the military



school and convinced Princip to enter the merchant school. The first three years at the school were uneventful. Princip was a good student, reserved in manner and a voracious reader. By the end of his third year he decided to transfer to a classical high school. Although not in favor of the change, his brother Jovo reluctantly agreed. In August 1910 Princip went to Tuzla and enrolled in the fourth grade of the high school. He graduated in 1911.

But it was events prior to this that set the stage that would ultimately direct world politics for the rest of the century. On October 5, 1908, the Austro-Hungarian Empire annexed Bosnia. Public opinion in Serbia immediately soured. The Serbian nationalists believed that this action unfairly snatched the Bosnian territory from their grasp. Two secret societies instantly surfaced: Narodna Odbrana (National Defense) and Ujedinjenje ili Smrt (Unification or Death), also known as Crna Ruka (The Black Hand).

The year 1911 was critical for Princip. His ideals began to change, and he became more deeply involved in the Greater Serbian cause. He continued school in Sarajevo and Tuzla, and in 1912, at the age of eighteen, he traveled to Belgrade where he took a more Serb-national education. At the same time a group of students formed Mlada Bosna (Young Bosnia) and adopted an anti-Hapsburg stand. Their campaign took on a wider, Pro-Yugoslav slant, moving away from their previous narrow Serb nationalist position. Of this group, Princip went on to become the most famous, moving into the ranks of the Black Hand. He clearly defined his beliefs when he stated at his later trial, "I am a Yugoslav

nationalist, aiming for the unification of all Yugoslavs, and I do not care what form of state, but it must be free from Austria."

### The Black Hand

The Ujedinjenje ili Smrt (Union or Death) was a secret society also known as the Black Hand. The society was formed in 1911, one year before Princip was recruited and trained in terrorism. It was during this training that his desire to unite the south Slavs into a federal nation by eliminating the Austro-Hungarian rule began to surface. It became clear to Princip that this goal would only be achieved through the elimination of a government official or a member of the ruling Hapsburg Imperial family.

Princip had a history of ill health and although admitted to the Black Hand academy in 1912, he was considered unfit for active duty. His health did not, however, prevent him from coming to the attention of the organization's leader, Major Tankosic, who considered him to be a strong personality with good leadership qualities.

### Events of the Day

By the spring of 1913 relations between Austro-Hungary and Serbia were critical. War was imminent between the two powers. Serbian conquests of neighboring territories threatened the Austro-Hungarians, causing the military governor of Bosnia to declare a state of emergency. His actions were harsh and immediate. He dissolved parliament, suspended civil courts, closed Serb associations and took over the control of Bosnian schools. By the end of May 1913, the short-lived First Balkan War ended with the Treaty of London. However, by this time the governor's anti-Serb policies were securely established, much to the distress of the Serbian citizens. Everything was now in place for the events that would occur in June of 1914. The Austro-Hungarian army made plans to stage military maneuvers in Sarajevo, and Archduke Ferdinand and his wife were scheduled to be present to review the army.

Princip remained closely tied to the Black Hand society during this two-year period. When it was learned that Archduke Franz Ferdinand would make an official visit to Sarajevo, the wheels were set in motion for one of the most disruptive acts in world history. As a plot to assassinate the Archduke began to unfold, Princip was selected to be its leader for his marksmanship abilities and those very same leadership qualities recognized two years earlier.

On June 28, 1914, Princip and his comrade, Nedeljko Cabrinovic, along with four other members of the Black Hand, awaited the arrival of the Archduke. The first attempt to assassinate Ferdinand failed when Cabrinovic tossed a bomb at the royal automobile, but the bomb bounced off it and rolled under a second car, exploding and injuring an army officer. Archduke Ferdinand and his wife Sophie, the Duchess of Hohenberg, sped off to a reception at the City Hall untouched. Afterward the Archduke asked to visit the officer who had been injured earlier that day, and his driver unwittingly followed the same return route as the one taken earlier. The Duchess was not originally scheduled to return with the Archduke, but when last minute plans were made

to visit the officer injured in the first attempt, she insisted on accompanying her husband. This decision, coupled with the lack of judgment in planning the return route, resulted in her death. The return route brought the Archduke back into the sights of Gavrilo Princip. As the royal car stopped within feet of him, Princip stepped forward and fired two shots. Sophie was hit on the right side and died first. The Archduke outlived her by only a short time. The bullet that took his life severed his jugular vein and came to rest in his spine. Princip later claimed that he intended one shot for General Oskar Potiorek, military governor of Bosnia, but the shot felled the duchess instead. One month later, on July 28, 1914, Austria-Hungary had found the reason it sought to enter into war. It held Serbia accountable for the actions of Gavrilo Princip and declared war.

### The Trial, the Sentence and Death

Princip understood only too well the actions that would follow. He attempted suicide at the scene by shooting himself, but a quick-thinking onlooker swiftly knocked the gun from his hand. A mob began to close in, but Princip was rescued by the police and imprisoned.

Princip and his fellow conspirators were all arrested at the scene, but during questionable interrogations, neither Princip nor Cabrinovic broke their code of silence with the Black Hand. His account of the event was not clear. "Where I aimed I do not know. But I know that I aimed at the Heir Apparent. I believe I fired twice, perhaps more, because I was so excited. Whether I hit the victims or not, I cannot tell, because instantly people started to hit me." One of the group, Danilo Ilic, confessed to his participation and nearly spelled disaster for the group, but Princip was able to gain control and exercise his leadership over the group.

While in custody, Princip again attempted suicide by the use of cyanide, but again his attempt was unsuccessful. Throughout the trial Princip remained quiet and aloof. He also remained loyal to the Black Hand, refusing to place the blame for the assassination with any organization. He expressed no remorse for the crime and made only a short final statement saying, "In trying to insinuate that someone else has instigated the assassination, one strays from the truth. The idea arose in our own minds and we ourselves executed it. We have loved the people. I have nothing to say in my defense."

Princip was found guilty, and it was at this point that the question of his age became pivotal to the outcome of his trial. The prevailing law of the country prevented the execution of any prisoner who was under twenty on the day of his crime. Princip's exact birth date could not be determined, and the court gave him the benefit of the doubt. He was sentenced to twenty years in prison, the maximum the courts could give.

Princip was imprisoned in Theresienstadt prison in Austria. It is thought that he was tubercular before entering prison, and as a result of his poor health he underwent the amputation of an arm. During his incarceration he was transferred between his prison cell, where he was kept in solitary confinement, and the prison hospital where he was treated for his tuberculosis. Princip's death certificate reads

that he died April 28, 1918 at 6:30 p.m. of tuberculosis of the bone in Theresienstadt Hospital. He was buried secretly.

### A Century of Warfare

The whole of the twentieth century was sent into a tailspin as a result of two bullets fired from the gun of Gavrilo Princip. The "war to end all wars," World War I, concluded with the Treaty of Versailles, an agreement so punitive to Germany that its reaction fostered the rise of Nazism and led to World War II. The division of Europe at the end of World War II aided in the rise of Soviet Russia and the Communist bloc and resulted in Cold War tensions that persisted until the fall of Communism in the late 1980s and the dissolution of the Soviet state in 1991. By the end of the twentieth century the world had come full circle, focusing on another Serbian terrorist named Slobodan Milosevic.

### Books

- Dedijer, Vladimir, *The Road to Sarajevo*, Simon and Schuster, 1966.  
 Malcolm, Noel, *Bosnia: A Short History*, New York University Press, 1994.

### Periodicals

- Newsweek*, March 15, 1999.  
*Time*, June 14, 1999.

### Online

- "Black Hand," *Encyclopaedia Britannica*, <http://www.britannica.com/seo/b/black-hand-I> (November 17, 2000).  
 "Death of an Archduke, 1914," <http://www.ibiscom.com/duke.htm> (November 17, 2000).  
 "Gavrilo Princip," <http://www.worldwar1.com/biosgprn.htm> (November 17, 2000).  
 "Picture of the Day: June 28," <http://www.thehistorynet.com> (November 17, 2000).  
 "Princip, Gavrilo," *Columbia Electronic Encyclopedia*, <http://www.infoplease.com> (November 17, 2000).  
 "Princip, Gavrilo," *Encyclopaedia Britannica*, <http://www.britannica.com/seo/g/gavrilo-princip/> (November 17, 2000).  
 "Princip, Gavrilo," <http://raven.cc.ukans.edu> (November 17, 2000). □

## Vladimir Putin

**When Vladimir Putin (born 1952) was appointed prime minister of Russia, very little was known about his background. This former Soviet intelligence agent entered politics in the early 1990s and rose rapidly. By August of 1999, ailing President Boris Yeltsin appointed him prime minister. When Yeltsin stepped down that December, Putin became the acting president. He went on to win the March 2000 election to retain his presidential post.**



Putin (POO-teen) was born on October 1, 1952, in Leningrad (now St. Petersburg), Russia. He is an only child. His father, a decorated war veteran, was a foreman in a metal factory. He died in August of 1999, the week his son was appointed prime minister of Russia. Putin's mother, who did not work outside the home, died a year and a half before that. Growing up in Leningrad, Putin lived with his parents in a communal apartment with two other families. Though religion was not permitted in the Soviet Union, his mother secretly had him baptized as an Orthodox Christian. He remains a practicing member of the Church and delivered a Christmas Eve speech in Moscow in 1999.

Though he was a small-built child and is still a short and slim man, Putin could hold his own in fights thanks to martial arts classes. By the age of 16 he was a top-ranked expert at sambo, a Russian combination of judo and wrestling. He attended a prestigious high school, School 281, which only accepted students with near-perfect grades. The institution was the only one in Russia to stress chemistry, which was Putin's interest. However, he soon gravitated toward liberal arts and biology. Putin worked at the school radio station, where he played music by the Beatles and other Western rock bands. Though he attended parties, he was reportedly more mature than others his age, according to one of his fellow students quoted by Michael Wines in the *New York Times*. Fascinated with spy movies as a teen, he aspired to become a KGB agent.

At Leningrad State University, Putin was the school's judo champion in 1974. He graduated from the law department in 1975. Wines in the *New York Times* noted that Putin had graduated with honors, but a *Newsweek* article reported that his thesis adviser, Valery Musin, said he had received "good but not great grades," though he was a "meticulous" student. The *Newsweek* piece pointed out that his scholastic record had been removed from the university's archives. Later, he received a doctorate in economics as well.

Instead of entering the law field right out of school, Putin landed a job with the KGB, the only one in his class of 100 to be chosen. Though some reports stated that he joined the elite foreign intelligence arm, called the First Chief Directorate, the *Newsweek* article claimed that his first position was actually in a department called Service Number One in the agency's Leningrad office. This branch was responsible for recruiting foreigners in the country to serve KGB intelligence purposes. Another report by Wines in the *New York Times* stated that he "was a mid-level KGB agent performing fairly routine duties."

In the early 1980s Putin met and married his wife, Lyudmila, a former teacher of French and English. In 1984 he was selected to attend the prestigious Red Banner Institute of Intelligence, where he mastered German and also learned English in preparation for an international assignment, which he had coveted for some time. In 1985 the KGB sent him to Dresden, East Germany, where he lived undercover as Mr. Adamov, the director of the Soviet-German House of Friendship, a social and cultural club in Leipzig. According to Wines, he spoke so fluently that he

could easily mimic regional dialects. Putin appeared to genuinely enjoy socializing with Germans, unlike many other KGB agents, and respected the German trait of discipline.

What Putin did in East Germany has been a matter of some speculation. Wines wrote, "Officially—and perhaps actually—his task was to track the political leanings of East Germans and their contacts with the West." John Lloyd stated in the *New York Times Magazine*, "His real task was to recruit agents to supply technical and economic information: he may have been involved in setting up a KGB network to prepare for the collapse of East Germany." *Insight on the News* reporter J. Michael Waller, meanwhile, claimed that Putin oversaw the notorious Stasi secret police force during the 1980s.

Around the time Putin went to East Germany, Soviet leader Mikhail Gorbachev was beginning to introduce economic and social reforms. Putin was apparently a firm believer in the changes. In 1989 the Berlin Wall, separating East from West Germany, was torn down and the two began to unite. Though Putin supposedly had known that this was inevitable, he was disappointed that it occurred amid chaos and that the Soviet leadership had not managed it better.

In 1990 Putin returned to Leningrad and took a job in the international affairs department at his alma mater, screening foreign students. However, that was a cover for his continuing intelligence work. Before long, one of his former university professors, Anatoly Sobchak, who had become the first mayor of St. Petersburg (the former Leningrad), asked him to join his administration. In 1991, just as the Soviet Union was beginning to be unraveled, Putin resigned from the KGB at the rank of colonel, in order to get involved in politics. He allegedly quit because he wanted to be part of the important changes going on in Russia at the time, or perhaps because many of his colleagues in the KGB were persecuted after the fall of the Berlin Wall. In any event, he became the mayor's external affairs aide and, in 1994 became deputy mayor. However, a *Newsweek* report suggested that he might have been an infiltrator there as well.

During his time in city government, Putin "excelled at unraveling the Gordian knots of Russian bureaucracy and building an infrastructure—highways, telecommunications, hotels—to support foreign investment," according to Wines. Although St. Petersburg never grew to become the financial powerhouse that many had hoped, its fortunes improved as many foreign investors moved in, such as Coca-Cola and Japanese electronics firm NEC. Putin gained the nickname "the gray cardinal" in response to his behind-the-scenes influence and low profile. He was investigated in the early 1990s for allegations of favoritism in granting import and export licenses, but the case was dismissed over lack of evidence.

In 1996, when Sobchak lost his mayoral campaign, Putin was offered a job with the victor, but declined out of loyalty. The next year, he was asked to join President Boris Yeltsin's "inner circle" as deputy chief administrator of the Kremlin. He left the Kremlin in 1998 to become head of the Federal Security Service (FSB), the domestic intelligence

arm and successor to the KGB, which had been dismantled. In March of 1999, he was named secretary of the Security Council, a body that advises the president on matters pertaining to foreign policy, national security, and military and law enforcement.

In August of 1999, after Yeltsin had gone through five prime ministers in 17 months, he appointed Putin, who was originally dismissed by many observers as not a viable heir apparent to the ill president. For one thing, he had little political experience; for another, his appearance and personality seemed bland. However, Putin increased his appeal among citizens for his role in vehemently pursuing the war in Chechnya. In addition to blaming various bombings in Moscow and elsewhere on Chechen terrorists, he also used harsh rhetoric in condemning his enemies. As Wines reported, this "established his image as a tough and no-nonsense leader at a time when Russians were seeking just such a person." Soon, Putin's popularity ratings were soaring at 50 percent in a nation where an approval rating of even 20 percent is considered a good showing.

In December of 1999, Russia held elections for the 450-seat Duma, the lower house of Russia's parliament. Putin's Unity Party, formed just three months prior, came in a close second to the Communists in a stunning showing. With allies, they were expected to wield just about as much power. Though Putin was not a candidate on the ballot in this election, the candidates rode on his coattails as the obvious front-runner in the upcoming presidential race scheduled for June of 2000.

On New Year's Eve in 1999, Yeltsin unexpectedly stepped down as president, naming Putin as acting president. The election was moved up to March 26 in accordance with the Russian Constitution. Many observers speculated that Yeltsin's move was calculated to ensure Putin's success, just in case public support for the war in Chechnya turned and caused his ratings to fall. It was rumored that Yeltsin also wanted to install Putin in order to escape any prosecution, since Putin had been a loyal follower and Yeltsin had long been accused of corruption and nepotism. Indeed, one of Putin's first actions as acting president was to grant Yeltsin immunity from any future criminal or administrative investigations. The decree also granted continued housing, salary, staffing, and benefits for Yeltsin and his family.

Immediately, Western news media and the United States government scrambled to create a profile of the new Russian leader. Due to Putin's secretive background as a KGB agent, information was scarce. Many articles focused on the fact that, despite his popularity, few even in his own nation knew details of his background or where he stood on issues. His history as a spy caused many Westerners and some Russians as well to question whether he should be feared as a foe of democracy. In addition, Christian Caryl wrote in *U.S. News and World Report*, "Putin's watch at the FSB (from July 1998 until August 1999) coincided, in part, with a series of high-profile prosecutions of environmental activists accused of 'betraying state secrets' (actually publicizing the lackadaisical disposal of dangerous nuclear waste by the Russian military)."

In Putin's first speech as acting president, he promised, "Freedom of speech, freedom of conscience, freedom of the press, the right to private property these basic principles of a civilized society will be protected," according to a *Newsweek* report. In addition, Putin rid his cabinet of several of Yeltsin's cronies and relatives, including Yeltsin's daughter, who served as his chief adviser. However, an *Economist* article dismissed the changes as "cosmetic," saying, "other Kremlin insiders remain firmly in place." In addition, Putin raised eyebrows when, a couple of weeks later, he made a power-sharing pact with Communists in the Duma that effectively shut out most free-market democrats. Still, his popularity among Russians hovered at 50 percent or higher in the weeks leading up to the election.

On March 26, 2000, Russians elected Putin out of a field of 11 candidates, including Communist leader Gennady Zyuganov, who won 42 percent of the vote in a tight race in 1996 against Yeltsin. Putin won with 52.6 percent of the vote as compared to runner-up Zyuganov, who gathered 29.3 percent. After his election, Putin's first legislative initiative, in April of 2000, was to win approval of the Start II arms reduction treaty from the Duma. The deal, which was negotiated seven years earlier, involved decreasing both the Russian and American nuclear buildup by half. Putin's move on this issue was seen as both a positive step in his willingness to develop a positive relationship with the United States but also as a sign that he would resist American efforts on antimissile defenses. In addition to forging talks with the United States, one of Putin's earliest moves involved working with a team of economists to try to develop a plan to improve the country's economy. On May 7, 2000, Putin was officially sworn in as Russia's second president and its first in a free transfer of power in the nation's 1,100-year history.

Putin, a soft-spoken and stone-faced man, keeps his personal life very private. He and his wife have two daughters, Katya and Maria, who were both in their early teens when he became president. Putin has a black belt in judo and enjoys running. He does not smoke, and does not drink alcohol, or at least drinks so rarely that it appears that way. In early 2000, an American publishing company announced that in May it would release an English-language translation of his memoirs, *First Person*, which was banned from publication in Russia until after the March 26 presidential election.

## Periodicals

*Business Week*, April 24, 2000, p. 151.  
*Economist*, January 8, 2000, p. 19; January 15, 2000, p. 49.  
*Insight on the News*, September 6, 1999, pp. 6, 18; January 31, 2000, p. 14; February 14, 2000, p. 20.  
*Maclean's*, January 10, 2000, p. 25; January 17, 2000, p. 46.  
*Nation*, April 17, 2000, p. 3.  
*Newsweek*, January 10, 2000, p. 52; January 17, 2000, p. 30.  
*New Yorker*, December 20, 1999, p. 33.  
*New York Times*, January 1, 2000, p. A11; January 10, 2000, p. A8; January 17, 2000, p. A6; January 20, 2000, p. A12; February 20, 2000, p. A1; March 8, 2000, p. A5; March 20, 2000, p. C14; March 22, 2000, p. A1; March 24, 2000, p. A1; March 27, 2000, p. A1; March 28, 2000, p. A11; April 15, 2000, p. A1; May 8, 2000, p. A1.

*New York Times Magazine*, March 19, 2000, p. 62.  
*People*, February 28, 2000, p. 125.  
*Time*, December 31, 1999, p. 210; January 1, 2000, p. 90.  
*U.S. News and World Report*, January 3, 2000, p. 26.  
*Wall Street Journal*, December 20, 1999, p. A18; January 24, 2000, p. A26.

### Online

"Newsmakers: Vladimir Putin," ABC News web site, <http://www.abcnews.go.com> (May 3, 2000).  
"Vladimir Putin: Spy Turned Politician," BBC News Online web site, January 1, 2000, <http://news.bbc.co.uk> (May 3, 2000). □

# R

## Constantine Samuel Rafinesque

**During his lifetime, Constantine Samuel Rafinesque (1783-1840) was not appreciated for his abilities as a gifted naturalist. He produced over 900 works on a wide variety of subjects, describing many new species of plants and fishes. Charles Darwin ultimately recognized him as one of the first naturalists to champion the idea of natural plant classification. Rafinesque believed that each species that deviated from the norm was capable of becoming a new species.**

Constantine Samuel Rafinesque was born in Galata, a suburb of Constantinople, Turkey, on August 22, 1783. His father was a prosperous French merchant from Marseilles. His mother, Madeleine Schmaltz, was born in Greece of German parents. Rafinesque went by the name Rafinesque-Schmaltz until 1814 when he dropped his mother's maiden name. During the Napoleonic Wars the Rafinesque family moved to Philadelphia, Pennsylvania, to escape the violence. Rafinesque's father died there of yellow fever. His mother took Rafinesque, along with his brother and sister, back to France. From there the family fled to Leghorn, Italy, to escape political upheaval in France. The family lived there from 1792 to 1796. His mother, a cultured and independent woman, had her children educated by private tutors.

### Precocious Child

Rafinesque was only eleven when he began the systematic collection of herbs. He also intended to collect birds. After shooting a Titmouse, he became so upset that he only killed for food for the rest of his life. By the age of twelve Rafinesque believed that he had read at least a thousand books on a wide range of subjects. He also claimed to have studied 50 languages by the age of 16 including Chinese, Hebrew, and Sanskrit. Rafinesque's education by tutors and his separation from young men his own age caused him difficulties throughout the rest of his life. He never acquired the discipline of the trained scientist and was ignored by many of his contemporaries.

During his youth, Rafinesque also lived in Piza, Genoa, and Marseilles. In 1800, he was apprenticed to a merchant who had been a friend of his father and worked in Leghorn, Italy. Rafinesque and his brother decided to travel to Philadelphia, Pennsylvania where he lived for three years. During part of that time he worked in the counting house of the Clifford brothers. He also found much time to travel and continue his study of plants and animals. In Philadelphia he met many scientists such as Benjamin Rush, Thomas Forrest, Mosses Marshall, and William Bartram. He also traveled to Washington D.C. to meet with President Thomas Jefferson. There he talked to a group of Osage Indians and acquired knowledge of their language. He studied the botany of southern New Jersey and the dismal swamp of Virginia. By the time Rafinesque and his brother returned to Leghorn in 1804, he had a large collection of botanical specimens.

### The Sicilian Years

For the next ten years, from 1805 to 1815, Rafinesque lived in Palermo, Sicily. He considered these years to be the



high point of his life. He explored Mount Etna, made hundreds of sketches of the flora of the area, collected specimens, and studied the ichthyology of the waters around Sicily. During this time he published many pamphlets and wrote for a number of periodicals. To support himself, he worked as the secretary and chancellor to the American council. By 1808, he opened his own business exporting squills and medicinal plants. He was a good businessman and, when he put his mind to it, did quite well.

Rafinesque married Josephine Vaccaro in 1809 and produced two children; a daughter, Emily, who became an actress, and a son who died in infancy. His wife showed no interest in his work and may have had affairs with other men. Rafinesque was unable to get his Sicilian portfolios published and was refused the chair of botany at the University of Palermo. He later claimed that he loved the climate and the soil of Sicily, but hated the deceit of women. In 1815, he packed up his personal belongings, as well as his medicinal plants and merchandise, and sailed for the United States, where he would remain for the rest of his life.

### Returned to America

His third voyage to America of over 100 days ended in disaster. He was shipwrecked off Fisher's Island, at the entrance to Long Island Sound. He lost everything, including all of the work he had produced over the last 20 years. He was naked and destitute, after almost drowning. His wife, upon hearing of his plight, soon married a comic actor.

Rafinesque was humiliated and kept the story of his marriage a secret until his death.

Samuel Latham Mitchell became his friend and introduced him to the naturalists in New York. Zaccheus Collins, the Quaker naturalist, did the same in Philadelphia. During part of this time he supported himself as a tutor in the Livingston household at Clermont. In his spare time, he explored the Hudson Valley, Lake George, Long Island, and surrounding regions. In 1818, Rafinesque embarked on a 2,000 mile tour to the west of the Alleghenies. As he proceeded mostly on foot, he made many important botanical discoveries.

Rafinesque traveled to Lexington, Kentucky, in the spring of 1818 to visit his friend John D. Clifford. Clifford was instrumental in getting Rafinesque appointed to a post as professor of botany, natural history, and modern languages at Transylvania University. Though his friend died two years later, Rafinesque managed to hold on to his post until 1826. He was considered a brilliant teacher. During this period he traveled through Kentucky, Tennessee, Ohio, Indiana, and Illinois. Finally in 1825, he journeyed through Washington, Baltimore, and Philadelphia. Unfortunately, Rafinesque did not keep organized records of the flora and fauna he observed during these travels. He left mostly fragments of writing and sketchy descriptions. His collection of possibly 50,000 specimens was damaged by vermin and discarded by curators who dismissed Rafinesque's work as hopelessly unrewarding. His work was never taken seriously during his lifetime.

### Championed Natural Plant Classification

Because the earliest validly published description had to be accepted according to the rule of priority in systemic biology, later naturalists had to recognize Rafinesque. He was ahead of his time in the introduction of natural plant classification in the United States. Rafinesque believed that Jussieu's natural plant selection should replace Linnaeus' artificial sexual system of classification. According to Rafinesque in his work *Flora telluriana 1*, life is ruled by great laws including symmetry, perpetuity, diversity, and instability. Symmetry gives the bodily forms to genera, molding typical frames. The original primitive forms are perpetuated by reproduction. All living bodies are compelled to diversify and no two individuals are exactly alike. The last great law is instability. No form is perpetual. All living forms are born, grow, decay, and die; some quickly, while others take years. Writing in the *Atlantic Journal* in the spring of 1833, Rafinesque stated that "every variety is a deviation which becomes a species as soon as it is permanent by reproduction. Deviations in essential organs may then gradually become new genera." With this statement he anticipated the future of biological thought.

Rafinesque had many interests in addition to botany and ichthyology. He wrote about banking, the Bible, and poetry. Rafinesque endorsed the construction of the Panama Canal, believed that culturing pearls in mussels was a viable industry, and that houses and ships could be built of fireproof materials. He developed and marketed a vegetable remedy for tuberculosis that was never patented.

Rafinesque began a savings bank primarily to finance his own publications. He was also the first to suggest that the Mayan system of ideographs was partly syllabic.

As one of the most widely traveled naturalists in America, Rafinesque had the opportunity to meet the noted scientists of his day and was on friendly terms with most of them. After leaving Transylvania University, he lived in Philadelphia until his death from stomach cancer on July 18, 1840. His friends described him as a little dried up old Frenchman. Only two pictures of him have been verified. He continued to travel and publish until his death, ultimately bankrupting himself. His best known works are *Ichthyologia Ohioensis*, (1820), *Medical Flora of the United States*, (1828), and *A Life of Travels*, (1836). In all, he published at least 900 other works. Most of his drawings and writings are out of print. Rare copies can still be found. He died in poverty in Philadelphia and his friends stole his body for burial before his landlord could sell it to a medical school. In 1924 his remains were moved to the campus of Transylvania University at Lexington, where he was reinterred with honor.

### Books

*Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie, Charles Scribner's Sons, 1975.

Elliot, Clark A. *Biographical Dictionary of American Science: The Seventeenth Through the Nineteenth Centuries*, Greenwood Press, 1979.

*Merriam-Webster's Biographical Dictionary*, Merriam-Webster Incorporated, 1995.

### Online

"Constantine Samuel Rafinesque," *Biography Resource Center*, <http://www.galenet.com/servlet/BioRC/hi...10&1=12>  
= Constantine + Samuel + Rafinesque (January 8, 2001) □

## Ramanuja

**Nearly a millennium has past since Ramanuja (ca. 1017-1137) wandered the roads of southern India, yet his legacy as theologian, teacher and philosopher remains alive. His many followers consider him to be a saint and one of the greatest teachers of Vishishtadvaita Vedanta, one of the six classical systems of Indian philosophy.**

Ramanuja belonged to the Acaryas, believers who worked to systemize the monotheistic theology of Vaishnavism. He was an exponent of a qualified nondualism known as Vishishtadvaita. He combined the northern and southern traditions of Vaishnavism and strengthened the religious belief and worship of Vishnu. He encouraged the general population toward a devotional expression of Hindu spirituality by teaching that the Divine entails rather than transcends all qualities.

### Responsibility at an Early Age

Information on the life of this Indian theologian and teacher is based primarily on legend handed down through the centuries. Ramanuja was born into a privileged Brahmin family in about 1017 in Sriperumbudur, a village in southern India about 25 miles west of Madras. His father was Keseva Samayaji, his mother, Kantimathi. Around 1033, Ramanuja married a girl named Rahshambal. His father died within a few days of the wedding, and this caused him considerable grief. Ramanuja gathered his young wife and his mother and left for Kanchipuram, where he settled. Ramanuja's cousin, Govina Bhatta, his closest friend and a man with whom he shared a mutual affection from early childhood soon joined them. Bhatta would play a pivotal role in Ramanuja's future, delivering him from a plot to take his life. Ramanuja's marriage lasted until he was thirty, when he gave up the worldly life for that of religion.

### A Jealous Teacher

Ramanuja was considered a brilliant boy of extraordinary intelligence and as a youth studied the Vedanta, one of the six classical systems of Indian philosophy. Soon after moving to Kanchipuram, he met Yadavaprakasha, a teacher of Advaita philosophy and follower of the monistic system of Vedanta of Shankara, an eighth-century philosopher. Ramanuja adapted well to his studies but soon found himself in conflict with his teacher. Yadavaprakasha preached strict nondualism, while Ramanuja qualified his beliefs, stating that the Divine One is not without distinction but embodies infinite contrast. Profoundly religious, he frequently argued with his teacher, questioning his instruction and professing a different understanding of the religious teachings. He found mistakes in Yadavaprakasha's teachings, and soon the teacher became jealous of his student. Yadavaprakasha realized that his student had a clearer understanding of the religious texts than the teacher. After several more instances of being corrected by his student, the guru considered him a threat and plotted to kill him.

Yadavaprakasha arranged for Ramanuja to join him on a pilgrimage to Varanasi with several other students and his cousin, Govina Bhatta. As the trip progressed, Bhatta learned of the plot and told his cousin, helping him to escape. Ramanuja wandered lost in the forest and was soon found by a hunter and his wife who helped him find his way out. During this time he was said to have had a vision of the God Vishnu and his wife Lakshmi. Ramanuja believed the hunter and his wife to be the incarnations of Vishnu and Lakshmi and immediately began a daily worship ritual at the place where he first beheld them.

When the teacher and his students learned of Ramanuja's escape, they sought him but were unable to find him and believed he died in the forest. Soon Ramanuja found his way out of the forest only to discover that he had returned to the same spot from which he had departed. When Yadavaprakasha discovered that Ramanuja returned he feared his plot would be discovered, and he set about convincing the young man to return to the guru and resume his lessons. Ramanuja agreed, but times had not changed, and Ramanuja continued to find fault with

Yadavaprakasha's interpretations of religious writings resulting in a final falling out between student and teacher.

After the second split, Ramanuja became a temple priest at the Karadaraja temple at Kanchi where he was loved and respected by his students. At the temple he began teaching that the worship of a personal god and the soul's union with him is an essential part of the doctrines of the *Upanides* (part of the ancient Hindu texts) on which the system of Vedanta is built.

### A New Guru

During this time, Ramanuja came to the attention of a guru by the name of Yamunacharya, the leader of the Vishishtadvaita school. He was an elderly man, aware that he was dying. He had been searching for the right man to follow in his tradition, and upon seeing Ramanuja he became convinced this was the right one to continue his work.

When Yamunacharya learned of the separation of Ramanuja and his guru, he invited Ramanuja to visit. Ramanuja traveled to Srirangam to meet the famous teacher, but upon his arrival he discovered the great man had died. While viewing the body, he observed that three of Yamuna's fingers were twisted, and Ramanuja interpreted this to be a message directing him to make three vows—to make the people surrender to God; to write a commentary on the Vedantasuta (Sri bhashya) and to write an encyclopedia on the Puranas. He was told by the disciples of Yamunacharya that he had been selected by the guru to carry on his teachings.

### A Popular Teacher

Ramanuja was a popular teacher and remained in Srirangam, but like many Hindu thinkers he undertook an extended pilgrimage throughout India. Upon his return to Srirangam, the king of the Chola dynasty persecuted him. This monarch was a fanatical worshipper of Shiva and planned to force Ramanuja to adopt his religious views. Ramanuja fled to Mysore where he was said to have founded 700 monasteries. He organized temple worship and taught a monistic philosophy based on a doctrine of devotion to the incarnation of Vishnu.

While in Mysore, he converted King Bittiveda of the Haysala dynasty. This act led to the founding of the town of Milukote (1099). It was here that he dedicated the temple to Selva Pillai. It was twenty years before Ramanuja returned to Srirangam, where he organized a temple of worship, and it was said that here he founded 74 centers to disseminate his doctrine. According to tradition, Ramanuja died in 1137 at 120 years of age.

### A Religious Legacy

Ramanuja is considered the most influential thinker of devotional Hinduism. He spread devotion and discipline in society through his nine works known as Navaratnas. In his three major commentaries, the *Vedartha-Samgraha*, the *Sri-bhashya* and the *Bhagavadgita-bhashya*, he provided an intellectual basis for devotional worship. He gave new insight into southern Indian Vaishnavism and became known as its foremost saint.

Ramanuja formulated a Yoga that taught that the cultivation of *bhakti* is more important than mediation. Bhakti-Yoga is a form of supreme attachment to one divine person. Ramanuja believed and taught his disciples that devotion was not merely the means to liberation but the goal of all spiritual endeavors.

The prayer he repeated at the beginning of his *Sri-Bhashya* best describes the essence of his teachings—"May knowledge transformed into intense love directed to Sri Narayana (Vishnu), the highest Brahman, become mine, the Being to whom the creation, preservation and dissolution of the Universe is mere play, whose main resolve is to offer protection to all those who approach Him in all humility and sincerity, and Who shines out like the beacon light out of the pages of the Scripture (vedas)."

### Books

Brandon, S.G.F., *A Dictionary of Comparative Religion*, Charles Scribner's Sons, 1970.  
Feuerstein, George, *The Yoga Tradition*, Holm Press, 1998.

### Online

"Ramanujacharya," <http://www.freeindia.org.biographies/sages/ramanujacharya/index.htm> (December 3, 2000).  
"Ramanuja," *Encyclopaedia Britannica*, <http://www.britannica.com> (December 3, 2000).  
"Ramanuja," *Microsoft Encarta Online Encyclopedia 2000*, <http://encarta.msn.com> (November 17, 2000).  
"Ramanuja," <http://www.dishq.org.saints.ramanuja.htm> (November 17, 2000).  
"Sri Ramanuja Acharya," <http://home.att.net/~s-prasad/ramanuja.htm> (November 20, 2000).  
"Sri Ramanuja," <http://sribalaji.com/sri-ramanuja.htm>, (November 17, 2000). □

## Bernardino Ramazzini

**The understanding of occupational diseases dates back to 1700, when the Italian physician Bernardino Ramazzini (1633-1714) wrote *Diseases of Workers*. As a result of these studies, he was regarded as the father of occupational medicine.**

**B**ernardino Ramazzini was born October 4, 1633, in Carpi, Modena, Italy. Educated in philosophy and medicine, Ramazzini practiced as a physician until late in 1676, when he became a professor of medicine at the University of Modena (1682-1700) and at Padua (until 1714). In 1682 he was invited to join the university by Duke Francesco d'Esta and appointed to the chair of the theory of medicine at the university. Ramazzini took an early interest in epidemiology, the study of the causes, distribution and control of disease, and he described numerous plagues that ravaged his region of Italy. Soon he expanded his studies to occupational diseases, examining more than 50 occupations and the diseases that were frequently associated with them.



In the late 1600s Ramazzini described outbreaks of lathyrism, a disease of humans and animals caused by eating legumes of the genus *Lathyrus*. The disease is commonly called chick-pea poisoning and is characterized by spastic paralysis, by-paresthesia and paresthesia (a prickling skin sensation). Between 1690 and 1695 he expanded his studies to outbreaks of malaria in Italy. During this study, Ramazzini used the cinchona bark (from which the alkaloid quinine is derived) to treat his malaria-stricken patients. His use of this medicine is considered a turning point in the history of medicine. It was a practice of most physicians of the time to prescribe the cinchona bark extract for all types of illnesses; it was Ramazzini, however, who realized this medicine should not be used indiscriminately, but rather be reserved for the treatment of malaria.

### **Conducted Comprehensive Studies of Diseases and Their Relationship to Occupations**

Ramazzini believed in the importance of visiting workplaces and speaking directly with workers. This was not a belief shared by his peers, and he encountered much sarcasm and derision from other doctors. One of his earliest investigations found that sewage workers were affected with a severe reddening of the eyes, resulting in blindness for many of them. Ramazzini studied this phenomenon, questioned the workers in detail, and determined that the problem was linked to ammonia vapors present in the sewers. As

a result of this study, he developed the idea for his treatise on occupational diseases.

In 1700 Ramazzini wrote *De Morbis Artificum Diatriba* (*Diseases of Workers*.) Although the first recorded observations of occupational disease date back to Hippocrates (c. 460-377 B.C.), *De Morbis Artificum Diatriba* was the first comprehensive work on occupational disease. Ramazzini applied his approach of inspecting the workplace, questioning the workers, and advising on remedies to outline the health hazards associated with chemicals, dust, metals, as well as other abrasive agents that laborers may encounter in the daily routine of their work. In his *De Morbis Artificum Diatriba*, Ramazzini describes over 50 dirty or dangerous trades; among those at risk, he noted, were miners, gilders, chemists, potters, tinsmiths, glassmakers, painters, tobacco workers, lime-workers, tanners, weavers, coppersmiths, and printers.

Ramazzini begins each chapter of his work with a description of the illness associated with one of the trades. Throughout the document he stresses the need to inform workers about risks to their health in the various occupations he studied. As a result of his personal approach, he was able to devote more detail to each illness and soon became the primary expert on each topic. In addition to the direct relationship between the illness and its associated occupation, Ramazzini was concerned with the pollution of the surrounding area. The expression of his concerns was perhaps the first appreciation of public-health problems.

### **The Father of Occupational Medicine**

As a result of his studies and publication, Ramazzini believed it was the responsibility of medical science to further cultivate the study of occupations and any diseases associated with them in order to provide workers with proper medical attention, thus leaving them free to pursue their trade without concern for illness overtaking them. Much of his approach to advising remedies for illnesses was based on common sense. He advised starch-makers to work in open places, and he stressed the need for improved ventilation. He recommended periodic rests from work and shorter work time to prevent eye injuries for those craftsmen employed to make very small items. He also recommended frequent interruptions to work for workers whose jobs required considerable muscular effort (bricklayers, woodworkers, and printers). Through his studies of artists who developed metallic poisoning, Ramazzini was able to determine the relationship between metals and the symptoms of metallic poisoning. He realized that the paints used by the artists were a factor in their poisoning. His interest in this area of medicine took him into the studies of diseases of other occupations such as eye conditions of printers and mercury poisoning and lung diseases associated with miners.

Ramazzini's work was soon followed by others. In 1775 Percivall Pott published a work on the diseases of chimney sweeps. Charles Turner Thackrah published an extensive study of industrial illnesses and poverty in 1831. Regardless of the proof of these various pamphlets, dissertations, and full studies, it was not until 1895 that Great



Britain became the first country to introduce statutory notification of occupational diseases.

### Ramazzini's Legacy

Certainly Ramazzini can be credited with awakening the medical community to the need to protect workers from any hazards they may encounter from their occupation or their occupational environment. He can also claim credit for ensuring that health emergencies related to occupation or occupational environment are understood and dealt with in a healthy and accurate manner. Industrial medicine, factory and safety laws, and the eventual introduction of the treatment of occupational diseases into workers' compensation laws can surely be traced back to Ramazzini and his *De Morbis Artificum Diatriba*.

Ramazzini died on November 5, 1714, in Padua, Veneto, Italy.

### Books

*New Encyclopaedia Britannica*, 15th ed., Helen Hemingway Benton, 1973-1974.

### Periodicals

*Lancet*, September 4, 1999.

### Online

"Occupational Disease," *Hutchinson Dictionary of Science*, 1998, accessed through *Electric Library Personal Edition*, <http://www.elibrary.com/> (January 18, 2001).

"Ramazzini, Bernardino," *Columbia Encyclopedia*, 5th ed., 1993, accessed through *Electric Library Personal Edition*, <http://www.elibrary.com/> (January 18, 2001).

"Ramazzini, Bernardino," *Encyclopaedia Britannica*, <http://Britannica.com.htm> (January 17, 2001). □

## Grote Reber

**Grote Reber (born 1911) was a radio engineer who became interested in radio astronomy as a hobby. He built the first radio telescope in the backyard of his home and, for a decade, he was the only radio astronomer in the United States. Reber recorded radio signals at different wavelengths and created the first radio map of the universe.**

Grote Reber was born on December 22, 1911 in Wheaton, Illinois, about 25 miles west of Chicago. His mother, Harriet Grote, was a grade school teacher who interested Reber in astronomy with a book by one of her former students, Edwin P. Hubble. As a child, Reber was interested in radio as a hobby. By the time he was 15 years old he had built his first transmitter receiver and could communicate with other "ham" radio amateurs around the world.

In 1933 Reber graduated from the Illinois Institute of Technology with a Bachelor of Science degree in electrical

engineering. After graduation he went to work for a Chicago radio manufacturer, the Stewart Warner Company, where he designed radio receivers. During the same year, Karl Jansky published his first report describing how he had detected the first radio waves from outer space. Reber read Jansky's report and was inspired to pursue these signals himself.

Karl Guthe Jansky was a physicist at Bell Telephone Laboratories in Holmdel, New Jersey. In 1927 Bell had created the first transatlantic radiotelephone. However, the telephone links were highly susceptible to electrical interference. In 1930 Jansky was asked to locate the source of the interference. Within two years Jansky discovered three sources of the problem, two of which were related to storms and the third came from an unknown origin. Jansky pursued this third source and discovered that it appeared four minutes earlier each day, which corresponded to the 23 hour 56 minute period of the stars. This meant that the stars emitted energy in the form of radio waves, as well as light waves. Jansky followed up this work with another report in 1935 which linked the radio waves to the distribution of the Milky Way.

Jansky was then assigned to work on other projects at Bell Laboratories and never had the opportunity to continue his work on stellar radio waves. However, Reber read Jansky's work in the *Proceedings of the Institute of Radio Engineers* journal and was determined to continue his work. He first needed to build a telescope capable of detecting cosmic radio waves. In the midst of the Great Depression, Reber was unable to garner academic or financial support for his project. Astronomers were not familiar with radio technology and were still absorbed with visual inspections of the universe. Reber was not discouraged by this lack of enthusiasm and was determined to work on the project alone.

### Built First Radio Telescope

Reber drew up plans to build a large parabolic reflector to collect radio waves and feed them into a radio receiver. He presented his plans to the American Bridge Company, which quoted him a price of \$7,000 to build the telescope. Since this price was not affordable to Reber, he decided to construct the device himself. With the help of two friends, Reber built a reflector out of galvanized sheet metal and wooden rafters. The mirror was 31 feet in diameter with a focal length of 20 feet. With no external financial support, Reber spent \$1,300 of his own money to build the first radio telescope in the backyard of his home in Wheaton. This was \$300 more than the price of a new automobile. The telescope took four months in 1937 to build, but stood in Reber's yard for ten years.

Once the telescope was in place Reber went to work trying to confirm Jansky's findings. He worked at Stewart Warner during the day and recorded signals in his backyard at night when there was less interference from cars. Reber originally chose to operate the telescope at a wavelength of nine centimeters. However, after a year, he failed to detect anything with his telescope. In 1938 he made several improvements to his telescope using parts from his employer

and from the University of Chicago and he decided to increase the wavelength to 33 centimeters. Reber was still unsuccessful. A year later he increased the wavelength to 1.87 meters. After two years of trying to detect cosmic radio waves, Reber was finally successful at this longer wavelength.

### Major Discoveries

Once Reber had an operational telescope he set out to make a radio map of the Milky Way. First he confirmed Jansky's claim that the static was strongest at the constellation Sagittarius, the center of the universe. He also detected strong signals from other constellations, namely Cygnus, Cassiopeia, Canis Major, and Puppis. Reber published his initial findings in the *Proceedings of the Institute of Radio Engineers*. He also tried once again to get astronomers interested in radio waves. Reber submitted his paper to the *Astrophysical Journal*, but there was no one qualified to review the paper. As Reber explained in a January 1988 article in *The Toronto Star*, "The astronomers couldn't understand the radio engineering and the radio engineers couldn't understand the astronomy." The editor of the journal decided to publish the paper without a review and it finally appeared in June of 1940.

Reber continued to improve his telescope and map the universe. In 1943 he started to explore the Sun and found strong radio signals. This discovery had already been made accidentally by the British a year earlier but had remained a military secret until after World War II. Reber completed the first radio map of the galaxy in 1944 based on over 200 chart recordings. He also noted that radio waves could penetrate the interstellar dust that blocks the view of the Milky Way. This was an important improvement over visual inspections of the universe.

For nearly a decade Reber worked alone in his backyard as America's only radio astronomer. However, once Reber's findings were circulated among astronomers and once World War II was over, interest in the field began to grow. Reber stopped his operations in Wheaton in 1947 and moved his telescope to the United States Bureau of Standards. In 1948 Reber went to work at the University of Virginia as the chief of the experimental microwave radio section. In 1951 he moved to Hawaii to work in an area that had less man-made radio interference. He used a telescope that worked at 5.5 to 14 meters to try to find new sources of radio waves. He left his original telescope behind and it was moved in 1960 to the National Radio Astronomy Observatory in Green Bank, West Virginia, where it is still on public display.

### Moved to Tasmania

In 1954 Reber moved to Tasmania, off the coast of southern Australia, to be closer to the south magnetic pole where the Earth's ionosphere was the weakest and, therefore, radio waves were the strongest. He joined the Commonwealth Scientific and Industrial Research Organization and constructed a new wire-antenna instrument over 3,000 feet in diameter that measured wavelengths at 150 meters. It is one of the world's largest radio telescopes. Aside from a

brief period between 1957 and 1960 when Reber worked for the National Radio Astronomy Observatory, he spent the rest of his life in Tasmania. One of his first projects there was to map the southern radio sky. He found that the southern map was the inverse of what he had mapped in Illinois at much shorter wavelengths.

Even in Tasmania Reber's work was still hindered by the ionosphere. While the ionosphere protects the Earth from long-wave radiation from space, it also prevents certain radio frequencies from escaping. In 1985 Reber used a mission of the space shuttle *Challenger* to his advantage. Exhaust gases from the space shuttle's engines temporarily neutralized the electrical particles in the ionosphere. Therefore, on August 4, 1985 when *Challenger* was over Reber's telescope in Hobart, Australia, the shuttle released a quarter ton of fuel to create a hole in the ionosphere for a few hours. Through this hole Reber was able to find cosmic radiation at a wavelength of 176 meters, which was the first time radio waves of this length from space had ever been recorded.

Reber's next project took him to the other end of the Earth. He took advantage of a solar minimum of 1986 and 1987 to try to map the northern sky at 144 meters to match his southern sky map at that same wavelength. He spent two winters as a visiting scientist at the National Research Council of Canada working with an antenna at Ashton, southwest of Ottawa. However, the antenna was a part of some obsolete defense equipment and was badly damaged, so Reber was unable to complete his map.

### Challenged Big Bang Theory

Reber continued to work into the next decade, when he was in his eighties. He was trying to find more ways to create holes in the ionosphere so that he could get more data from longer wavelengths. Reber believed that these data were key to disproving the Big Bang theory of how the universe evolved. His radio maps of space have shown that the radio sky is brighter at longer wavelengths than shorter wavelengths. Reber believes that this is due to photons losing energy as they travel through space, while proponents of the Big Bang theory see this as a sign of a receding galaxy. Reber has given many lectures on why he does not believe in the Big Bang theory and many astronomers disagree with him. Reber, however, is accustomed to being alone in his beliefs and is waiting for an opportunity to test them.

What started out as a one-man project in Reber's backyard in Wheaton, Illinois has evolved into the serious science of radio astronomy. For the first decade Reber had been the only radio astronomer. Now the discipline has gained support in the United States, Britain, Australia, and elsewhere. This technology has led to important discoveries in astronomy, especially with respect to quasars and pulsars. It has even become popular among the public. For example, there is now a Society of Radio Astronomers which is an international organization designed to help hundreds of radio astronomy amateurs observe the radio sky. Reber's conviction in his beliefs and his life-long dedication to his profession have increased our knowledge of

the universe and have even challenged our beliefs about its conception.

### Books

- Classics in Radio Astronomy*, edited by Woodruff Turner Sullivan III, D. Reidel Publishing Company, 1982.
- Hey, J.S., *The Evolution of Radio Astronomy*, Science History Publications, 1973.
- Kraus, John, *Big Ear*, Cygnus-Quasar Books, 1976.
- Kraus, John, *Big Ear Two: Listening for Other-Worlds*, Cygnus-Quasar Books, 1995.
- Kraus, John, *Radio Astronomy*, Cygnus-Quasar Books, 1986.
- Malphrus, Benjamin K., *The History of Radio Astronomy and the National Radio Astronomy Observatory: Evolution Toward Big Science*, Krieger Publishing Company, 1996.
- Tucker, Wallace, and Karen Tucker, *The Cosmic Inquirers*, Harvard University Press, 1986.
- Verschuur, Gerrit L., *The Invisible Universe Revealed: The Story of Radio Astronomy*, Springer-Verlag, 1987.

### Periodicals

- Astronomy*, June 1992, p. 46.
- New Scientist*, October 29, 1994, p. 53.
- New York Times*, November 17, 1981, p. C1.
- Sky and Telescope*, July 1988, p. 28; July 1988, p. 31; November 1988, p. 492.
- Toronto Star*, January 23, 1988, p. M3; January 30, 1988, p. M3.

### Online

- "Grote Reber and His Radio Telescope," <http://info.gb.nrao.edu/~fghigo/fgdocs/reber/reber.html> (January 17, 2001). □

## Paul Julius Reuter

**Communications pioneer Paul Julius Reuter (1816-1899) exploited the crude technology of the telegraph to create one of the world's first international news services. The news agency he founded, Reuters, established the model for transmitting news quickly around the world. It has remained one of the most effective, innovative and respected communications outlets.**

Reuter was born on July 21, 1816 in Kassel, in the Electorate of Hesse in Germany. His Jewish parents named him Israel Beer Josaphat. As a young man he worked as a clerk at his uncle's bank in Gottingen, Germany. At the bank he became acquainted with Carl Friedrich Gauss, a well-known mathematician and physicist who was a pioneer at applying mathematical theory to electricity and magnetism. At the University of Gottingen, Gauss was a professor and director of the observatory. Gauss was experimenting with the electric telegraph, and Josaphat developed a keen interest in telegraphy. Josaphat began to consider how to use the new technology to improve communications throughout the world.



In October 1845, Josaphat moved to England, where he at first called himself Joseph Josaphat. Within a few weeks he converted to Christianity and, at his baptism on November 16, 1845, took the name Paul Julius Reuter during a ceremony at St. George's German Lutheran Chapel in London. Seven days later, Reuter married Ida Maria Elizabeth Clementine Magnus at the same church.

### Bridging the Gap

Reuter soon returned to Germany. In 1847 he became a partner in a Berlin bookshop, Reuter and Stargardt, and joined a small publishing company. Reuter published several political pamphlets that provoked the wrath of German authorities. Under pressure from German leaders, he moved to Paris in 1848.

In Paris, Reuter began translating newspaper and business articles into German and dispatching short excerpts to Germany. This news agency failed after several months due to tight regulations by the French government. He then worked in Paris as a translator for the Havas news agency.

By 1850, Reuter was back in Germany, where he founded another news agency at Aachen. In April 1850, he entered into an agreement with Heinrich Geller to start a carrier pigeon service to transmit news and stock prices between Aachen, where German telegraph lines ended, and Belgium. Although his service was known as a "pigeon-post," he used both central telegraphic transmission and carrier pigeons. The service operated for a year until the telegraphic gap between the two nations was closed.

In June 1851, Reuter moved back to London with his family and soon became a naturalized British citizen. On October 10, 1851, he established a telegraph office at the Royal Exchange Buildings, near the London stock exchange. From this location he transmitted stock market quotations between London and Paris, using the new Calais-Dover telegraph cable under the English Channel. Recognizing the need for a news service, Reuter spent the next seven years working hard to build the agency and promote his services to newspapers. At first, most of his work was confined to commercial telegrams. In 1858 he convinced the *London Times* and several other English papers to subscribe to his service and publish his news dispatches. Soon his news agency, known as Reuters, became indispensable to the British press.

### International Success

Reuter rapidly built a strong reputation for his service by reporting several exclusive stories. In 1859 he transmitted the text of a speech given by Napoleon III prior to the Austro-French Piedmontese war in Italy. The agency soon extended its service to include the entire British press. Reuter's continuing successes brought him to the attention of the highest levels of government. In 1861 Reuter was presented at the Court of Queen Victoria by Prime Minister Lord Palmerston.

On April 26, 1865, Reuters was the first news agency to bring the news of President Abraham Lincoln's assassination in the United States to the European public. Later that year, Reuter opened the first news agency office outside of Europe in Alexandria, Egypt. With his services rapidly expanding throughout Europe, Reuter laid his own telegraph cables across the North Sea to reach Germany and France. Reuters then began to serve the United States. By 1872 the agency reached the Far East, and in 1874 it expanded into South America.

As the world of news transmission grew, Reuter found himself battling with two main competitors, the Havas agency of France and Wolff of Germany. On January 17, 1870, after many years of rivalry, Reuters and its competitors set ground rules for the worldwide exchange of news by dividing up turf. The territorial divisions allowed Reuters, Havas and Wolff exclusive control over their own countries and assigned to each of them parts of Europe and South America. For many years, the three agencies enjoyed a shared monopoly on global news service.

In 1871, Reuter was named a baron by the Duke of Saxe-Coburg-Gotha. Later he was given the same rank in England. Reuters converted his news agency into a joint stock company, and he remained its managing director until 1878, when he retired and was replaced by his son Herbert.

### Foresaw the Future of News

Even after his retirement, Reuter remained active as the news agency he founded continued to grow and flourish. In 1883, Reuter began transmitting messages electrically to London newspapers using a column printer—an early version of a “news wire” or “ticker” which would become a common feature in newsrooms worldwide.

Reuter's sense of the importance of clear, concise and timely dissemination of the news is summed up in an 1883 memo he dispatched to his correspondents and agents. In the memo he requested that news be transmitted that included “fires, explosions, floods, inundations, railway accidents, destructive storms, earthquakes, shipwrecks attended with loss of life, accidents to war vessels and to mail steamers, street riots of a grave character, disturbances arising from strikes, duels between, and suicides of persons of note, social or political, and murders of a sensational or atrocious character. It is requested that the bare facts be first telegraphed with the utmost promptitude, and as soon as possible afterwards a descriptive account, proportionate to the gravity of the incident.” With this memo he established the ground rules which future news agencies followed.

Reuter died on February 25, 1899, at his mansion, the Villa Reuter, in Nice, France. His company continued to build on his initial success after his death. In 1923 Reuters pioneered the use of radio to send news internationally. In 1925 the British press agency, the *Press Association*, took charge of a majority holding in Reuters, Ltd. In 1941 the Reuter Trust was formed to ensure the neutrality and independence of Reuters. On February 25, 1999, the Reuters News Agency commemorated the 100th anniversary of the death of its founder by launching a university award in Germany.

### Books

*Columbia Encyclopedia*, Fifth Edition, 1993.

*Julius Reuter and His Son Herbert Reuter*, Reuters News Pictures Service, 1999.

*Merriam-Webster's Biographical Dictionary*, Merriam-Webster, Inc., 1995.

### Online

“An 1883 memo,” *Reuters History*, [http://about.reuters.com/investormedia/company\\_info/memo.asp](http://about.reuters.com/investormedia/company_info/memo.asp) (December 11, 2000).

“Foundation and early development,” *Reuters History*, [http://about.reuters.com/investormedia/company\\_info/history.asp](http://about.reuters.com/investormedia/company_info/history.asp) (December 11, 2000).

“Milestones in the life of Paul Julius Reuter,” *Reuters History*, [http://about.reuters.com/investormedia/company\\_info/milestones.asp](http://about.reuters.com/investormedia/company_info/milestones.asp) (December 11, 2000).

“Reuter, Paul Julius, Baron (Freiherr) von,” *Britannica.com*, <http://britannica.co.uk/article/9/0,5716,64949+1,00.html> (November 24, 2000).

“Reuter, Paul Julius, Baron von,” *Microsoft Encarta Online Encyclopedia 2000*, <http://encarta.msn.com> (November 17, 2000). □

## Henry Martyn Robert

**Anyone who has ever attended a civic or organizational business meeting has probably seen Robert's Rules of Order in action. But what few people know is that General Henry Martyn Robert (1837-1923) had a long and varied career, one that had an impact**



on the landscape of the United States, as well as on how its decisions are made.

Robert was born on May 2, 1837 on his grandfather's plantation near Robertville, South Carolina. His father was the Reverend Joseph Thomas Robert, a Baptist minister and teacher. Reverend Robert did not support slavery, and by the time his son was 16, the family had moved to Ohio. It was from Ohio that Robert received his appointment to the United States Military Academy at West Point when he was 16.

In 1857, Robert graduated from the Military Academy with honors. Although he returned to teach at the academy the following year, he was given his first significant engineering assignment in August of 1859.

### Robert's Redoubt

U.S. Army troops were stationed on San Juan Island, in northern Puget Sound, 80 miles north of Seattle, Washington. There had long been controversy over the boundary of the United States and Canada, then a British colony. In the summer of 1859, the conflict came to a head in what has come to be known as the "Pig War," when an American settler shot and killed a pig that had repeatedly eaten his crops. The pig was owned by Canada's powerful Hudson's Bay Company, and the British Army was soon involved. When three British warships suddenly appeared off San Juan Island, the local commander wrote for help.

Help was sent in the form of a ten-man detachment from the Army Corps of Engineers, commanded by now Second Lieutenant Robert. Robert had come to Washington to help in the federal campaign against the aboriginal people. He had traveled to the West in the most popular method of the time, sailing to Panama, crossing that country on land, then sailing north back to the United States. During this journey, Robert contracted malaria.

Once at San Juan Island, Robert and his engineers began building a dirt fort, digging trenches and piling the dirt to create a barrier. The redoubt was based on designs Robert had studied at West Point. It was planned to feature eight heavy guns taken from the battleship *U.S.S. Massachusetts* to be used against British ships. After only one gun was in place, did the British realized that the fort was designed well enough to allow a small contingent of men to repel an attack. Negotiations were begun and both sides agreed to reduce their military presence on the island. The work had been physically difficult, done only with pick and shovel, and the redoubt never fired a shot in anger. The fort became known as "Robert's Gopher Hole." If it never knew battle, it certainly succeeded in ending the armed conflict and helping to shape policy.

On Christmas Eve, 1860, Robert married Helen Marie Thresher in Dayton, Ohio. The couple would have five children, four daughters and one son.

When the American Civil War began, Robert chose to remain loyal to the United States. He helped to plan the defenses of Washington, D.C. and Philadelphia Harbor, and was subsequently promoted to first lieutenant. Because the sometimes-sultry climate of the Middle Atlantic States aggravated his lingering malaria, he was soon transferred to New Bedford, Massachusetts.

### Introduction to Parliamentary Procedure

It was in New Bedford that Robert had his first exposure to the thing that would bring him fame. Asked to preside over a meeting at his church, he found that he had no idea how to effectively do the job. According to legend, Robert decided that he would not preside at a meeting until he understood parliamentary procedure.

After a short term heading the Department of Practical Engineering in West Point, Robert became the chief engineer for the Military Division in the Pacific in 1867. He was in charge of lighthouse and harbor construction and also ordered to scout Arizona. He was stationed in the then booming town of San Francisco. While there, he was asked to once again take a leadership role, this time at the First Baptist Church of California. He found that as people came from various parts of the country to take part in the boom, they brought with them many ideas of how a meeting should be run, each based on their own experience. It created an atmosphere in which little of the business of the church could be accomplished. Robert had developed some ideas from his own study of parliamentary law, and saw that there was a need for a general reference tool.

He began to seriously research and study parliamentary law. The basic rules of order originated in the early parliaments of England. European settlers brought them to

the United States. But they were an oral tradition. As people moved across the U.S., the rules were adapted and evolved. Robert researched both the historical and most widely adopted current rules to determine a set procedure that would be applicable to modern-day meetings. His research resulted in the publication of a 15-page pamphlet in 1869. It was meant for himself and his friends, so that the business of the church could be better handled.

### The Rules of Order were Created

In 1873, Robert was assigned to Milwaukee, Wisconsin, supervising construction of lighthouses on Lake Michigan and river and harbor improvements. During the severe winter of 1873-74, he found himself with time on his hands, unable to perform any duties due to the weather. He decided to use this time to collect all he had researched on parliamentary procedure and write the first manuscript of what would become *Robert's Rules of Order*. It was the most complete guide to be published at the time. On the suggestion of his wife, who felt that the *Rules of Order* might be too complex for people who had no parliamentary experience, Robert added two sections. The first dealt with practical matters such as the scheduling of meetings and the preparation of agendas. The second section had to do with the legal rights of assemblies, and the correct procedures for regulating behavior at meetings.

Once he had completed the manuscript in 1875, Robert, following a convention of many writers of the day, paid to have 4,000 unbound copies of *Rules of Order* typeset and printed by Burdick and Armitage, printers in Milwaukee. In early 1876, Robert found a publisher to handle the sales and distribution of the book. The S.C. Griggs Company in Chicago agreed to publish the *Pocket Manual of Rules of Order for Deliberative Assemblies*. The title pages of the first edition were reprinted to include the publisher and copyright date as 1876.

The book was officially published in February 1876. One thousand copies of the first edition were given free to educators, civic leaders and parliamentarians across the United States. That act must have helped create the tremendous demand; the remaining 3,000 copies were sold out by May. When he had the original 4,000 copies printed, Robert believed that it was at least four year's supply.

Griggs wanted to reprint the book, but the plates needed to be reset. Robert took advantage to make some changes. The second edition of the *Rules of Order* was published in July of 1876. It featured 16 additional pages, due to a combination of Robert's changes and the use of a larger typeface. The second edition would see 21 printings by 1892, with more than 140,000 copies printed. In 1881, Robert's *The Water-Jet as an Aid to Engineering Construction* was published.

### Robert in Galveston

The U.S. government was looking for a port in the western Gulf of Mexico at the end of the 1880s. President Grover Cleveland appointed Robert to head a board of engineers to select the best location. Robert felt that the island city of Galveston, Texas was the only choice for a

seaport. Congress accepted his proposal, and Robert was given the task of building a deep-sea port at the island. The largest hindrance to navigation at Galveston was a large sandbar. Robert designed a series of jetties that increased the speed of the river water entering the gulf, which eventually forced the sandbar into deeper water. The work lasted until 1895, during which Robert was promoted to the rank of colonel.

While working in Galveston, Robert prepared a third edition of *Robert's Rules of Order*, which was published in 1893. After his wife Helen died in 1895, Robert continued his career as a consulting engineer. His experiences in Galveston led him to jobs at a number of other Texas harbors and riverfronts.

The spring of 1901 was a very eventful one for Robert. On April 30, President William McKinley rewarded him for his 44 years of loyal and productive service, by promoting him to the rank of brigadier general, and appointing him chief of the Corps of Engineers. Though it surely added to his pension, the act must have been mainly a symbolic one, for Robert retired from the Army just two days later, on May 2. He was 64 years old.

### Civilian Life

Less than one week later, on May 8, Robert embarked on the next phase of his life by marrying Isabel Livingstone Hoagland in Owego, New York. The newlyweds settled in Owego, in central New York State, and Robert began his career as an engineering consultant. He also began to revise his *Rules of Order*.

One of his first civilian engineering jobs again involved the city of Galveston. In 1900, the city was devastated by a hurricane with storm tides that almost destroyed the city. Robert was invited to help devise some form of protection against future storms. From 1901 to 1904 he designed and supervised the building of a large seawall. The resulting construction, made of concrete, was 17 feet high, seven miles long, and wide enough to allow a roadway on its top. It protected the city from two later storms, in 1909 and 1915. Robert inspected the seawall after both storms and reported any damage to city leaders. He also worked on designs for a highway and a railway bridge linking Galveston to the mainland.

In 1915, *Robert's Rules of Order, Revised*, featuring new material and a new copyright was published. *Parliamentary Practice: An Introduction to Parliamentary Law* was published in 1921. This was followed in 1923 by *Parliamentary Law*.

On May 11, 1923, Henry Martyn Robert died in Hornell, New York. He was 86. Services were held at Owego, New York. Robert is buried in Section Three of Arlington National Cemetery outside of Washington, DC. Parliamentary procedure has become a family business. Robert's daughter and grandson have both created revised editions of the *Rules of Order*.

Many of the engineering improvements Robert designed still stand as a testament to his abilities. The Sea Wall at Galveston is that city's most distinctive feature, and has

been called the premiere waterfront boulevard in the United States. Robert is known around the world for bringing order to civic and organizational meetings. If a vote were to be held to declare Henry Martyn Robert the person with the most influence on meetings, without a doubt, the motion would be carried.

### Books

Petroski, Henry, *Remaking the World*, Alfred A. Knopf, 1997.

### Online

"Chronology of the Life of Gen. Henry Martyn Robert," <http://www.paliamentarians.org> (February 4, 2001).

"San Juan Island National Historical Park," National Park Service, <http://www.nps.gov/> (February 4, 2001).

"In 1876 You Could Buy a Robert's First Edition for 75 Cents," (From the 4th Quarter 1999 issue of the *National Parliamentarian*) <http://www.newkent.net/> □

## John Rock

**John Rock (1825-1866) was one of the first African Americans with a medical degree. Also trained as a dentist and lawyer, Rock was the first African American to be admitted to the bar of the U.S. Supreme Court. He was a passionate abolitionist and civil rights leader and held a strong belief in the dignity and rights of all Americans.**

The son of free parents, John Rock was born on October 13, 1825, in Salem, New Jersey, a small town near Wilmington, Delaware. His middle name is listed as either Sweat or Swett. Although his family was poor, his parents encouraged John to pursue his education as best he could. From an early age, Rock showed a tremendous interest in books and learning, spending much time reading. He attended the Salem public schools.

In 1844, at the age of 19, he accepted a teaching position at a one-room school in Salem. Although he enjoyed teaching, Rock deeply desired to become a doctor. After teaching for six hours a day and spending two more hours tutoring students, he apprenticed after work with two local doctors, Dr. Shaw and Dr. Gibson. With the doctors' medical libraries at his disposal, Rock often added another eight hours of reading to his day. Some speculate that Rock's overexertion as a young man made have contributed to his poor health and early death.

After four years of teaching and apprenticeship with Shaw and Gibson, Rock prepared to enter medical school. However, because he was black, no medical school would admit him. Discouraged but not ready to give up his dream completely, Rock began studying dentistry. At that time, an academic degree was not required to practice dentistry. He found a job doing chores for a local dentist, who was so impressed with Rock's intellect that he made the young man his apprentice. In 1849, after a year learning the dental

profession, Rock was ready to open his own office. Because he knew that few if any white patients would see him, Rock decided to establish his practice in Philadelphia, which had one of the country's largest populations of free blacks.

### Became a Doctor

Rock displayed such skills in making dentures that he won a silver medal. But after two years, it was clear that Rock could not sustain himself financially being a dentist. Most free blacks in Philadelphia could not afford to pay for dental work. In 1851, Rock became the director of Apprentices' High School, a night school for the city's black population. In 1852, most likely due to the influence of white doctors, who supported his cause, he was allowed to enroll in the short-lived American Medical College in Philadelphia. Once again proving his exceptional intellectual abilities, Rock graduated with his medical degree in 1852.

During his two years in Philadelphia, Rock also became involved in the temperance movement and abolitionist efforts. He soon earned a reputation as a public speaker of considerable power and persuasion. The second half of his life would be dominated by his advocacy of racial progress.

### Abolitionist Activities

In 1853, Rock moved to Boston to open a medical and dental office. Boston was the home of a well-organized, influential group of black leaders and a hotbed for the abolitionist movement. After setting up his business in Boston, Rock began giving many speeches on racial issues that earned him public notice. By 1855 he was traveling throughout New England, and occasionally farther west, to deliver public lectures. His most well-received and famous lectures were "The Unity of Human Races," "The Light and Shade of the African Character," and "Races and Slavery." In 1856 he addressed the Massachusetts Legislature on "The Unity of Human Races," and the speech won him great reviews.

In his thirties Rock's health deteriorated, probably due to the effects of tuberculosis, and his illnesses limited his activities. In 1857, after undergoing several surgeries, Rock was forced to halt his medical practice. Believing that he could receive more advanced care overseas, he made plans to sail to France. Friends offered financial support for Rock's journey, and a farewell party was held at the Twelfth Baptist Church in Boston. But U.S. Secretary of State Lewis Cass denied his application for a federal passport. Cass claimed that a passport was evidence of citizenship, and since African Americans did not hold citizenship rights, no passport could be issued. Activists were outraged, citing numerous previous examples of African Americans obtaining passports. Finally, the Massachusetts Legislature authorized the Massachusetts Secretary of State to grant Rock a passport.

### Sought Improved Health in France

In May 1858, Rock set sail for France. Rock remained in Paris for eight months under the care of Dr. Auguste Nelaton, a noted professor, surgeon, and member of the French Academy. Nelaton operated on Rock and recom-

mended he give up his medical practice and speaking engagements. When Rock returned to Boston in the early months of 1859, he published an article in *The Liberator* in which he said that his health was so much better that he could again practice medicine. In fact, Rock could not sustain his medical career due to the long hours and physical demands of caring for his patients. Finally he abandoned his medical and dental practice completely but continued his abolitionist activities.

While in France, Rock had studied German and French. When he returned Rock displayed his new linguistic abilities in various articles, most often for *The Liberator*. Rock's deepest commitment was to justice for his race. His language in his political essays and speeches was bold, brash, and unapologetic. According to Eugene P. Link in the *Journal of Negro History*, "For Dr. Rock to suggest that the Negro was a superior race in many attributes, was outrageous, beyond the pale." Yet, not only did Rock suggest that his race was high-minded, he also half-humorously noted that he was quite pleased with his complexion and preferred it to the pale skin of his white counterparts. Some activists later credited Rock with inventing the phrase, "Black is beautiful," which became popular in the 1960s.

### Became a Lawyer

No longer practicing medicine, Rock began to study law. Most likely with the assistance and tutelage of Robert Morris, Boston's best-known African American lawyer, Rock passed the bar on September 14, 1861. Almost immediately after Rock's admission to the Massachusetts bar, the governor and the Boston city council appointed him to be justice of the peace in Boston and Suffolk County. In addition, Rock opened a law office on Tremont Street in Boston.

With the outbreak of the Civil War in 1861, Rock could not contain his desire to contribute to the cause of freedom. Despite his deteriorating health, he continued traveling and giving lectures around Massachusetts and in Washington, D.C., during 1862.

### Admitted to the Supreme Court

In the last years of his life, Rock set his sights on one more milestone achievement. He wanted to gain admittance to argue before the U.S. Supreme Court. Traditionally, the chief justice of the Supreme Court determined who would be granted the privilege of bringing cases before the nation's highest court. When Rock began his quest, the Chief Justice was Roger B. Taney, who had ruled against the citizenship rights of African Americans in the Dred Scott case.

When Taney died in October 1864, Rock saw his opportunity and seized it. The new chief justice was Salmon P. Chase, President Lincoln's former Secretary of Treasury and an opponent of slavery. With the assistance of Massachusetts Senator Charles Sumner, who petitioned Chase on Rock's behalf, Rock was admitted to the bar of the Supreme Court on February 1, 1865. The press noted the significance of Rock's admittance, with many commentators noting that the Dred Scott decision had been effectively overturned. If a black man could appear before the Supreme Court, it would

be preposterous to claim that African Americans had no rights of citizenship.

After his admittance to the Supreme Court, Rock was received by the U.S. House of Representatives, the first black to receive the honor. Ironically, he was arrested on his way home from the reception for traveling without a pass. As a result of that incident, U.S. Representative James A. Garfield (who would later become president) introduced a bill that abolished the requirement that black Americans carry passes.

### His Vision

Throughout his life, Rock's causes were numerous and varied. He unsuccessfully petitioned the Committee on Federal Relations of the Massachusetts House of Representatives to remove the word "white" from the state's militia code. He was adamantly opposed to efforts by the American Colonization Society to send American blacks to other countries. During the Civil War, after Congress approved the creation of units of black troops, Rock worked to recruit black men for the 54th and 55th Massachusetts Infantry Regiments. He then lobbied for equal pay for black troops. He spoke at many important events, including the 1862 meeting of the Massachusetts Anti-Slavery Society and the 1864 National Convention of Colored Men.

Like other black leaders of the time, Rock encouraged self-improvement. He accused the African American community of cowardice for refusing to revolt sooner. He called upon blacks to do all in their power to improve themselves, their situation, and their lives. However, Rock did not believe that the black community could completely rid itself of white oppression until the color line was erased. He denounced whites that mistreated blacks as being the biggest cowards. Education and economic improvement were vital to Rock's vision for a new America. He believed true equality would be achieved only when African Americans were given economic power.

According to George A. Levesque in the magazine *Civil War History*, Rock was like other race spokesmen of his generation in that he "appeared to subscribe to the belief that the races' own efforts at moral and intellectual improvement was [sic] the key to the amelioration of their unenviable condition." However, Levesque notes that Rock was not so naive as to believe completely in such a simple remedy: "For many leaders—certainly this was true for John Rock—the self-improvement formula was seen for what it was: not a panacea whose application would miraculously transform white racial attitudes, but a modest stratagem, an expedient, really, for ameliorating the condition of the race."

Rock never actually argued a case before the U.S. Supreme Court. His health continued to worsen, and he died of consumption in Boston on December 3, 1866.

### Books

*Dictionary of American Negro Biography*, edited by Rayford W. Logan and Michael R. Winston, W. W. Norton and Co., 1982.



*Encyclopedia of American Biography*, 2nd edition, edited by John A. Garraty and Jerome A. Sternstein, HarperCollins, 1996.

### Periodicals

*Civil War History*, December 1980.  
*Journal of Negro History*, July 1967.

### Online

"John Sweat Rock," *Notable Black American Scientists*, <http://www.galenet.com> (February 10, 2001). □

## John Wellborn Root

**John Wellborn Root (1850-1891) lent his name and artistic genius to one of nineteenth-century America's most famed architectural firms, Burnham and Root. Their Chicago office designed and built some of the tallest commercial buildings in the world. Root's structural innovations helped create the first modern office blocks in history.**

Root was born on January 10, 1850 in Lumpkin, Georgia. His father Sidney, who had wanted to be an architect when he was young, ran a dry-goods store. Educated at home until he was ten, Root emerged as a gifted artist as a child who loved to draw and play the piano. Eventually the family moved to Atlanta, but during the American Civil War Root was sent to England, where he stayed in Liverpool with business associates of his father's. By this time the senior Root was profiting handsomely from a fleet of ships he owned that were able to evade a trade blockade of the South. After the end of the war, the family settled in New York City, but Root remained in England a bit longer, studying drawing at Oxford College and continuing his musical studies. By this time Root had become a talented organist.

His family lost their fortune almost as quickly as it had been gained, and Root's choices for college, when he returned to America, were limited. He enrolled at the University of the City of New York, and earned a degree in civil engineering in 1869. The first in his class, he delivered the commencement speech, but did not plan on a career in civil engineering. Instead he harbored a desire to design buildings. Since there were no graduate training programs in architecture at the time, he apprenticed with James Renwick, the designer of St. Patrick's Cathedral on Fifth Avenue. It was an unpaid internship. After a year Root was able to find a paid post with John Butler Snook, whose Brooklyn firm enjoyed a working relationship with the Vanderbilt family. During Root's tenure at the firm, Snook was completing a commission for New York's Grand Central Station—a building later destroyed to make way for the present one. At the age of 20 Root became supervisor of construction on the massive glass and iron vault. The first trains



entered the shed on October 8, 1871—the same day as the Great Chicago Fire.

### Headed West

Root showed some of his work to a forward-thinking New York architect, Peter Bonnet Wight, who was impressed by the young architect's drawings. He felt that they possessed a maturity and personal style unusual for someone so new to the profession. Wight had ties to Chicago, where he had maintained an office for a time in the late 1850s, and returned there to establish himself with Asher Carter and William H. Drake after the fire. The leveling of the city, at the moment when its commercial prospects were growing exponentially, gave architects an unprecedented opportunity. The Carter, Drake and Wight firm had so much business that they offered Root a job as head draftsman. He moved to Chicago in early 1872.

At the firm Root befriended a drafting-room colleague, Daniel Hudson Burnham, a Chicagoan from a well-to-do family. A talented artist, Burnham had done poorly in school and had only recently seemed to discover his calling. He and Root decided to begin working together. Burnham's exuberant personality won them their first commission, a house located at Harrison Street and Ashland Avenue. They formalized their partnership as Burnham and Root in July of 1873. Two months later, the Panic of 1873 triggered an economic downturn, and they struggled to keep the firm afloat. The partners took turns staffing the office while the other hired himself out to other architectural firms. Root also

earned a salary as the organist at the First Presbyterian Church.

One of Burnham and Root's first important clients was John B. Sherman, co-founder of the famous Union Stock Yards and Transit Company. They designed a residence for him, at 21st Street and Prairie Avenue, in a dignified style that soon attracted attention. Louis Sullivan later wrote about discovering the house when he was a young man and finding himself entranced by its turrets and decorative stonework. As a result of the contract, Burnham met and later married Sherman's daughter. Root's personal life had a more tragic cast: he married Mary Louise Walker in 1879, but she suffered from tuberculosis and succumbed just six weeks later. Three years later, he wed Dora Louise Monroe.

### Floating Raft

Burnham and Root's fortunes as a firm improved considerably in 1880 when they met Owen Aldis, a lawyer and agent for two Boston brothers with Chicago real-estate holdings. Aldis liked Burnham and Root's work, and secured commissions for them from Peter and Shepard Brooks that would leave an indelible stamp on the architectural history of the city. Their first project was the Grannis Block (1880-81) on North Dearborn Street, an office building with a terra-cotta facade carved into floral motifs. Their next Brooks commission, the Montauk block on West Monroe, was slated to sit on some of Chicago's marshiest soil. Root devised a new type of foundation made up of steel rails crisscrossed and then encased in concrete. He called it the "floating raft." Other architects in city began to use it as well.

Root's first corporate commission was finished in 1883. It had been awarded to the firm thanks to the father-in-law of his first wife, who was the solicitor for the Chicago, Burlington, and Quincy Railroad Company. The headquarters for the railroad, erected at the intersection of Franklin and Adams, achieved fame for its inner courtyard, which gave its offices much more light than was customary in a building of that size. The concept was expanded the following year in a design for the six-floor McCormick Harvesting Machine Company Building. Its intermediate floors became an arcade. Its facade consisted of a single-story base, mid-section of four floors, attic story with corbelled cornice—an arrangement that set the tone for building design for years to come.

### The Chicago School

Root began devising methods to create taller buildings. He transferred the floating raft concept into a vertical framework. In his historic Phenix Building of 1887, a metal skeleton was used for the inside walls. No longer did the walls have to bear weight—the steel beams carried it. Lighter buildings with more windows were now possible. The Phenix offices at 111 West Jackson Street housed an insurance company and provided an astonishingly vast space for hundreds of clerical workers on its ninth floor. It heralded the onset of a new era for American business. The Phenix was called the first great modern office block in history.

As their success grew, Root, Burnham, Dankmar Adler, Louis Sullivan, and other leading Chicago architects felt slighted by the American Institute of Architects, which was dominated by their New York and Boston colleagues. Conventions were almost always held in the East, since many loathed the idea of "the West," as Chicago was viewed. To combat these prejudices, the Chicago innovators formed the Western Association of Architects. Root was elected president at its third convention in 1886. The group rejected European trends and advocated the development of a purely American style, which their buildings already followed.

### The Rookery and Monadnock

The years between 1880 and 1890 were the most successful for Root. Chicago's population had doubled, and space was at a premium. Therefore, building owners were more willing to allow their architects to build upward. Prior to this time, tall buildings were viewed as unsafe and therefore unprofitable. It is estimated that Burnham and Root designed about two new buildings a month during this heady period. One of their most enduring was the Rookery Building (1885-88). It was situated on a prime spot in Chicago's financial district that had previously served as the site for City Hall in the years after the 1871 fire. A citizen once stopped the mayor on the street and complained about the pigeons that roosted above, and the name stuck. The Rookery's walls were structural piers made from stone, brick, and terracotta. Metal lintels on the rear walls and those of the inner court carried the weight of the structure. The inner courtyard was one of the most opulent spaces in the city in its day, made from gold and white marble. Framing this space were latticework iron balconies and an oriel staircase. It was famous even before it opened. Burnham and Root liked the space so much that they took offices in it themselves.

Another Root building that survived the twentieth century also became one of the landmarks of Chicago architecture. Root spent more time on the Monadnock Block, located at the south end of the Loop, than on any other project of his career. Built between 1884 and 1892 at Jackson and Dearborn streets, it was the tallest and heaviest wall-bearing building in the city—and most likely the world. It was 16 stories in height. At the ground floor level its brick walls were six feet thick. The Brooks owners named it after a mountain in New Hampshire, and specified that its ornamentation be restrained. Therefore, Root used a brown obsidian brick that offered visual delight, for its tone ranged from red to purple, depending on the light. Panels on the tenth floor offer carvings of lotus blossoms. On the twelfth floor were decorative papyrus stems, each of which were symbols of Upper and Lower Egypt. Root saw similarities in the two places, each situated near a large body of water and an important river, and both committed to establishing their own cultural and economic legacy. "In its refinement and nobility the Monadnock Block remains without peer in the history of the high office building," wrote Hoffmann in *The Architecture of John Wellborn Root*. "In Chicago, it was the perfect gesture—the exact visual metaphor of the vitality of the city. Root made it rise from the soil as if it were a springtime plant."

### Firm's Legacy Ended

The Rookery and Monadnock buildings established Root and his fellow Chicago School architects as some of the most innovative design minds of the era. When the AIA finally met in the city in 1887, Root was elected a director. Despite the heady pace of commissions he completed for the firm, he found time to write prolifically on the subjects of art and architecture, and traveled to lecture and meet with clients elsewhere. One of his last great achievements was the Reliance Building, began in 1889 and finished posthumously in 1895. It towered 15 stories above the heart of Chicago at Washington and State streets, and featured broad plate-glass display windows on its ground floor, which set a permanent standard for commercial architecture. Tragically, that ground floor was the only surviving part of Root's design. After his death from pneumonia on January 15, 1891, it was finished by Charles B. Atwood, Root's successor at the firm.

Root died just days after his 41st birthday. He left behind two daughters and a son, who became an architect. After his death, Burnham's firm made a radical shift toward classicism, and began designing Greek- and Roman-inspired buildings.

### Books

Hoffman, David, *The Architecture of John Wellborn Root*, University of Chicago Press, 1973.

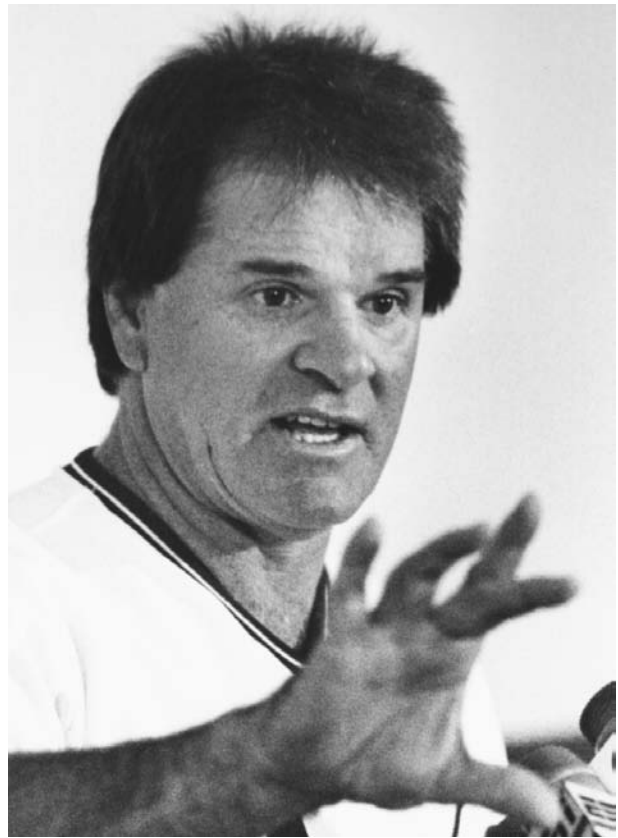
*International Dictionary of Architects and Architecture*, St. James Press, 1993.

Monroe, Harriet, *John Wellborn Root: A Study of His Life and Work*, Prairie School Press, 1896. □

## Pete Rose

**Pete Rose (born 1941), who got more hits than any player in professional baseball history, was banned from any further association with the game for allegedly betting on baseball games while he was a player and manager. Rose was suspended for life by baseball commissioner Bart Giamatti in 1989 and thus denied certain election to the National Baseball Hall of Fame. Named to the game's All-Century Team in 1999, Rose continued to plead for his reinstatement, gaining the support of many fans, players, and baseball officials.**

A native of Cincinnati, Rose was a player of limited physical talents but unlimited heart. He scrapped and fought for his teams throughout a twenty-four-year career. His intensity on the field earned him the nickname "Charlie Hustle." Playing five different positions, Rose secured many major league records for longevity. Finally, in 1985, he surpassed Ty Cobb's all-time record for career hits, finishing with 4,256. But the gambling scandal and his lifetime ban overshadowed Rose's career. Long after



his playing days, Rose remained a controversial figure, one of the game's greatest stars but also one of its most famous black sheep.

### Charlie Hustle

Pete Rose was born and raised in Cincinnati, the town where he would become famous on the ball diamond. His father, Harry Rose, who once played semi-pro football, pushed his son into athletics at an early age. One day, the story goes, Harry went to the store to buy a pair of shoes for his daughter and came back with a pair of boxing gloves for Pete. From then on, sports dominated Pete's life.

After hustling his way through several sports in grade school and high school, Rose settled on baseball. Though he was not considered a top prospect, his hometown Cincinnati Reds signed him to a professional contract. Rose began his pro career in 1960 with the Geneva Red Legs of the New York-Penn League and spent several years laboring in the minors, cementing his reputation for energetic play. He was about to turn 22 when he got the nickname "Charlie Hustle" during spring training of 1963. New York Yankees pitcher Whitey Ford bestowed it on him after he saw Rose running out a base on balls. His hustle helped him make the Reds that year, and Rose immediately became the regular second baseman. He was named Rookie of the Year.

Right away, Rose was a solid contributor. In 1965, Rose batted .312 and led the league in hits with 209. It was the first of 15 seasons in which he would hit at least .300, the first of 10 seasons with 200 or more hits (a major league

record) and the first of five years leading the league in hits. In 1968, he won the first of his three batting championships, hitting for a .335 batting average, and the following year he recorded a career-high .348 average.

Rose became the sparkplug of a young team that was developing many stars. In 1967, after four years at second base, Rose was switched to the outfield to make room for future Hall of Famer Joe Morgan. Never a spectacular fielder, Rose nonetheless was recognized with two Gold Gloves for fielding excellence as an outfielder, in 1969 and 1970. Rose spent eight seasons playing left field or right field before moving to third base in 1975.

In the first seven years of the 1970s, Cincinnati was the most successful team in the National League. Five times, the Reds won their division and four times—in 1970, 1972, 1975 and 1976—they made it to the World Series. Known as the “Big Red Machine,” the Reds were led by such future Hall of Famers as Joe Morgan, catcher Johnny Bench, and first baseman Tony Perez. Rose was the backbone of the team and its spirited leader. He became known for his head first slides and for running out every single ball he hit. Though he had only average speed, he stole 198 bases in his career.

In 1972, Rose helped the Reds win Game Five of the World Series over the Oakland As, opening the game with a home run and driving in the winning run in the ninth inning with a single. Nevertheless, the Reds lost the series, as they had in 1970. In 1975, Rose was named the World Series Most Valuable Player for batting .370 and leading the Reds to a memorable victory over Boston in the seven-game series, considered by many to be the greatest of the modern era. In 1976, the Reds swept the Yankees in four games, but Rose batted only .188.

### Hit King

When the wheels fell off the Big Red Machine, Cincinnati no longer could afford to keep Rose. After the 1978 season, during which Rose established a modern National League record with a 44-game hitting streak, he signed with the Philadelphia Phillies, getting a four-year, \$3.2 million contract that at the time was the biggest in baseball history. Again, he became a leader on a successful team. The Phillies made the playoffs in 1980, 1981 and 1983. They won the World Series in 1980 and lost it in 1983. On the Phillies, the aging Rose played for the most part at first base. He led the league in doubles at age 39 and in hits at age 40, when he batted .321 during the strike-shortened 1981 season.

With his glory days behind him, Rose focused on the goal of overtaking the legendary Cobb and his all-time hits record, which many experts had considered unbreakable. After a 1983 season in which he batted only .245, Rose did not seem likely to make it. Ten hits short of becoming the second man in baseball history with 4,000 hits, Rose was let go by Philadelphia. He was picked up by the Montreal Expos and surpassed the 4,000-hit mark. Later in that 1984 season, he returned to Cincinnati in a trade for fringe player Tom Lawless, and was named manager of the team.

Now the way was clear for Rose to pursue his quest of Cobb. As manager, he could put himself in the lineup

whenever he liked, and he was not about to quit until he reached his goal. “I’d go through hell in a gasoline suit to keep playing baseball,” Rose said at the time. At the start of the 1985 season, he was turning 44 years old and was still 94 hits behind Cobb’s record of 4,191. Finally, on September 11, he surpassed the record. Rose played one more season, batting only .219, before hanging up his spikes at age 45. He remained as manager of the Reds through the 1989 season, and though his teams never won a pennant, they won 414 games against 373 losses.

Although Rose was the all-time hit king of major league baseball, he had plenty of critics among baseball experts. Few considered him to be in the same class as Cobb as a hitter. For his career, Cobb batted .369, Rose .303. Rose had more than 2,600 at-bats than Cobb. Rose’s endurance was an impressive testament to his determination. Rose’s 14,053 career at-bats and 3,562 games were both all-time records, and he placed second on the all-time list in doubles, with 746, and fourth in runs, with 2,165. No one else ever played at least 100 games or got at least 100 hits during 23 different seasons. Yet Rose won only three batting championships and hit only 160 career home runs. His slugging percentage of .409 and on-base percentage of .373—considered by modern baseball experts to be the best measures of batting prowess—were not impressive.

Despite these shortcomings, Rose was virtually certain to be voted into the Hall of Fame. Rose epitomized the hard-nosed player who made the most out of his talents through tremendous desire. As “Charlie Hustle,” he was an American icon, a hero to the people of Cincinnati and to many Americans. And though Rose often seemed egotistical, speaking his mind and irritating reporters and baseball officials, his personality was irrelevant to his on-field accomplishments.

### Charlie Hustler

The knocks against Rose paled in significance to the storm that was brewing about his association with gamblers. Starting in 1984, Rose had begun hanging out with a group of men he had met at a Cincinnati gym. Through them he met bookmakers. He allegedly developed a betting habit that reached the vicinity of \$15,000 a day. To pay gambling debts he even gave bookies one of his World Series rings and the bat he used to break Cobb’s record.

In 1989, after a lengthy investigation, Giamatti, the baseball commissioner, concluded that Rose had bet on baseball games, including some involving Cincinnati, his own team. Two of his friends from the gym—who had both been convicted of felony drug charges—claimed Rose had gambled on baseball. According to baseball rules, Rose had to be banished. After waging a legal fight, Rose signed an agreement in which he accepted his suspension but did not admit to gambling on baseball games. He admitted he was a compulsive gambler but said he was guilty only of having a poor selection of friends.

Things got worse for Rose in 1990, when he served five months in prison for tax evasion. After getting out of jail, he became a fixture on the autograph circuit, hawking memo-

rabilia, earning more money, and trying to polish his tarnished image.

According to the rules of Major League baseball, Rose can petition for reinstatement. No one banned from the sport has ever been let back in, but if he succeeded, Rose would be eligible for the Hall of Fame. Rose's campaign for reinstatement became as single-minded and determined as his quest for Cobb's record. Among his supporters was former President Jimmy Carter, who said that "evidence about [Rose] specifically betting on baseball is less than compelling." Many players and managers also rallied to his cause. Philadelphia teammate Mike Schmidt, speaking during his own Hall of Fame induction, said: "I hope some day, some day soon, Pete Rose will be standing right here."

Rose was married twice and has a son and a daughter from each marriage. His son from his first marriage, Pete Rose, Jr., enjoyed a mediocre career in professional baseball, mostly in the minor leagues. Rose Sr. relocated to Boca Raton, Florida, where he entered the restaurant business and hosted a radio talk show. "I've paid for what I did, and that still doesn't seem to be good enough," he told an interviewer in 1999.

In 1999, Major League baseball selected its All-Century team, and fans voted Rose a spot among the elite. Despite the ban, Rose was allowed to stand on a podium at the All-Star Game in Atlanta alongside the other living members of the team. Of all the game's great stars who were introduced that evening, Rose received the loudest ovation from the

fans. In a nationally televised interview after the ceremony, Rose refused to apologize and continued to deny he had bet on baseball.

In the summer of 2000, teammate Perez and Sparky Anderson, who managed the Big Red Machine in the 1970s, were inducted into the Baseball Hall of Fame in Cooperstown, New York. On the day of their induction, Rose sat at a table outside a souvenir shop in the town, signing autographs and telling a reporter: "Fans realize I made mistakes. They know I've paid for my mistakes. They're willing to turn the page."

## Books

Reston, James, Jr., *Collision at Home Plate: The Lives of Pete Rose and Bart Giamatti*, University of Nebraska, 1997.

## Periodicals

*Knight-Ridder/Tribune News Service*, March 23, 1994; November 2, 1995; January 12, 1999; July 22, 2000.  
*Sport*, March, 2000.

## Online

"Answers to Frequently Asked Questions about Pete Rose," *The Baseball Archive*, <http://baseball1.com/bb-data/rose/>  
"The Pete Rose Hall of Fame Controversy," *Cosmic Baseball Association*, <http://www.clark.net/pub/cosmic/prhof.html>  
"Pete Rose," *Total Baseball*, <http://www.totalbaseball.com/player/r/rosep001/rosep001.html> □

# S

## Gale Sayers

**Chicago Bears running back Gale Sayers (born 1943) was the youngest player ever to be enshrined in the Pro Football Hall of Fame. Sayers earned the nickname of “Gallop-in’ Gale” for his exceptional ability to elude defensive attackers.**

The professional football career of Gale Sayers was brief, lasting for six seasons, from 1965 to 1971. He played a total of only 68 games, yet Sayers retired with a career gain of 6,213 yards and left six National Football League (NFL) records, among them a record as the all-time leading NFL scorer for a single season in 1965 with 22 touchdowns. That record, which stood for 10 years, remained an all-time rookie scoring record into the twenty-first century. Sayers was honored as NFL Rookie of the Year in 1965 and as Most Valuable Player in 1967, 1968, and 1970. In the wake of his 1972 retirement at age 29, Sayers was enshrined in the Pro Football Hall of Fame during his first year of eligibility in 1977. He was inducted as well into the Black Athlete’s Hall of Fame, the College Football Hall of Fame, and Kansas Sports Hall of Fame. Additionally, Sayers was cited by the NFL as the greatest running back in the first 50 years of the league, and in 1996 he was named a member of the All-Time All Big 8 (College) Team.

Gale Eugene Sayers was born in Wichita, Kansas, on May 30, 1943. He was the second of three sons of Roger Winfield Sayers and the former Bernice Ross. The Sayers family was well established in Kansas and owned considerable acreage in the vicinity of Graham County. Sayers’s father worked as a mechanic for the Goodyear Corporation in Wichita until 1950. At that time the family moved to

Speed, Kansas, not far from the Nebraska border, for 16 months in order to operate a sizeable wheat farm belonging to Sayers’s grandfather, who had fallen ill. In Speed, Gale Sayers and his older brother, Roger “Win” Sayers Jr., attended a small two-room schoolhouse in the nearby community of Phillipsburg. Throughout his childhood, Gale Sayers bonded intensely with both his older and younger brothers.

The family moved to Nebraska in 1951, following the death of Sayers’s grandfather. They settled in Omaha, where Sayers spent the duration of his childhood. His father supported the family by polishing cars for auto dealers. Upon his arrival in Omaha, the eight-year-old Sayers joined the local midget football league and blossomed into a promising athlete—a speedy runner in particular. He was gratified by his natural athletic ability and played on a variety of sports teams. Although his family changed residences frequently after settling in Omaha, Sayers remained adaptable and found companionship among his schoolmates at Howard Kennedy Elementary School.

As a teenager at Omaha’s Central High School, Sayers played middle linebacker on the school’s varsity team and earned the nickname of “Horse” because of his solid strength and sheer bulk. Although his natural agility remained to be tapped, Sayers eventually distinguished himself as an all-around track-and-field athlete, winning a total of three gold medals in area competitions. In his senior year of high school, he set a statewide record in the broad jump and placed fourth statewide in high hurdles. Sayers flourished also on the secondary school gridiron and emerged as the top intercity scorer, with 108 points to his credit. He graduated as the top scorer citywide and as a member of both the All-Midwestern and All-American high school teams. He spent much of his senior year of high school in



discussions with top colleges that proffered football scholarships, including Iowa State, Northwestern, and Notre Dame. Sayers, who was determined to play professional football after college, signed 17 letters of intent before he decided to play halfback for the University of Kansas (KU) Jayhawks in Lawrence.

### Kansas Comet

At KU, Sayers wore number 48 on the football field, pledged the Kappa Alpha Psi fraternity, and was not the brightest of scholars, according to the observations of others as well as according to his own admission. In his 1970 autobiography *I Am Third*, Sayers quoted an unidentified reporter who noted that even into his sophomore year, "[Sayers] was shy almost to the point of boorishness, completely inarticulate, [and] apprehensive about whether he was going to make it scholastically and as a football player."

To Sayers's good fortune, he married his high school sweetheart, Linda Lou McNeil, on June 10, 1962, after his freshman year of college and against the advice of both of their families. Regardless, McNeil was extremely supportive of Sayers, both in his educational endeavors and his athletic goals. Likewise, his speech coach, Tom Hendricks, and his fraternity advisor—an educational consultant by the name of Jesse Milan—contributed both tutorial and emotional support to Sayers. With continued reassurance, Sayers successfully overcame his apathy for learning, gained confidence, found religion, and raised his grade point average to 3.0 by the end of his junior year. As he matured athletically,

he became a dominant college player. In his sophomore year he set a collegiate record for the National College Athletic Association (NCAA), scoring a 99-yard touchdown run against the University of Nebraska. In his junior year he gained 941 yards and his gains surpassed 2,000 yards total by the end of the season, earning him the "Back of the Year" award from the Big 8 college conference. By the end of his college career Sayers had a college career yardage gain of 2,675 yards. He was named All-American tailback twice—in both his junior and senior years of college—and earned the nickname of "Kansas Comet."

### National Football League

As a college senior in 1965, Sayers received multiple offers to play professional football. He was picked during the first round of the college draft by teams in both the NFL and the former American Football League (AFL). After careful consideration, Sayers signed a contract to play for the NFL's Chicago Bears. The agreement provided Sayers with a salary of \$100,000 over a period of four playing seasons, along with a signing bonus of \$50,000. In contracting to play with the Bears, Sayers refused an even more lucrative offer from the Kansas City Chiefs of the AFL.

As a running back for the Chicago Bears, Sayers—wearing jersey number 40—distinguished himself immediately because of his uncanny ability to charge through opposing defensive lines. He possessed the skill to shift direction without faltering or slowing his pace, along with a penchant for dodging walls of defensive players who rushed to tackle. Sayers at times appeared to move virtually in two directions simultaneously, a unique talent that distinguished him from all other running backs. He rushed for an impressive 867 yards as a rookie and earned the nickname "Gallop-in' Gale." Sayers led the league in scoring that year with 22 touchdowns, a record that stood for 10 years and remained a rookie benchmark into the twenty-first century. Among his nearly two dozen scoring runs that year, Sayers scored a total of six touchdowns in a single game on December 12, 1965, to tie the earlier standing records of Ernie Nevers and Dub Jones set in 1929 and 1951, respectively. Sayers, with his unprecedented statistics, received the NFL Rookie of the Year title for the 1965 season and was named to the Pro Bowl that year.

In 1966, his second year with the NFL, Sayers amassed 1,231 rushing yards to lead the league, and he led in the standings with a total yardage gain of 2,440 yards that same year. Sayers was named to the Pro Bowl for the second time in 1966 and for the next two years in succession. In 1967, 1968, and again in 1970, he received the NFL's Most Valuable Player Award. Additionally, the NFL named Sayers to the first 50-year all-star team.

As a professional player with the NFL, it was damage to Sayers's knees that brought his career to an untimely end by 1971, following separate and unrelated injuries to each knee, for which no support garment might compensate. Because of the limited medical technology of the era, Sayers was forced to undergo extensive restorative surgery and intensive therapy after the first injury to his right knee in 1970. He returned to active play in the Pro Bowl in Los

Angeles, California, that year and earned the Most Courageous Player Award from the Pro Football Writers. A subsequent injury to his left knee during the following season left him completely ineffective to perform as the extraordinary darting running back of his previous years. He retired officially from active play in 1972 at the age of 29. Yet in his retirement he left an impressive set of statistics in the NFL record books, including all-time leader of kickoff touchdown returns.

### After Pro Ball

While his right knee recuperated in 1970, Sayers wrote an autobiography entitled *I Am Third*, and in 1972 he collaborated with Hall of Fame quarterback Bob Griese in writing a manual called *Offensive Football*, which was published by Atheneum. Sayers, who lacked only 10 credits toward his bachelor's degree when he signed with the Chicago Bears, completed his undergraduate work at KU in his retirement. He earned a post-graduate degree in education from that same institution and served as assistant athletic director at his alma mater, beginning in 1973. He also held a post as director of the school's Williams Educational (athletic) Fund. In 1976 Sayers became athletic director at Southern Illinois University.

Sayers was enshrined in the College Football Hall of Fame in 1977. On July 30 of that same year he was inducted into the Pro Football Hall of Fame, in what was his first year of eligibility following his 1972 retirement. Nearly two decades later, in 1996, he was named to the All-Time All Big 8 Team by his college conference (now Big 12).

In addition, Sayers embarked on an entrepreneurial career and founded Crest Computer Supply Company in Chicago, Illinois, in 1984. Under the personal leadership of Sayers as president and chief executive officer, the company realized \$55.2 million sales in 1994. Crest Computer Supply, renamed Sayers Computer Source, expanded into reselling and system integration by 2001.

In addition to his financial ventures and other responsibilities, Sayers contributes articles as a columnist to the *Chicago Daily News*. He is the father of one daughter and five sons. His first marriage to McNeil ended in divorce, and he was remarried on December 1, 1973, to Ardythe Elaine Bullard. His community involvement and board memberships encompass social welfare groups and athletic corporations. Among them, he served as an honorary chairman of the American Cancer Society. Sayers sits on the board of trustees of the Chicago chapter of Boy Scouts of America, the Marklund Children's Home, BBF (formerly Better Boys Foundation) of Chicago, and Cradle Adoption Agency. Sayers also served as alumni spokesperson for the Boys and Girls Clubs of America. From 1992 to 1997 he was a member of the National Board of Junior Achievement, and in 2000 he was an alumni representative for the Kansas University Athletic Corporation.

### Books

Sayers, Gale, *I Am Third*, Viking Press, 1970.

### Periodicals

*Forbes*, September 14, 1992, p. 522.

### Online

"Chicago Bears—Hall of Fame: Gale Sayers," <http://www.chicagobears.com/bearsalley/galesayers.cfm> (December 14, 2000).

"Fame Couldn't Wait for Sayers," *ESPN.com*, 2000, <http://espn.go.com/sportscentury/features/00016460.html> (December 14, 2000).

"Gale Sayers," *Kansas Sports Hall of Fame*, <http://www.kshof.org/inductees/sayers.html> (December 14, 2000).

"Hall of Fame Career Profile," *Sayers Computer Source*, [http://www.sayers.com/sayers1\\_frame.htm](http://www.sayers.com/sayers1_frame.htm) (December 14, 2000).

"NFL Legends and Lore," *CBS SportsLine.com*, <http://cbs.sportsline.com/u/football/nfl/legends/hof/sayers.htm> (December 14, 2000).

"The Players," *All-Madden.com*, [http://www.foxsports.com/allmadden/players/gale\\_sayers.sml](http://www.foxsports.com/allmadden/players/gale_sayers.sml) (December 14, 2000).

*Pro Football Hall of Fame*, 2000, <http://www.profootballhof.com/players/enhshrinees/gsayers.cfm> (December 14, 2000).

"Sayers Takes the Ball and Runs with It," *HawkZone*, September 20, 2000, <http://www.hawkzone.com/stories/092000/fookuacsayers.shtml> (December 14, 2000). □

## Friedrich Serturner

**Friedrich Serturner (1783-1841) successfully isolated the morphine crystals contained in dried poppy resin, thus creating a powerful new painkilling substance that could be prescribed by physicians in predictable potencies.**

In 1803, young Friedrich Serturner was a 20-year-old pharmacy apprentice with limited education. Yet, through diligent research, he successfully isolated and extracted morphine crystals from a tarry opium substance called poppy seed juice. In doing so, he became the first chemist ever to isolate and identify the active ingredient associated with a medicinal herb or plant. Furthermore, Serturner's discovery enabled physicians to prescribe morphine in regulated dosages. It was a powerful new method for easing pain and eliminated the dangers of overdose associated with raw poppy juice, which varied unpredictably in its concentration of morphine from one batch to another.

### Isolation of Morphine

Serturner was born Friedrich Wilhelm Adam Ferdinand Serturner in Neuhaus, Prussia, in 1783. His Austrian parents, Joseph Simon Serdinner and Marie Therese Brockmann, were in the service of the Paderborn prince, Friedrich Wilhelm. Serdinner, an engineer and building inspector in Wilhelm's municipality died in 1798. The prince, who was Serturner's godfather, died in the same year. These deaths left Serturner, at age 15, without a means



of support. He was apprenticed to a court apothecary named Cramer.

While serving as an apprentice to Cramer, Serturner decided to investigate the nature of opium to isolate the specific painkilling substance in the drug. During his work in the pharmacy he became aware of the dangers associated with physicians prescribing raw opium as a painkiller. The opium, derived from the seed capsules of white poppies and distributed in the form of dried poppy juice, varied drastically in potency from one juice batch to another. Thus it was nearly impossible for doctors to prescribe the drug effectively. The dangers sometimes overshadowed the benefits, because the opium sometimes was lethal.

After lengthy experimentation, in 1803 Serturner successfully isolated a white, crystalline, alkaloid substance, which he described as the "sleep-inducing factor" of opium. Serturner named it morphine after Morpheus, the Greek god of sleep. He continued to perform his experiments discreetly, late at night and at other times when he was alone. In time he introduced cellar mice and stray dogs into the experiments to observe the effects of the morphine on live animals.

To determine an appropriate dosage for humans, Serturner enlisted friends to ingest the morphine in a series of controlled experiments. Serturner also participated in the experiments while observing and recording the effects of the drug at increased dosages. The experiments revealed that one-half grain of the morphine induced a happy, lightheaded sensation. A second dose caused drowsiness and excessive fatigue. The subjects fell into confusion followed by a deep slumber after ingesting a third dose, and they suffered nausea and headaches upon awakening. Although his friends refused to continue the experiments, Serturner took the morphine compound for months by himself, unaware that it was extremely addictive.

Serturner continued to pursue his pharmacy career, passing the test for apothecary assistant. In 1806, he moved to the Prussian town of Einbeck, where he worked as assistant to the local apothecary, a man named Hink. That year, he published two articles on his morphine experiments, but they were largely ignored. By 1809 he had become a licensed pharmacist and the proprietor of his own business in Westphalia. He published a report on his experiments with morphine for the third time, describing his findings in much greater depth.

The report, entitled *Ueber das Morpium als Hauptbestandteil des Opiums*, received greater attention than his earlier writing. It was recognized by the German Mineralogical Society during its meeting at Jena in March of 1817. At the urging of the noted philosopher Johann Wolfgang von Goethe, the society named Serturner as an honorary member of the group. The faculty of the university at Jena gave him an honorary doctor's degree, and he eventually received similar honors from universities at Marburg, Berlin, St. Petersburg, Batavia, Paris, and Lisbon.

In 1831, Serturner received the Montyon prize as a "Benefactor of Humanity" for his work in isolating morphine from opium. The prize, based on a nomination from the distinguished Institute of France, included a purse of

2,000 francs and brought Serturner the notoriety that he craved in recognition of his tireless research.

### Aftermath of Fame

With the return of the Hanoverian government to Westphalia, Serturner's license to operate his apothecary, issued under the previous French authority, was revoked. In 1820 Serturner moved to Hameln to operate the town pharmacy.

Certain factions of the German medical community refused to acknowledge the significance of Serturner's discovery. Critics maligned his reputation and belittled his research as amateurish. Medical historians later attributed much greater importance to Serturner's work, especially considering the handicaps he faced. The field of organic chemistry was barely developed during his lifetime. He accomplished his research with a sketchy medical background and with only the limited resources available to him as a pharmacist. It is a testament to his ingenuity and to his passion that he succeeded in creating the chemical reaction exactly as he had set out to do.

Serturner's scientific hypotheses extended beyond his curiosity about the sleep-inducing properties of opium. Because of his commitment to scientific investigation, he branched out into other research. His wife, Lenore von Rettberg, whom he married in 1821, dutifully handled the day-to-day business of his pharmacy, thus affording Serturner greater freedom to conduct his experiments.

Serturner theorized about other chemical reactions, including the potential formation of ether from alcohol and sulfuric acid. He also speculated about atmospheric heat and cold heat. His excessive speculation at times overshadowed his work and put him at a disadvantage among his contemporaries in the scientific community. Scientific journals were loathe to publish his writing, although many of his theories and conclusions later proved true. For example, he noted the behavior of cholera during an epidemic and accurately attributed its cause to a living organism.

Serturner also accurately assessed the nature of alkaloid compounds, which he called "vegetable alkali," thus disproving the notion that all medicinal plant substances were acidic. In his morphine research he demonstrated how easily substances could be isolated through crystallization, since crystalline substances cannot form new compounds with crystalline substances of different types.

Despite the significance of his research, Serturner suffered from chronic depression and became severely withdrawn. In his later years he judged himself a failure in his quest to develop a safe and efficient analgesic formula, a way to kill pain without rendering the patient unconscious. In his frustration over the indifferent response of the scientific community to much of his work, Serturner turned his research to improving the designs of firearms, bullets, and other ammunition. He developed an improved design for rear-loaded rifles and created a lead-antimony alloy for making bullets, which proved effective in increasing range. However, his attempts to invent an improved type of gunpowder met with little success. Ironically, the Hanoverian government, which had expelled him from his Westphalia

pharmacy, later honored him as a patriot for his research on firearms and ammunition.

Serturner's later years were wracked with bitterness and pain. He became a recluse and a hypochondriac who bemoaned what he perceived to be a senseless world. He turned increasingly to morphine to dull his pain, until the side effects became intolerable. Over time his addiction increased his discomfort. He died in Hameln on February 20, 1841, unaware that the full potential of his discovery was imminent with the invention of intravenous medication a few years later.

The significance of much of Serturner's research remains subject to dispute among historians. Some approach his accomplishments with hesitation, citing his tendency to speculate excessively. Others commend Serturner's work but blame his frustrations on his inability to articulate his findings with sufficient clarity to satisfy 19th century European medical professionals. Among his works are a two-volume dissertation, *System der chemischen Physik*, dated 1820-22, and *Annalen fur das Universalsystem der Elemente*, comprised of three volumes and dated 1826-29.

Despite his limited education, Serturner's work proved far-reaching. Beyond the isolation of the morphine crystals, he effectively demonstrated that medicinal plants contain specific substances that can be extracted efficiently, permitting precision control of a prescribed dosage of drug.

### Books

Daintith, John; Sarah Mitchell, and Elizabeth Tootill, *A Biographical Encyclopedia of Scientists*, Facts on File, 1981.

*Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie, Charles Scribner's Sons, 1975.

Montgomery, Elizabeth Rider, *The Story Behind Great Medical Discoveries*, Dodd, Mead and Company, 1945. □

## Willie Shoemaker

**Horse racing's most famous jockey, Willie Shoemaker (born 1931) was a tiny, gentle rider who set a world record with 8,833 winning races, including 11 victories in Triple Crown races. He raced for more than 40 years and was the oldest rider (at age 54) and one of the youngest (at age 23) to win the Kentucky Derby.**

Weighing under 100 pounds and standing less than five feet tall, Shoemaker was an unlikely star athlete. Yet he seemed always to coax the best performances out of his horses. For decades, he rode in dozens of races nearly every week of the year. After his retirement, he was critically injured in a car accident and became a spokesman for the rights of disabled persons.

### From Small Beginnings

Born at his family's rural Texas home in 1931, Billy Lee Shoemaker weighed only one pound, 13 ounces. The doc-



tor attending the birth told his mother the baby wouldn't live. Shoemaker's grandmother put him in a shoebox, turned on the oven, and put the box on the open oven door. The homemade incubator helped the tiny baby defy the odds.

Though his father was nearly six foot tall, Shoemaker remained small as he grew into manhood. His father worked in cotton mills and at odd jobs, and the family moved frequently during the Depression years. When the boy was seven, he went to live on his grandfather's ranch and started riding a horse every day to get the mail. Once, he nearly drowned when he fell into a cattle trough.

Shoemaker preferred riding horses to going to school, and he often skipped classes. When he was ten, his parents divorced, and he went to California to live with his father and his new wife. At El Monte Union High School, Shoemaker weighed only 80 pounds. He tried out for football and basketball, but the coaches thought he was too little. So he turned to wrestling and boxing. As a wrestler, he consistently beat boys bigger than him. He never lost a match.

A girl at school introduced him to a boy who was a jockey, and Shoemaker started working at a thoroughbred horse ranch. After 11th grade, he quit school so he could work full-time at the ranch, cleaning the stables and learning about horses.

### Pulled Out in Front

The owner of the ranch was president of Hollywood Park, a racing venue. At the ranch, a retired jockey showed

Shoemaker how to ride a thoroughbred. The teenager became immersed in all aspects of training and riding horses. Shoemaker started hanging around California racetracks and became an apprentice to trainer George Reeves. Reeves saw Shoemaker's talent and interest and gave Shoemaker his start at riding.

Shoemaker was only 17 when he rode his first horse in a race, on March 19, 1949, at Golden Gate Fields. His horse, Waxahachie, finished fifth. In his third race, on April 20, Shoemaker entered the winner's circle for the first time, riding a horse named Shafter V. Reeves at first took a lot of criticism for letting such a young and inexperienced jockey ride, but Shoemaker won seven races in his second week in the saddle.

Even for a jockey, Shoemaker was small: four feet eleven inches and 96 pounds. He did little talking and soon earned the nickname "Silent Shoe." His calm demeanor atop his horses also surprised observers. Most jockeys kicked, whipped and pulled hard on the reins. Shoemaker became known for his "soft hands" and gentle riding techniques.

In 1949, even though he had gotten a late start, he won 219 races, second-most in the United States. The following year, he tied the all-time record, set in 1906, by winning 388 races in one season. For much of that year he rode nine races each weekday and 12 others at a different track on Sundays. Throughout his career Shoemaker would hardly pause for breath as he switched horses and rode race after race. Six times in his career he would ride six winners in one day.

In 1950 Shoemaker hooked up with Red McDaniel, the winningest trainer in the country. One day he won four races even though his foot was so swollen from stepping on a stingray at a beach that he had to wear special boots. That year, he raced in New York for the first time and won three races in his first day at the Aqueduct track. He quickly became a national figure. By the time he turned 20, he was the top jockey in the United States and already married to his first wife, Ginny.

### Sped Past the Competition

In 1953, Shoemaker rode in about 1,600 races and set a new single-season record by winning 485 of them. That record would stand for more than 20 years. The next season, he won 380 out of 1,251 races, setting a 20th century record for winning percentage by an American rider.

In 1954, Shoemaker began riding horses for breeder-owner Rex Ellsworth, including Swaps. Shoemaker and Swaps upset veteran jockey Eddie Arcaro and his favored horse Nashua in the Kentucky Derby. Later that year, Nashua beat Swaps in a famous match race.

In the 1957 Kentucky Derby, Shoemaker made a rare mental mistake, mistaking a furlong pole for the finish line and standing up in his stirrups before the race was finished. His horse, Gallant Man, ended up losing by a nose to Iron Liege, and Shoemaker was suspended for 15 days, even though his was an innocent error and might not have been decisive. After that, Churchill Downs painted a big bull's-

eye at the finish line. Shoemaker rode Gallant Man to victory in the Belmont Stakes a few weeks later.

Early in 1958, Shoemaker notched his 3,000th win. He again was the year's leading rider, winning 300 races. For the next seven years he would be the sport's biggest money winner. In 1959, Shoemaker again won the Kentucky Derby, riding Tomy Lee, who beat Sword Dancer, the horse Shoemaker had wanted to ride. Shoemaker rode Sword Dancer to fourth place in the Preakness and then to victory in the Belmont Stakes. Shoemaker won 347 races for the year, tops again. At age 27, he was inducted into the Jockeys' Hall of Fame at the Pimlico track in Florida.

In May 1961, Shoemaker, not yet 30, won his 4,000th race—a mark only three other jockeys in horse racing history had achieved. That year, he married his second wife, Babbs. Shoemaker won the Belmont again in 1962, riding Jaipur, and in 1963 won the Preakness for the first time, riding Candy Spots. Early in 1964, Shoemaker surpassed Arcaro's career earnings record with more than \$30 million. In October of that year, Shoemaker got his 5,000th win.

### Overcame Adversity

In 1965, Shoemaker won his third Kentucky Derby, riding Lucky Debonair. He was the most famous jockey in the United States, and a well-known sports figure worldwide. In 1967, he won the Belmont and the Preakness on Damascus. Within 13 years ending in 1967, he had won nine Triple Crown races.

In January 1968, Shoemaker's horse went down in a race at Santa Anita. Shoemaker broke his leg when he fell off and was struck by the hind leg of another horse. For a while, Shoemaker didn't believe he would ever race again. But after months of therapy, he returned to race at Santa Anita in February 1969, winning all three races he rode that day. "As it turns out, it's possible that spill prolonged my career because it made me realize how much I loved riding horses," Shoemaker wrote in his autobiography. "You get blasé when you're doing well year after year. Then you have a setback, and you realize you have no business being blasé."

Shoemaker's bad luck continued a few months later when he suffered an injury two days before he was to race in the Kentucky Derby. A horse flipped backwards and fell on him, breaking his pelvis, rupturing his bladder and causing other internal injuries as well as nerve damage in his leg. This time, the Shoe was out three months.

In 1970, Shoemaker targeted jockey John Longden's all-time win record of 6,032. He passed 6,000 in August and then battled increasing media attention as he closed in on the mark. On September 7, he broke the record, riding a filly named Dares J. Longden had taken 40 years to compile his record, but Shoemaker had broken it in 22 seasons. And the Shoe was far from finished.

By 1975, at the age of 43, he was still one of the top jockeys in the world, winning the Belmont Stakes on Avatar. On March 14, 1976, at Santa Anita, Shoemaker reached another milestone with his 7,000th win. He had teamed up with trainer Charles Wittingham and together they formed

one of the most successful partnerships in horse racing history. In 1978, he divorced Babbs and married his third wife, Cindy Barnes, and they had a daughter, Amanda.

### Refused to Quit

Although his pace slowed down as he aged, Shoemaker continued to win big races. In 1981 he became the first jockey to win a one-million-dollar race when he rode John Henry in the first Arlington Million. Entering the Kentucky Derby in 1986, Shoemaker was considered too old to be a factor. But he won the race on Ferdinand, despite 18-to-1 odds against the horse.

When Shoemaker finally decided to retire, a farewell tour was organized. For nine months, crowds came to see Shoe, who raced at 48 tracks, including tracks in England, Sweden and Germany as well as out-of-the-way places in Texas and Oklahoma. His last ride was February 3, 1990, at Santa Anita, and 64,573 spectators turned out, but Shoemaker's horse finished fourth.

In his career, Shoemaker rode 40,350 mounts and won 8,333 races, including 1,009 stakes races and 11 Triple Crown races. His horses earned more than \$123 million in purses. In ten different years, he was the top money winner on the racing circuit. Shoemaker often said he didn't place much stock in records and that every record he set would eventually be broken. In 1999, his career record of 8,333 wins was eclipsed by jockey Laffit Pincay, Jr.

After his retirement, Shoemaker became a trainer in southern California. His life changed dramatically on April 8, 1991. Driving home from a golf outing, he lost control of his Ford Bronco, which plummeted over a 50-foot embankment. Shoemaker was left paralyzed from the neck down. Arrested on suspicion of drunken driving with a blood-alcohol level twice the legal limit, he was never prosecuted, because no other victims were involved in the accident.

Though the crash left him a quadriplegic for life, the indomitable Shoemaker refused to give up. Taking up physical therapy for the third time, he resumed horse training in a supervisory role in September 1991, and kept working as a trainer, using a mouth-controlled wheelchair, until he retired in November 1997. His fans rallied too, contributing to a \$2 million endowment of the Shoemaker Foundation, organized by friends, which helped pay for Shoemaker's treatment and support and for other horse trainers, grooms and jockeys who were injured.

In 1993, Shoemaker and Ford Motor Company agreed to a \$1 million settlement of his claim that poor automotive design had caused the rollover accident. The automaker admitted no culpability. For his part, Shoemaker asked for no sympathy. "You have to play the hand you're dealt," he told writer William Nack of *Sports Illustrated*, "and I was dealt this one." In 1994, his third wife, Cindy, divorced him.

After retiring as a trainer, Shoemaker continued as honorary chairman of the Paralysis Project, an organization dedicated to improving spinal cord research and treatment. "The most important thing," he told an interviewer for WebMD Live, "is don't ever, ever, ever give up."

### Books

Shoemaker, Willie and Dan Smith, *The Shoe: Willie Shoemaker's Illustrated Book of Racing*, Rand McNally, 1976.

### Periodicals

*Automotive News*, March 1, 1993.

*People Weekly*, April 29, 1991.

*Sports Illustrated*, February 5, 1990; April 19, 1993.

*U.S. News and World Report*, February 12, 1990.

### Online

"Mind Over Body: The Willie Shoemaker Story with Willie Shoemaker," *MSNBC Heath*, <http://content.health.msn.com/content/article/1707.50022>.

"Shoemaker made racing history," *ESPN Sports Century*, <http://espn.go.com/sportscency/features/00016470.html>.

"Willie Shoemaker, Ageless Sultan of the Saddle," *Famous Texans*, <http://www.famoustexans.com>. □

## Christopher Latham Sholes

**Christopher Latham Sholes (1819-1890) has been called the "Father of the Typewriter." Although he did not invent it, he did develop the first practical commercial machine. Sholes also developed the Qwerty keyboard that is still in use today.**

Sholes was born on February 14, 1819, near Mooresburg Pennsylvania. On his mother's side, his ancestry could be traced back to John and Priscilla Alden, the famous Pilgrims. His paternal grandfather had commanded a gunboat during the Revolutionary War. Sholes' father, Orrin, served in the War of 1812 and was rewarded for his service with a gift of land in Pennsylvania. In 1823, when Sholes was four, Orrin moved his family to Danville, Pennsylvania, where he ultimately apprenticed all four of his sons to become printers.

At the age of eighteen, Sholes went to Green Bay, Wisconsin to work for his brothers Henry and Charles, publishers of the Wisconsin *Democrat*. Two years later, when Charles bought a share of the Wisconsin *Enquirer*, Christopher Sholes moved to Madison to assume the post of editor. The next year, at the age of 21 and at his brother's bidding, he moved to Southport, Wisconsin, and founded the Southport *Telegraph*, a weekly newspaper. Southport was a new town on the Lake Michigan shoreline south of Madison, (incorporated as the city of Kenosha in 1850.) Sholes soon became owner and publisher of the *Telegraph*.

### Sholes the Newspaperman

Settling in Southport, Sholes married Mary Jane McKinney in 1840. He and his family lived there until 1857. Sholes published his paper and became involved in politics, both reflecting his drive for social reform. The *Telegraph* took stands against capital punishment and war, and supported the growing movement for women's rights. A fight

between two members of the territorial government in Wisconsin resulted in one member being killed in the council chamber. Sholes was an eyewitness and reported the incident in his paper. His article was reprinted across the country and Charles Dickens related the tale in his *American Notes* as an example of law making in the United States.

Sholes was a firm believer in mass communication. He felt that people could not reach their full potential until they could be brought closer together in thought. Sholes approved of every new way of communicating that came along. The *Telegraph* would give free ad space to any itinerant teacher of handwriting-shorthand or longhand-that came to Kenosha.

Politically, Sholes was a good Democrat. He supported the platform of his party, which included the condemnation of the anti-slavery abolitionists. He was rewarded with an appointment to local postmaster. In 1848, Sholes was elected to the first senate of the newly admitted state of Wisconsin. He then served as city clerk in Kenosha, and returned to Madison as an assemblyman.

In January 1853, Sholes met James Densmore, an editor from Oshkosh, Wisconsin. Where Sholes was mild-mannered and poetic, Densmore was aggressive and possessed a temper. He did not make a good first impression on Sholes. Yet the two men shared many political views and quickly formed a partnership.

The first collaboration of the two men was the Kenosha *Daily Telegraph*. By using the wire news services of the Associated Press, they would have enough content to fill a paper every day. In the first year of their publication, they had taken on new causes. Sholes had undergone a change of heart and now supported the work of the abolitionists and the congressional candidate of the newly formed Republican Party.

Sholes traveled to Kansas, where a struggle had broken out after the United States Congress passed the Kansas-Nebraska Act. It was determined that the residents of new territories would decide the question of slavery. Sholes returned to Wisconsin and the newspaper business. This time, he worked at Republican papers, the Milwaukee *Free Democrat* and then the Milwaukee *Daily Sentinel and News*. He visited the Wisconsin soldiers in the Union Army of the Potomac during the Civil War. In this capacity, Sholes represented the governor of Wisconsin, but paid his own expenses. He supported the Republican Party and President Abraham Lincoln throughout the war. As a reward, Sholes was given a federal post, serving as collector of customs for the Port of Milwaukee in 1863.

### Sholes the Inventor

Despite his long career in journalism and politics, Sholes was an inventor at heart. Tired of addressing newspapers to subscribers with pen and ink, he invented a machine that would do the task using preset type and a treadle, variations of which were in use until the advent of computers. While living in Milwaukee, Sholes would often spend time at C.F. Kleinstaub's machine shop, which was a meeting-place and workshop for amateur inventors. Working with another printer, he developed a machine that con-

secutively numbered railway tickets and bank notes. Sholes was trying to adapt it to automatically number the pages of books. Another amateur inventor in the workshop, lawyer Carlos Glidden, was working on a mechanical plow. Both Sholes and Glidden were interested in the work others were doing on typing machines. As an outgrowth of Sholes' page-numbering device, the two began work on a typing machine of their own.

The idea of a machine that would help people communicate with clarity must have appealed to Sholes. Many typing machines had come before. William Burt created the first typing machine in 1830. Fifty more people invented or re-invented machines before Sholes began his work in 1867. A plan for a machine in *Scientific American* inspired Sholes, but it seemed to be unnecessarily complex. The design called for a cast plate containing all the type. The plate would be adjusted to bring the desired letter into position and a hammer would force paper against the plate.

It took Sholes only a week to determine the basic premise of his typing machine. A single letter of type, carved onto a short metal bar could be made to strike upward against a glass plate. The first model came out with the help of Glidden and Samuel Soule, a draftsman and civil engineer. It only typed the letter "W", but its basic design would become the trio's first typing machine.

### His First Typewriter

The three men set to work to make a complete machine. After much trial-and-error, a workable prototype was built by the fall of 1867. The design required that the paper be placed between the type and the inked ribbon, so only tissue paper could be used. After selling their first one, Sholes, Glidden, and Soule tried to raise enough capital to mass-produce the machine. Sholes typed a letter to his old partner James Densmore, who recognized the possibilities of their invention. He bought into the group and began promoting the machine. Densmore requested that the design be simplified so that it would be cheaper to produce.

Densmore spent a thousand dollars to manufacture a handful of machines before deciding that it was unworkable. The concept was good, but the execution, which had been largely in the hands of Soule, was faulty. He decided to try again, but with Sholes alone. Densmore requested that the machine be able to accommodate thicker, higher-quality paper. This led Sholes to develop a moving cylindrical carriage to hold the paper, and the inked belt, or ribbon, that would be located between the type and the paper.

Despite these changes, Sholes maintained his original concept of the type striking upward against the carriage. This differed from the front striking machines that would later become the standard. The great benefit of the front-striking typewriter was that the operator could see the type as it was being printed, with no delay.

Aside from his efforts to develop a machine that the public would accept, Sholes was also responsible for designing a typewriter keyboard. The earliest typing machines used many different styles of keyboards: circular or in rows with separate keys for upper- and lower-case letters. Almost all arranged the letters in alphabetical order, from a-to-z. As

Sholes experimented with his new machine, he found that placing the keys in alphabetical order caused his machine to jam too often.

### The Qwerty Keyboard

Many legends surround Sholes' development of the keyboard. It is not laid out based on the frequency of use of certain letters, nor are the most used letters placed under the strongest fingers. The most frequently quoted story, that it is based on the arrangement of the letters in the printers' type-case in the days when every printed page was set individual letter and symbol by hand—is false. Most likely Sholes changed the order of the keys as he created prototype after prototype of his machine, trying to eliminate the most frequently occurring jams, when two nearby keys would meet. The layout kept frequently combined letters separated mechanically, which limited the number of possible collisions between type bars. It probably also slowed the rate a good typist could reach, further eliminating possible jams.

Ultimately, Densmore sold the machine to Philo Remington, American manufacturer of arms, sewing machines and farm implements. Even after Sholes' hours of experimentation, the engineers and mechanics at Remington were able to improve on the machine. They solidified the layout of the keyboard into something very close to what is still used on all alpha-numeric keyboards in most English-speaking countries today.

This has come to be known as the Qwerty keyboard, after the first six letters at the upper left on the keyboard. A comparison of keyboards from around the world shows that most countries using the Roman alphabet (A, B, C, etc.) or some variation of it use basically the same layout of keys. Over time, typewriters advanced technologically. The mechanical aspects were supplemented first by electric assistance and finally by electronic devices. It was no longer necessary to use the key positions to keep the machines from jamming. Many people have developed more efficient keyboards, both easier to remember and better able to divide the work between the right and left hands. However, these have all been commercial failures. The public has refused to adopt them, preferring the Qwerty design instead.

Sholes finally agreed to sell his rights to Yost and Densmore in 1880. History does not record the price, but it was not very high. Sholes was tired of the machine, and was ready to invent something else. He took advantage whenever possible to turn his rights into ready cash, believing until almost the end of his life that the typewriter would never be a success.

When sales of the Remington typewriter increased, Sholes accused Densmore of cheating him. Densmore replied that Sholes had probably made more money than he did. Once Sholes totaled his receipts from the typewriter for the period of 1872 to 1882, it came to more than \$25,000. Densmore had not realized that much in that period, although he was to make much more in the coming years.

Sholes was quite proud of one social consequence of the typewriter—it opened office careers to women. Previously, business schools only trained men as secretaries. Since men were reluctant to give up communicating and

corresponding in elegant handwriting, it became common for typewriter manufacturers to train women as typists. They frequently offered both machine and operator as a package to prospective clients. Women, who had been locked out of the office, suddenly had their foot in the door.

Sholes spent the end of his life in ever-increasing obscurity. He continued to tinker with various inventions, but none saw the light of day. Even as he neared his death in Milwaukee, Wisconsin on February 17, 1890, his bed was often crowded with models of inventions.

Because he had not associated his name with either the machine or its producers, he was forgotten. Whenever articles were written about the history of the typewriter, Sholes was only mentioned in passing. Often his innovations were judged to be unoriginal or hindrances. Yet he must be credited with contributing to the design of the typewriter. Even now, as typewriters fall into disuse, his legacy lives on. Remember him the next time you wonder "Who designed this stupid keyboard?"

### Books

- Adler, Michael H., *The Writing Machine*, George Allen and Unwin Ltd., 1973.  
 Beeching, Wilfred A., *Century of the Typewriter*, St. Martin's Press, 1974.  
 Bliven, Bruce Jr., *The Wonderful Writing Machine*, Random House, 1954.  
 Current, Richard N., *The Typewriter*, University of Illinois Press, 1954. □

## Daniel Edgar Sickles

**Daniel Sickles (1819-1914) led a colorful and controversial life. He was a primary figure in the creation of New York's Central Park. Sickles may have been one of the first persons to use the insanity defense when charged with murder. He played a pivotal role in the Battle of Gettysburg during the American Civil War. Sickles also served as a military governor of the Carolinas and minister to Spain.**

**D**aniel Edgar Sickles was the only child born to George Garrett Sickles and Susan Marsh Sickles on October 20, 1819 in New York City. The date of his birth has sometimes been incorrectly reported as 1825 and stated as such by Sickles himself. This is perhaps because of his marriage to a woman less than half his age. However, most historical records not based on the oral tradition of the family suggest that the date of 1819 is actually correct. It is rather fitting that even the birth date of this notorious character has been uncertain, for controversy was the path that his entire life would follow.

His father was a real estate speculator whose finances waxed and waned. When Sickles was a youngster, his parents were able to afford to send the young boy to a private school in Glens Falls, New York. However, he fled the



school after being given a whipping for breaking rules. He worked for a local newspaper as a printer for over a year. During this time, his parents visited him with a man whose household was going to have an important impact on Sickles' future. Lorenzo L. Da Ponte was in his thirties and a professor at the University of the City of New York when they met. He persuaded Sickles to return to his parents' home in New York. After a time, they sent Sickles to a farm in New Jersey, from which he ran away. He traveled to work as a printer in Princeton and then moved to Philadelphia. His parents finally found him and let him know that he could come back to New York and they would pay for his education.

Sickles agreed, on the condition that he be allowed to live with Lorenzo L. Da Ponte and his elderly, colorful father. This arrangement was worked out and Sickles, almost 20 years of age at this point, spent several years in the Da Ponte household. The elder Da Ponte had adopted a teenaged girl who married one of the family's visitors from Italy, Antonio Bagioli. The two produced a daughter they called Teresa, in 1836. Sickles lived with the Da Ponte family, played with Teresa and took some classes at the university.

The elder Da Ponte died in 1838 and his son succumbed to tuberculosis two years later. Sickles became distraught at the graveside of the younger Da Ponte. According to Nat Brandt, in his book *The Congressman Who Got Away with Murder*, his friends were afraid that he "might do some further violence to himself, and that his mind would entirely

give way." Two days later, he was almost light-hearted when another friend met him, a change of behavior that stood in stark contrast to the exhibition of desolation he had shown days earlier. This unusual behavior would be recalled years later when Sickles was on trial for murder.

After the death of Lorenzo L. Da Ponte, Sickles studied law with Benjamin F. Butler, a politically well-connected lawyer. Shortly thereafter, he opened his own law firm. His father began to study with him, eventually becoming a lawyer himself. Despite his interest in the law and politics, Sickles' character was not unsullied. He had been indicted in 1837 for "obtaining money under false pretenses," according to Nat Brandt. He faced several similar charges in the next few years, for which he was never prosecuted. These sorts of claims would plague him until the end of his life. At the age of 92, Sickles was accused of misuse of funds that had been collected for the monuments on Gettysburg field.

Sickles had friends from all backgrounds, from rowdy to respectable. He helped them whenever he could, perhaps to further his own career. He was elected to the New York Assembly in 1847 and became active in Tammany Hall politics for the next few years. In 1953, Sickles was sent to London as secretary to the legation and left for England on August 6 of that year. He served in this post until December 1854.

On September 27, 1852 Sickles married Teresa Bagioli, the girl who had also been part of the Da Ponte household. She was 16 years old at the time of their marriage and he was almost 33. A daughter, Laura, was born to the couple in the following year. As the date of this daughter's birth is unclear, it is speculated that Teresa was pregnant before the wedding ceremony. The family followed him to London in the spring of 1854. Sickles left his post in London on December 16, 1854. In 1855, he was elected to the New York State Senate and soon began work on a project he had begun before he left for England.

### Central Park

Sickles had, in his own words in Brant's historical study, organized "a consulting committee of twenty-four gentlemen, prominent in our municipal social life, with whom I was in the habit of conferring upon all questions of importance." He gathered all the park advocates to agree on a centrally located site of 750 acres rather than a smaller site in a less accessible area. He persuaded the City Council that they needed a larger site to accommodate a growing city and convinced the governor to sign legislation needed to establish the park. At first Sickles had an eye on personal gain, as he and some friends had purchased building lots near the park site. Although this group fell apart, Sickles continued to work on establishing the park, even though he was not to benefit financially in the way he had envisioned.

The site itself was boulder-filled, had no trees and large parcels of the land were covered by swamps. Lakes were dug, trees were planted, carts brought in dirt to cover the boulders, roads and bridges were constructed. The site was transformed. Sickles contributed exotic creatures from his travels for the Central Park Zoo.

### Murder of Philip Barton Key

In November of 1856, Sickles was elected to represent the third congressional district of New York in the U.S. Congress. He took a house in the most exclusive neighborhood of Washington, D.C., Lafayette Square, and established his family there while Congress was in session. The social functions in the city were numerous; Teresa Sickles held a reception every Tuesday morning and a dinner every Thursday night. She was expected to attend many similar functions each week, with or without her busy husband. It was the custom in the city to be escorted to these functions by one of the many bachelors. Unfortunately, perhaps due to Sickles' neglect and Teresa's boredom, she began an affair with Philip Barton Key, the son of Frances Scott Key.

When Sickles learned of the affair he became distraught and summoned several friends to his house. At the same time Key appeared across the street in Lafayette Square, and was pointed out to Sickles by one of his visitors. As was his usual pattern, Key began signaling Teresa with a white handkerchief. Brandt tells us that Sickles' friend, Samuel F. Butterworth had just advised him that if everyone knew of the affair, then "there is but one course left you as a man of honor. You need no advice." Sickles went out into the square, confronted the unarmed Key and repeatedly fired at him. At least two of the shots were at point-blank range, killing Key. Butterworth, who was nearby, made no effort to stop Sickles.

### Temporary Insanity Defense

Sickles was taken to jail. His trial was set for April 4, 1859. Sickles had no less than eight lawyers representing him. These included some New York friends who were working for free and the renowned criminal lawyer, James Brady. The team amassed as much evidence as possible against Philip Barton Key and Teresa Sickles, putting their actions on trial. The argument used in the trial was that there had not been, according to Brandt's reports of the defense argument "sufficient time for his passion to cool," and that his "mind was obviously affected."

Insanity had been used as a defense before, but never as a condition that would fade within a period of time. Temporary insanity was a new defense. However, Sickles' past behavior at the funeral of Da Ponte and his seemingly quick recovery two days later established a consideration of his behavior that could be termed in the modern phrase to be "temporary insanity." On April 26, 1859, the final arguments were given. The jurors left the courtroom around 2 p.m. to deliberate. They returned one hour later with the verdict. Sickles was found not guilty.

Despite public opinion, Sickles reconciled with his wife. However, he remained away from home as much as ever. Teresa Sickles left Washington and Sickles came back to finish his term. Knowing that he would not be able to win another term in office, Sickles finished his term and turned to other projects. His wife, never quite well after the scandal, contracted a cold which worsened. She fell into a coma and died on February 5, 1867, at the age of 31.

### Civil War and Gettysburg

After his term in Congress ended, Sickles had raised enough men in the state of New York to get himself deemed an army officer, though Congress at first turned down his appointment. With President Lincoln's help, he finally was approved and his men were able to join the troops fighting for the Union in the spring of 1862.

Sickles' actions were controversial at Gettysburg, one of the pivotal battles of the Civil War. He failed to put his men into the position that Major General George Mead had suggested, but positioned them forward of the line instructed. He repeatedly communicated with Mead about his position and Mead even had General Hunt inspect the position with Sickles. According to William Glenn Robertson, in his essay "Daniel E. Sickles and the Third Corps" (from the book *The Second Day at Gettysburg*), Hunt noted that the higher Peach Orchard position that Sickles wished to occupy had advantages, especially if they wished to mount an offensive from the left but it also had its disadvantages: "the line was too long, the resulting salient could be attacked simultaneously from two directions, and both flanks of the Third Corps would be in the air." By the time Mead arrived, the southern troops were beginning to fire on Sickles' men and it was too late to move. Mead kept sending reinforcements to the line. However, by the end of the day, though the line had held, thousands of men had fallen. Sickles himself was forced to leave the battlefield due to the wounding of his leg, which was subsequently amputated.

Some say that, though he lost thousands of men during the fighting, he was responsible for the success of the battle for the Army of the Potomac. Others say his actions almost lost the battle for the northern troops. It is probable that Sickles' action helped the army hold the ground that Mead had intended to hold originally, by keeping the line forward of the ground that was crucial to be held. However, Sickles definitely did not obey orders in the strictest sense, especially if he fully understood those orders. These are the contentions of the historians, and there is much more that has been argued in print. Sickles himself was an outspoken man who lived to be 94 years of age, well beyond most others who disagreed with him. Thus his version of events came to be widely publicized during his lifetime.

Sickles went on to become military governor of the Carolinas during the restoration period after the Civil War, then minister to Spain. He established Gettysburg battlefield as a memorial in later years, encouraging both members of the former Northern and Southern armies to commemorate their dead. Sickles married again while in Spain but lived apart from his wife, the former Caroline Creagh Sickles, and their children for almost 30 years. He returned to New York while she remained in Europe. Laura, his eldest daughter, died at the early age of 38.

Sickles, died in New York City on May 3, 1914, at the age of 94. He was a dynamic figure who had aroused much controversy during his lifetime.



### Books

- Brandt, Nat, *The Congressman Who Got Away with Murder*, Syracuse University Press, 1991.
- Gallagher, Gary W., *The Second Day at Gettysburg*, Kent State University Press, 1993.
- Pinchon, Edgcomb, *Dan Sickles: Hero of Gettysburg and "Yankee King of Spain"*, Doubleday, Doran and Company, Inc., 1945.
- Sauers, Richard, *A Caspian Sea of Ink: the Meade-Sickles Controversy*, Butternut and Blue, 1989.
- Swanberg, W.A., *Sickles the Incredible*, Charles Scribner's Sons, 1956. □

## Sam Snead

**In a world inundated with sports legends, pro golfer Sam Snead (born 1912) is truly a standout. From his smooth rhythmic swing at the tee to his entertaining personality to his 81 PGA Tournament victories "Slammin' Sam" is a legend that will never go away.**

Snead is probably the only pro golfer who claims that some of his athletic prowess is due to of all things—squirrel hunting. Growing up in the rural south Snead, like many of his boyhood friends, hunted both for sport and for the table. His accurate eye on the golf tee, professes Snead, is due in part to his learning to shoot accurately with a squirrel rifle. Stories like these are part of the Snead legend that makes him continually popular both on and off the course. Even though long retired from the professional circuit, Snead continues to draw accolades from admirers. Writing for *Golf Digest* Lee Trevino (no slouch on the golf course himself) described a shot Snead once made, "Now, I've seen a lot of great golf in the last 32 years, but I've never seen anything like that shot. And only Sam could hit it." At the time of the shot Snead was, it must be noted, a still young 66. "When God decided what He wanted a golf swing to look like, he sent Sam Snead down to show us," the *Wall Street Journal* opined. What can you say about a golfer beyond that?

### Farm Boy

"Slammin' Sam" was born Samuel Jackson Snead in Hot Springs, Virginia on May 27, 1912. He was raised on the family farm near the small town of Ashwood. Squirrel hunting was part of rural life for a Virginia farm boy. Snead was an all around athlete throughout his high school years playing football, basketball, baseball, and making the track team. He also is said to have practiced golf with a crooked stick and smooth stones he picked up in his wanderings. His real introduction to the game that was to so impact his life, however, was as a 15-year-old caddy (some say he was 11) for a Hot Springs golf course near his home. The course was The Homestead; the barefoot Snead and some of his friends would walk there in the hope of making some spending money. Snead remembers caddying for a golfer who filled his small hat with pennies and nickels after the game but to



Snead's dismay, no dimes when he searched through the hat. Snead's mother was justifiably worried by her son's unannounced absence from the farm and was not mollified by his pleading, "But, Mom, I brought you all this money." Snead claims he got the tanning of his life but nonetheless he was forever hooked on the sport, especially after a back injury squelched any thought of playing pro football.

### Budding Golfer

As a caddy Snead was allowed to golf at a nearby nine hole course. Between caddying and golfing with his makeshift collection of clubs Snead also ran errands, cleaned member's golf clubs, and performed various other tasks for the caddy master. Snead quickly mastered the nuances as well as the technical aspects of the game and developed his now famous "honey sweet" swing. Snead's country ways and mannerisms, however, were not always looked upon with favor. However, he continues to this day to carry his "hill upbringing" as a badge. "You see, the truth is, the days when I started swinging a club, golf was a rich man's sport," Snead writes in his autobiography, "kind of like polo almost. But you can bet at first they didn't like seeing a skinny hayseed like me, with funny clothes and my homemade clubs, coming out on the course and showing 'em how it's done." Snead's winning ways and mannerisms soon made him welcome most anywhere he went to play.

## Turning Pro

By 1935 Snead was the assistant golf pro at White Sulphur Springs, West Virginia. The following year he became the teaching professional at Cascades Inn in Hot Springs. He turned professional in 1937 and, touring the country in a second hand car, placed seventh at the Los Angeles Open and first in the Oakland Open. For a newcomer to the sport Snead had a meteoric rise and quickly became somewhat of a golfing sensation. Before the year ended he won the Bing Crosby Invitational, the Miami Open, and the St. Paul and Nassau Opens. Most surprisingly, he was runner-up in the United States Open. By the end of 1937 Snead was the third highest money-winning golfer, with \$10,243. A year later he was golf's number one money winner, garnering \$19,334. His down home manner and outgoing personality made him one of the most popular players on the circuit and he soon began drawing crowds of spectators. He was still regarded by the press as somewhat of an upstart and "the hillbilly from backwoods Virginia" but this characterization was soon replaced by the moniker "Slammin' Sam," a tribute to his "swing of beauty" which was later described by another writer as "like watching ice cream melt." In 1938 Snead, although placing second in the United States Open and the Professional Golfers Association (PGA) Open, was awarded the Vardon Memorial Trophy as the best golfer of the year. World War II called Snead to service in the Navy from 1942 to 1944, but a postponed induction allowed him to enter and win the 1942 PGA.

## Professional Accomplishments

Snead's professional career is an outstanding laundry list of wins and accomplishments: leading money winner in 1938, 1949 and 1950; 1946 victory in the British Open; Vardon Trophy for lowest strokes per round average in 1938, 1949, 1950, and 1955; in 1942, 1949, and 1951 he won the Professional Golfer's Association (PGA) tournament; he won the Masters tournament in 1949, 1952 and 1954; the British Open once; he was named the 1949 Player of the Year; he was inducted into the PGA Hall of Fame in 1953; he had a total of 84 PGA victories and six PGA Senior's titles. In addition Snead has accumulated a number of other notable achievements: in 1979 he became the first pro to shoot a score at or below his age when at the Quad Cities Open he shot a 67 and 66 at the age of 67. He was also a member of the Ryder Cup squad ten times between 1937 and 1969 including being team captain in 1959. He was also the PGA Tour's oldest when he won the Greater Greensboro Open in 1965 at the age of 52 years 10 months. When Snead won 11 events in 1950 he became the last pro to win ten or more events in one season. In 1978 Snead, while paired with Gardner Dickinson, won the first Legends of Golf tournament held in Austin, Texas. Snead played 42 years on the PGA tour, winning \$620,126 and accumulating 81 titles. This was eleven more than his closest rival, Jack Nicklaus. Independent record keepers give Snead a total of 135 victories, although he claims 165 (which includes regional events).

## Great Swing but Poor Putting

Snead will always be remembered for his long rhythmic swing. "No one ever swung a golf club like Sam because no one could," according to ex-pro and long time Snead friend Johnny Bulla in a *Wall Street Journal* interview. "He has the longest tendons of anyone I ever saw, and they enable him to do things like bend his wrists so he could touch his arms with his fingers, front and back. That's how he kept that big swing of his under control." In spite of this great swing, Snead has long maintained a reputation for being a mediocre putter—a reputation that began early in his career. In the 1947 Open, for instance, Snead blew first place when he missed the last putt on the final hole. Other observers, counter by noting Snead's putting was superb when he won the 1946 British Open and that his putting is only mediocre when unfairly compared to the greatness of the rest of his game. In his book *The Game I Love* Snead claims he was a good putter, especially a good lag or fell putter. However, he admits that he was never a great putter, blaming his problems on becoming a wrist putter instead of an arm putter.

## Elusive Victory

In spite of these victories, awards, and accomplishments Snead never managed to win golf's big one—the United States Open. Between 1937 and 1949 Snead was runner-up four times in the U.S. Open, leaving his outstanding golfing career slightly tarnished and leaving Snead slightly defensive. "Sure it bugs me that they make such a big deal of it because I never won the U.S. Open," Snead said, "but I must have been playing pretty good and sinking putts when I won those three Masters, three PGAs and the British Open." In Snead's autobiography he wrote about his travails with the U.S. Open although in a less defensive and more reflective manner. "I entered the Open year after year, and in the '50s I was usually picked as the sentimental favorite. But whether it was some kind of a jinx or whatever, it seemed that whenever the USGA flag went up at the Open, so did my score."

## Strange Mishaps

During Snead's long golfing career he has been involved in a number of strange and potentially deadly mishaps. In 1938 when golfing with a number of others a bolt of lightning struck and killed two players standing next to Snead but only slightly injuring him. During a tournament in Argentina he was bitten on the hand by an ostrich (the club's mascot) causing Snead to nearly lose two fingers. Snead has also been involved in a number of dangerous airplane mishaps. Once a plane he was flying in nearly crashed over the Sahara Desert. In 1946 while flying to the British Open in a Constellation airplane an engine caught fire over the Atlantic forcing a return to New York. He was in a small plane in Iowa that crashed and burned on take-off, leaving Snead and the pilot fazed but unhurt. While Snead prefers automobiles to airplanes, a 1992 auto accident left him with a dislocated shoulder. On a lighter note, while golfing in Florida Snead was using a ball-getter to retrieve some golf balls from a pond. Astonishingly he found himself being

chased out of the pond by an irritated and open-mouthed alligator.

### Retirement Years

Since retiring from the Tour in 1979, at the age of 67, Snead has devoted himself to hunting, fishing, counting his money, telling off-color jokes, and of course golf. He's the golf pro at the Greenbrier Resort in Sulphur Springs, West Virginia and still endorses golf clubs for the Wilson Sporting Goods Co. A *Wall Street Journal* article claims that, for a long time, more golfers used clubs bearing Snead's signature than any other brand. Snead managed to play golf every day until the trials of advancing age caused a curtailment of his golfing activities and the many side bets that have always been part of his non-professional game. Always known as a hustler on the course, Snead maintains that he has been hustled more times than he's managed to hustle. When he was 86, Snead was on his way to conduct a golf clinic which would earn him a quick \$8,000 when a "pigeon" suggested a \$100.00 match. Snead had to be quickly retrieved from the first tee by the Greenbrier's director of golf and hurried back to the clinic where the attendees were anxiously waiting. "He can't resist a game," the Greenbrier director told a reporter, "it's not the money. He was going to forget an \$8,000 clinic to play for \$100.00. He just loves a match." As Snead is fond of saying, "You don't have to hang from a tree to be a nut."

### Books

*Great Athletes: Twentieth Century*, Salem Press, 1992.  
*Lincoln Library of Sports Champions*, Frontier Press, 1989.  
 Snead, Sam, *The Game I Love: Wisdom, Insight, and Instruction From Golf's Greatest Player*, Ballantine Books, 1997.  
 Snead, Sam, *Slammin' Sam: An Autobiography*, Donald I. Fine Inc., 1986.

### Periodicals

*Golf Digest* January 1999, p.42; April 1999, p.134; May 2000, p.104.  
*Wall Street Journal* April 7, 2000, p.W13.

### Online

"Only old age could stop Snead," *ESPN.com*, <http://espn.go.com/sportscenry/features/00016478.html> (December 24, 2000).  
 "Sam Snead (1912-)," *Golfeurope*, <http://www.golfeurope.com/almanac/players/snead.htm> (December 24, 2000). □

## Edward Robinson Squibb

**Edward Robinson Squibb (1819-1900) was a physician, chemist, and pharmacist who dedicated his career to ensuring that drugs were pure and effective. He became a leader in the struggle for national standards for pharmaceuticals and federal regulation of the industry. According to his biographer, Lawrence G. Blochman in *Doctor Squibb: The Life***

***and Times of a Rugged Individualist*, "Uniformity and purity became a lifetime passion with Dr. Squibb, a crusade which was to embrace all pharmacy."**

Edward Robinson Squibb was born on July 4, 1819 in Wilmington, Delaware to James and Catherine Harrison (Bonsall) Squibb. The family consisted of two sons and three daughters, but all three girls died in one year, followed soon after by their mother in 1831. James Squibb then moved his two boys to Darby, Pennsylvania, near Philadelphia, to be closer to his relatives. A few years later, Squibb's father suffered a debilitating stroke. Squibb and his brother were then raised by both of their grandmothers.

As a young boy, Squibb was educated by a tutor. When he was 18 years old he moved to Philadelphia and decided to go to medical school. To offset his educational expenses, Squibb worked part-time as an apprentice to Warder Morris, a pharmacist, and later worked for the pharmaceutical company J.H. Sprague. In 1841 Squibb attended Jefferson Medical College, where he graduated three years later at the age of 26. Upon graduation the college employed him as a clerk of clinics, assistant demonstrator of anatomy, and curator of the medical museum. Squibb also began to establish a private practice.

### Naval Career

During this time the United States was involved in the Mexican War and many young men, including Squibb's colleagues at the medical college, were enlisting in the armed forces. Because Squibb was a Quaker, and therefore a pacifist, whether or not to join his friends was not an easy decision to make. He decided to enlist. On April 26, 1947 he was assigned to the navy as an assistant surgeon. This decision cost him his association with the Quakers, but it would prove to be a pivotal point in his life, one which shaped the rest of his career.

Squibb spent four years as a medical officer aboard the *Perry*, the *Erie*, and the *Cumberland* in Mexican and South American waters and the Mediterranean. During his time at sea Squibb was dismayed that the navy used poor quality drugs. In fact, he often took drastic measures to improve the quality of care he gave. For example, in *Doctor Squibb: The Life and Times of a Rugged Idealist*, Lawrence G. Blochman wrote that "In overhauling the Cumberland's dispensary, Dr. Squibb threw overboard great quantities of medicines he considered unfit for human consumption." Upon finishing his last voyage, Squibb compiled a report of his complaints regarding the hygiene and medical conditions he witnessed and supported his claims with detailed health records that he had kept throughout his assignment. Squibb sent his report to the *American Journal of the Medical Sciences*. It was published in January 1852, to ensure that the medical community was aware of the problems.

After a brief leave from sea, which Squibb spent brushing up on the latest medical advances at Jefferson Medical College, Squibb was ordered to return to sea aboard the steamship *Fulton*. He was unhappy about returning to sea

under the poor medical conditions of the navy and managed to get reassigned to the Brooklyn Naval Hospital. Squibb intended to use this opportunity to improve the quality of drugs used by the navy. According to Lawrence G. Blochman in *Doctor Squibb: The Life and Times of a Rugged Idealist*, Squibb and his colleague at the hospital, Benjamin Franklin Bache, “were resolved that the Brooklyn Naval Hospital, at least, and if possible the shops it supplied, would have chemically pure drugs of standard strength.”

While working at the naval hospital, Squibb met Caroline Lownds Cook, Bache’s sister-in-law. The two were married on October 7, 1852 and had their first child, Edward, the following year. Their second son Charles was born on June 16, 1858, followed by a daughter, Mary, in 1864. The couple had one more son in 1867, who did not survive infancy. Before the birth of their last child, Caroline Squibb was diagnosed with epilepsy. The personal tragedies of her illness and their child’s death made Squibb even more passionate about his work.

Squibb worked to improve the equipment at the hospital as well as the quality of drugs produced. His major accomplishment at this time was developing a new method to distill ether to improve its purity. Squibb designed a still that operated with steam rather than an open flame. Instead of getting a patent for the design, Squibb published detailed diagrams in the September 1856 issue of the *American Journal of Pharmacy*, for he believed that scientific knowledge should be shared. While working at the naval laboratory, Squibb perfected the manufacture of chloroform, fluid extracts, bismuth salts, calcium chloride, benzoic acid, and many other drugs.

### Established Independent Laboratory

In 1857 Squibb resigned from the navy for economic and personal reasons and went into private industry. His first job was a one-year contract at the Louisville Chemical Works in Kentucky. Once he finished this obligation, Squibb opened his own laboratory. Colonel Richard S. Satterlee of the Army Medical Corps proposed that if he could finance his own laboratory, the army would send its pharmaceutical orders to him.

On September 6, 1858 Squibb established his own pharmaceutical laboratory in Brooklyn and called it E.R. Squibb, M.D. Financial backing for the project came primarily from Dr. Sam White, a former colleague from Jefferson Medical College. He received additional funds from his brothers-in-law. The laboratory had barely gotten started when disaster struck. On December 29, 1858 Squibb’s helper had accidentally caused an explosion with ether. The fire destroyed the new laboratory and Squibb was severely burned while trying to salvage his books and scientific notes. During his recovery Squibb was already planning to rebuild the laboratory. Friends and colleagues from the community were raising funds for him to do so. On April 13, 1859 Squibb was presented with over \$2,000 to rebuild his business. While the money was given as a gift, Squibb treated it as a loan and expected to repay the sum plus interest.

By May 1859 Squibb was back in business with his new laboratory. The company took off quickly as the Civil War in 1861 brought much military business as promised. By the end of 1861 Squibb was able to pay off the loan he received from the community. During this time Squibb began the crusade that would consume the rest of his life: to regulate the import, manufacture, and sale of drugs in America in order to ensure their purity and strength. To this end he became a member of the 1860 Committee for Revision of the *United States Pharmacopoeia*, the registry of approved drugs, including their identification, tests, and standard formulas.

Squibb had finished building a new, larger facility when the Civil War ended and his business began to decline. He suffered some financial difficulties because of this, but was still able to make ends meet. While he found extra work as a professor of pharmacy in the New York College of Pharmacy from 1869-1871, he worked for free because of the college’s limited finances. Another setback came when his new laboratory experienced a fire in 1871. However, this time only part of the lab was destroyed and Squibb was not injured again. The year was not a complete disaster for Squibb since he also struck a business relationship with National Chemical Wood Treatment in order to create a process for distilling acetic acid from wood.

### Crusade Against Impure Drugs

For the next two decades Squibb continued his crusade against impure drugs. He lobbied unsuccessfully for the American Medical Association to control the *Pharmacopoeia*. Instead the pharmaceutical publication remained under the control of the Pharmacopoeia Convention that consisted of companies with patented drugs and therefore created a conflict of interest. In 1879 he saw to the passage of a pure food and drug bill in New York, but the national bill proposed to Congress in 1881 did not pass. The federal bill was not approved until 1906, six years after Squibb’s death. One of the greatest supporters of the bill was Harvey W. Wiley, who was an associate of Squibb.

Throughout his career Squibb refused to patent his products for the sake of the scientific community. Despite this and the fact that he advertised primarily by word of mouth, Squibb had established a very prosperous business by the 1880s. By 1883 his company was producing over 300 drugs and distributing them worldwide. Aside from his many improvements with pharmaceuticals, Squibb also invented important equipment for his work, such as an automatic zero burette, a general apparatus stand, and a specific gravity apparatus. In 1882 Squibb started a journal called *An Ephemeris of the Materia Medica, Pharmacy, Therapeutics, and Collateral Information*, in which he published his own research as well as other advances in the pharmaceutical industry. He felt the need for a publication that would be updated more often than the *Pharmacopoeia* so that doctors and pharmacists could read about the most recent discoveries as they happened. His journal preceded the *Journal of the American Medical Association* by six years. He continued to produce the journal every two months until his death. Throughout his career Squibb was active in the professional

community. He held memberships in the American Pharmaceutical Association, American Medical Association, American Philosophical Society, and American Association for the Advancement of Science, among others. He was also the first vice-president of the American Pharmaceutical Association from 1858 to 1859.

### Retirement and Legacy

In 1892 Squibb made his two sons partners in his half-million dollar company and changed the name to E.R. Squibb and Sons. Squibb officially retired in 1895, although he continued to work in his lab and publish his journal. He died on October 25, 1900 at his home in Brooklyn, New York.

### Books

Blochman, Lawrence Goldtree, *Doctor Squibb: The Life and Times of a Rugged Idealist*, Simon and Schuster, 1958.  
Squibb, Edward Robinson, *The Journal of Edward Robinson Squibb*, George E. Crosby Co., 1930.

### Online

"History of Bristol-Myers Squibb," <http://www.bms.com/aboutbms/ourhis/data/ahisto.html> (January 4, 2001).  
"Bristol-Myers Squibb," <http://www.bioanalytical.com/calendar/99/02squibb.html> (January 4, 2001).  
"Edward Robinson Squibb," <http://www.britannica.com/soe/e/edward-robinson-squibb> (January 4, 2001). □

## James Starley

**James Starley (1831-1881) was an inventor and manufacturer who is widely considered to be the father of the bicycle industry. His inventions and refinements made the bicycle practical for widespread use. Starley also contributed to the improvement of the sewing machine.**

James Starley was born April 21, 1831, into an agricultural family. His father, Daniel Starley, was a farmer in Albourne, Sussex, England. When he was nine years old, Starley began working on the family farm, but, dissatisfied with farming, he set off on foot for London in 1846. There, he found work as a gardener and put his spare time to use cranking out inventions, including the adjustable candlestick, a one-stringed window blind, and a mechanical bassinet. He married Jane Todd on September 22, 1853, and had three sons, James, John Marshall, and William.

### Sewing Machine Advances and Bicycle Prototypes

Around 1855 Starley got a job with Newton Wilson in London, where he worked on sewing machines. Within a few years, he moved to Coventry to work as foreman of the Coventry Sewing Machine Company. Starley spent the next dozen or so years working out improvements to the early

sewing machine, including his own invention, "The European." His inventions, many of which were patented, survive in the workings of modern sewing machines.

In 1868 Starley saw his first bicycle, a French velocipede. Bicycles had been around since 1818, but the earliest two-wheeled, rider-propelled machines were rudimentary, requiring the rider to use his own feet to move the wooden monster along. The bicycle Starley encountered had cranks attached to the front wheel, which the rider could use to propel the machine. These early bicycles weighed as much as 160 pounds and had solid rubber tires and ball bearings.

Foreshadowing their future success in bicycle design, development, and sales (of which the Coventry region would eventually become a national leader), the Coventry Sewing Machine Company became the Coventry Machinists' Company in 1869 after worker Rowley B. Turner convinced management to produce bicycles. The company manufactured 400 bicycles for sale in France, but the outbreak of the Franco-German War made such export impossible, and so it turned to England for its market. Thus, Starley shifted his creative inventing energy from sewing machines to bicycles, seeking to improve the machines, first aiming to reduce the massive weight and clumsiness of the velocipedes, which had earned the nickname of "boneshakers." Within a few years, Starley had invented the "C Spring and Step Machine," or the Coventry Model, and secured his place as the father of the modern bicycle.

The Coventry bicycle featured a curved spring seat, a mounting step, and a small hind wheel. Next, Starley developed a bicycle with a smaller still rear wheel and large front wheel, both fashioned from iron and wire spokes. This creation was tagged the "penny-farthing," after England's smallest and largest copper coins. Its major improvement was a gear that turned the wheel twice for every revolution of the pedals, cutting the riders' work in half.

### Bike Advances and the Masterpiece

Improving further on his initial designs, Starley invented the Ariel bicycle. After leaving the Coventry Machinists' Company in 1870, he went into business for himself and began producing his Europa sewing machines and Ariel bicycles. Historians consider the Ariel, a lightweight all-metal bicycle first sold in 1871, to be the first true bicycle. It was the first self-propelled two-wheeler to use pivot-center steering, which gave the bicycle the ability to turn, a leap in technology from the forward and reverse movements that limited the earlier wooden machines.

Next, Starley introduced what was to be his most significant contribution to bicycle advancement. His Tangent bicycle, introduced in 1874, was the first to feature alternating spokes. Starley's original wheels arranged the spokes in a straight line. Alternating spokes connected the spokes to the hub at an angle, easing the stress on individual spokes and making the wheels far stronger than earlier models. Starley's tensioned spoke wheels are found, virtually unmodified to this day, on nearly every contemporary bicycle. The Tangent bicycle weighed in at about 50 pounds, although 21-pound custom-made racing versions were soon available.

In 1876 Starley produced the Coventry Tricycle, a successful new invention that featured a double-throw crank, chains that drove the bike's wheels, and a rack. Combining all of his previous advancements into one four-wheeled machine, Starley next produced the Salvo which many of his contemporaries believed to be his creative masterpiece.

Starley's nephew John Kemp Starley "went on to design the Rover Safety Cycle, which has formed the basis of the shape of the bicycle ever since," wrote Anthony Hopker in the *Coventry Evening Telegraph*. The Rover, introduced in 1885, featured a triangular frame, equal-sized wheels, and chain drives. Manufacture of the Rover launched Coventry into the forefront of bicycle production. Starley's sons, James, John Marshall, and William, carried on the family business as Starley Brothers, a cycle manufacturing outfit.

### Legacy

James Starley died on June 17, 1881, in Coventry, Warwickshire. Among his lasting contributions is the reputation of Coventry as the cradle of bicycle production. Since 1884 the community has displayed a granite monument to Starley featuring his profile, carvings of two of his bicycles, and a statue of Fame on top. The site of his factory is now home to the Museum of British Road Transport.

By the 1970s Starley's statue had fallen into disrepair. Starley's nose and Fame's arms were broken off. Further, vandals attacked the statue during a renovation project. Townspeople mounted a campaign to save the memorial, calling in descendants of the original Victorian-era craftspeople for consultation and considering a proposal to move the statue to a more prominent location near Starley's original factory. "When you think of what Coventry used to produce," Coventry resident Edna Walker told Hopker, "it's so sad that their work is not being appreciated."

In 1999 the town of Coventry launched a campaign to commemorate the most important people in the town's 1,000-year history, soliciting nominations from townspeople. Starley's 57 votes ranked him the third most important native, behind Sir Frank Whittle, who invented the jet engine, and Provost Howard, who ran the Coventry Cathedral, but ahead of eleventh century heroine Lady Godiva and Coventry native William Shakespeare, who garnered only 14 votes.

### Books

*The Dictionary of National Biography*, edited by Sir Leslie Stephen and Sir Sidney Lee, Oxford University Press, 1922.  
*Merriam-Webster's Biographical Dictionary*, Merriam-Webster, Inc., 1995.

### Periodicals

*Bicycling*, June 2000, p. 62.  
*Coventry Evening Telegraph (England)*, February 10, 1999, p. 10;  
 February 21, 2000, p. 17.

### Online

"Bicycle" and "Starley, James," *Britannica.com*, 2001.  
*The Bicycle Industry in Coventry*, [www.coventry.org.uk](http://www.coventry.org.uk), 2001.



## Thomas Starzl

**A world-renowned transplant surgeon, Thomas Starzl (born 1926) performed the first human liver transplant in 1963 and was also a pioneer in kidney transplantation. Starzl's research in chimerism, the coexistence of donor and recipient cells, led to significant contributions in the understanding of transplant immunology, including how and why organs are accepted. He also helped to develop better drugs to make human organ transplants safer and more successful.**

Thomas Earl Starzl was born into a prominent Le Mars, Iowa, family of German extraction on March 11, 1926. His father, Roman F. Starzl, was editor and publisher of the *Globe Post* and, as R.F. Starzl, was one of the early twentieth-century science fiction writers. His father was also a frustrated inventor. His mother, Anna Loretta (Laura) Fitzgerald Starzl, was the center of family life and when she died of breast cancer just before Starzl graduated from college the family disintegrated. Starzl had an older brother, two younger sisters, and from his father's second marriage, a half sister. From the age of twelve or thirteen, Starzl was expected to do his share of work at the paper. His first job was as a newspaper carrier. Later, he became a devil, one of the men who fed giant rolls of paper into the presses. Starzl was also an excellent student and participated in school athletics. While Starzl was sheltered in his small Iowa town, World War II raged abroad.

### College Years

Upon graduation from high school, Starzl immediately enlisted in the navy and was sent to officers' training school at Westminster College in Fulton, Missouri, in 1944. He returned to Westminster College in the premedical program after his discharge from the navy and graduated with a degree in biology in 1947. He entered Northwestern University Medical School in Chicago, Illinois, in September 1947. After three years in medical school, Starzl took a year off to work with Dr. Horace W. Magouin, a professor of neuroanatomy and a world-renowned researcher of the nervous system with a particular interest in sleep and wakefulness. Starzl developed a recording technique to track deep brain responses to sensory stimuli. According to Starzl in his autobiography *The Puzzle People: Memoirs of a Transplant Surgeon*, it was like exploring the deep sea for the first time. Starzl and Magouin published their research in 1951. Starzl's work with Magouin earned him a Ph.D. in neurophysiology from Northwestern in 1952, and at the same time he received his medical degree with distinction.

Starzl met one more doctor at Northwestern who had a great influence on his life, Loyal Davis. According to Starzl, he learned more about surgery in three months on Dr. Davis' service than in any three months in his life. Though Magouin wanted him to continue in neuroanatomy and Davis wanted him to remain in his program at Northwest-



ern, Starzl chose to continue his surgical training at Johns Hopkins University Hospital in Baltimore, Maryland, where he completed a fellowship and a residency. Two years into his residency, he married Barbara June Brothers of Hartville, Ohio, whom he had met at Rehoboth Beach, Delaware, six months before. They had three children, Timothy, Rebecca, and Thomas.

After four years at Johns Hopkins, Starzl chose to take a position at Jackson Memorial Hospital in Miami, Florida. He was angry that Johns Hopkins offered him a fifth year, but definitely not a sixth year. He also did not like the regimentation of the program, and he needed a salary to support his growing family. His father was recovering from a stroke and Starzl felt it was time to stop being subsidized by him. Jackson Memorial Hospital had one of the busiest emergency rooms in the United States. Starzl was in on the beginning of both open heart surgery and the dawn of blood vessel surgery. He also set up a laboratory in an empty garage on the grounds of the hospital and experimented with removing the livers of dogs. He was successful and published his results, which quickly became the standard worldwide.

In 1958 Starzl accepted a fellowship in thoracic surgery at Northwestern University. In 1959 he passed the thoracic surgery boards and remained on the faculty for four years. He received two awards that helped to fund his experimental research in techniques for liver transplantation. The National Institutes of Health gave him a five-year grant, and the other was the Markle Scholarship, which induced him to

stay in academic medicine. Most surgeons at university hospitals were volunteers and derived their income from private patients. Starzl was the second full-time member of the Northwestern University surgical faculty. That and his grants allowed him to continue his research on liver transplants.

### **Developed Reliable Management Techniques for Kidney Transplants**

After four years at Northwestern, poor working conditions caused Starzl to look for a better position. He joined the faculty at the University of Colorado School of Medicine as an associate professor of surgery in 1962 and became a professor of surgery in 1964. He was to remain in Colorado for 19 years. On March 27, 1962, Starzl performed his first kidney transplant on an identical twin recipient. Soon he became interested in a patient, Royal Jones. The boy, only twelve years old, was running out of places where the artificial kidney machine could be connected. His mother was to be his donor. This would be Starzl's first non-twin transplant. In his autobiography, Starzl said that to abandon Royal was unthinkable in view of the deep commitment made to him and his mother. On November 24, 1962, the kidney transplant was completed along with a combination treatment of irradiation, and the administration of immunosuppressant drugs Imuran and prednisone. The operation was a success. Royal Jones was later to have the first and second kidney transplants replaced, but was still alive when Starzl's autobiography was published thirty years later. Starzl and his research team went on to perform more than 1,000 kidney transplants at Colorado General Hospital and at Veterans Administration Hospital in Denver.

### **Attempted First Liver Transplants**

Starzl was not satisfied with his success in the field of kidney transplantation. He was still determined to transplant livers. His first attempt was on March 1, 1963, on a three-year-old boy, Bennie Solis, who was born with an incomplete liver. Uncontrolled bleeding killed Solis. Starzl tried again in May of 1963 with a man suffering from cancer of the liver. Starzl tried to solve the bleeding problem by administering huge amounts of fibrinogen, a protein that forms blood clots. The operation appeared to be a success, but the man died three weeks later from complications due to blood clotting.

The paramount problems to be solved were uncontrolled bleeding and tissue rejection. Starzl suspended human liver transplantation to work on these issues. He also worked on the manuscript for his first book, *Experience in Renal Transplantation*. He also suffered a bout of hepatitis which was all too common at that time for transplant personnel. In 1964 he and his colleagues closed their transplant center for six months in order to set up the first extensive trial of tissue matching ever attempted. Starzl worked with Dr. Paul Terasaki from the University of California at Los Angeles. Terasaki concluded that tissue matching within families was feasible, but that it had limited value with unrelated donor kidneys. It was clear to Starzl and Terasaki that the solutions to organ transplant rejections lay

in the development of better drugs and other treatment strategies. Starzl theorized that organ rejection could be controlled by using the steroid prednisone along with Imuran. He soon added the anti-lymphocyte globulin and another immunosuppressant, cyclosporin. The use of this combination of drugs advanced kidney transplantation from an experimental procedure to a standard procedure.

### Performed First Successful Liver Transplants

In 1967 Starzl felt that the surgical techniques and immunosuppressant drugs had advanced enough to begin liver transplant trials again. The first attempts were on infants and young children with severe liver disease. Some of the operations were successful, while others failed because of the severity of the illnesses some of the patients had. By the late 1970s the survival rate for liver transplants had risen to 40 percent. Starzl was promoted to chair of the department from 1972 until he moved to the University of Pittsburgh in 1981.

While Starzl's professional life was extremely successful, his personal life was in shambles. His wife of 22 years divorced him intending to marry a wealthy Middle Eastern businessman. He felt that she rightly was tired of being a distant second to his career. His father, who had become totally paralyzed, died at about the same time. Next, his sister, Nancy, died of liver disease and he was unable to get to her in time. His son, Tim, was also hospitalized with an emotional breakdown. In March 1977 Starzl assembled a new research group. One of the researchers was a young woman, Joy Conger, who would become his second wife in 1981.

In 1981 Starzl joined the staff of the University of Pittsburgh School of Medicine as professor of surgery. For the next ten years he oversaw the largest transplant program in the world at Presbyterian University Hospital (UPMC Presbyterian), Children's Hospital of Pittsburgh, and Oakland Veterans Affairs Medical Center. Ultimately, he became the director of the University of Pittsburgh Transplantation Institute which was renamed the Thomas E. Starzl Transplantation Institute (STI) in 1996. In 1998 he retired as director but continued to be active in research.

### Performed Successful Baboon-to-Human Transplants

Starzl engaged in significant work during his tenure at the University of Pittsburgh Transplantation Institute. He got the National Institutes of Health to approve the drug cyclosporin for liver transplants. In 1984 he helped to get a bill passed by Congress which set up a national system of organ procurement and distribution. He and his researchers have improved the outcomes of liver, kidney, pancreas, and multiple organ transplantations. In 1986 Starzl and his team successfully completed their pivotal work on the anti-rejection drug tacrolimus which has benefited nearly 5,000 patients. To address the chronic shortage of human organs, Starzl and his team have looked into the feasibility of cross-species transplantation, or xenotransplantation. In 1992 and

1993, Starzl and his team performed two successful baboon-to-human liver transplants, making medical history.

In 1990 Starzl underwent coronary bypass surgery. He retired from active surgery and wrote his autobiography, *The Puzzle People: Memoirs of a Transplant Surgeon*. The idea for the title was given to him by an Indian journalist who asked him if in the next decade a puzzle man with multiple organs from various human and non-human sources would be feasible. After contemplating the idea, he decided that every patient who receives an organ is a puzzle because of all the ways the body has to change in order to accept the gift. Starzl continued to be active in research. He changed his concentration to chimerism, the coexistence of donor and recipient cells. Starzl now believed that the immune system no longer needed to be suppressed. The body could be fooled into believing that the transplanted tissue was not foreign. The trick was to convince both the body's defense mechanism and the new organ that the intruder is really "self," a recognized member of the host body.

Many of Starzl's ideas are still controversial, especially the animal to human transplants. He continues to speak throughout the world and is one of the most prolific writers in his field with four books, 2,076 scientific articles, and 283 chapters.

### Books

*American Men and Women of Science 1998-99*, 20th Edition, R.R. Bowker, 1999.

*Notable Twentieth-Century Scientists*, Gale Research, 1995.

Starzl, Thomas E., *Puzzle People: Memoirs of a Transplant Surgeon*, University of Pittsburgh Press, 1992.

### Periodicals

*The Lancet*, December 19, 1992, p. 1524.

*Time*, Fall 1996, p. 70.

*U.S. News and World Report*, July 13, 1992, p.12.

### Online

Thomas E. Starzl Transplantation Institute, <http://www.sti.upmc.edu> (January 8, 2001). □

## Simon Stevin

**Simon Stevin (1548-1620) was an influential mathematician and engineer with a broad range of interests. He offered new insights and discoveries in the development of decimal numbers and the laws of inclines, gravity, hydrostatics, and fortification. Although Stevin never earned the same lasting reputation as Galileo or Isaac Newton, his contributions to the advancement of mathematical theory are noteworthy.**





Very little regarding Stevin's early life is known with certainty. He noted in many of his books that he was a native of Bruges, a city in Flanders, which later became Belgium. According to the inscription on a later portrait, he was born in 1548. Records of his deeds name him as the son of wealthy parents, Antheunis Stevin and Cathelyne van der Poort. Conceived out of wedlock, he was most likely raised by his mother, but no information concerning his childhood is available.

In 1577, Stevin occupied an administrative position in the financial department of the government of Flanders. Prior to that, he was employed as a bookkeeper and cashier for the city of Antwerp. Reportedly he had traveled extensively through Poland, Prussia, and Norway from 1571 to 1577. By 1581 he had settled in the Dutch city of Leiden. Already in his 30s, Stevin finally began his formal education by enrolling in a Latin school and later entering the University of Leiden. He graduated on February 16, 1583, under the Latinized version of his name, Simon Stevinus.

After graduation, Stevin undertook numerous projects of mathematical writing and practical inventions. In 1584 he negotiated with the city of Delft to use an innovative system of drainage he developed. He also applied for patents for numerous inventions concerning drainage and dredging, along with an improved windmill and a mechanical roasting spit, which Stevin considered a toy.

From the beginning of his writings and engineering innovations, Stevin displayed a dual interest in pure thought and practical application. Although he asserted that knowl-

edge with no use in practical living was not worth pursuing, he followed many of his practical projects to theoretical ends. He often went beyond the scope of his original plans, and in so doing enhanced the growth of mathematical understanding. His work was crucial to the development of mathematical theory in the late 16th century.

### Published Important Mathematical Works

Stevin began publishing his writings on mathematics while still a student. In 1582 he employed a printing shop in Antwerp to produce *Tables of Interest*, which outlined the rules for computing interest and provided tables for understanding discounts and annuities. Until that time, the calculation of interest was a mathematical process known only to the banking industry, which guarded the formula closely to protect its financial interests. After the release of *Tables of Interest*, for the first time common people could calculate the interest costs and benefits of their investments.

In 1583, Stevin published *Geometrical Problems*. From the start, Stevin proved himself an innovator by publishing his books in Flemish. Writing in one's own language was highly unusual in a time when works of a scholarly nature were published in Latin. Over the next three years Stevin produced several of his most important mathematical works, including *Dialectics* (also known as *Art of Demonstration*), *The Dime*, *The Decimal*, and *L'Arithmetique*.

### Developed a System of Decimals

*The Dime* and *The Decimal*, both published in 1585, proved important in the advancement of the accepted use of a decimal system. The decimal system had been known for centuries, but Stevin's explanation provided an understandable and usable, albeit cumbersome, system of decimals. The common accepted practice among mathematicians at the time was to use fraction form with written notations. Although he fell short of devising a complete decimal system with a positional decimal point, Stevin provided the foundation on which other mathematicians would soon follow with these elaborations.

According to E. J. Duksterhuis in *Simon Stevin: Science in the Netherlands Around 1600*, other mathematicians were also gradually moving toward a decimal system. However, none of the advancements made were "comparable in importance and scope with the progress achieved by Stevin in *The Dime*." Duksterhuis lists three points of special importance. First, Stevin invented a method of indicating the value of each digit without using fraction notation. Second, characteristic of Stevin's interest in the practical use of mathematics, he demonstrated useful applications for his system. Finally, Stevin presented his invention clearly and systematically so that it could be easily understood and followed by others.

Stevin's system of decimals was based on integers, which he called the units of commencement. Following from those were new units that Stevin named Prime, Second, Three, and so on. These were written by placing signs after the numbers. The sign consisted of a circled number, which designated the unit value. The system proved cumbersome in complex computations. Stevin recognized this

and offered a shorter method of notation in which only one distinguishing sign was needed.

According to Stevin, the notation represented full integers, not fractions or parts of integers. In this sense, he did not set out to create decimal numbers. He believed that claiming integer status for all digits in the number was advantageous to its practical application. Mathematicians following Stevin, namely John Napier, soon adopted the use of a positional decimal point, thus eliminating the need for positional signs. In *A History of Mathematics*, Carl B. Boyer suggests that although highly trained mathematicians were familiar with a crude decimal system, "among the common people, however, and even among mathematical practitioners, decimal fractions became widely known only when Stevin undertook to explain the system in full and elementary detail. He wished to teach everyone."

### Other Studies

In 1586 Stevin published several of his most famous writings: *The Elements of the Art of Weighing*, *The Practice of Weighing*, and *The Elements of Hydrostatics*. In *The Elements of the Art of Weighing*, Stevin again foreshadowed future mathematical discoveries while continuing the work of Greek scientist Archimedes in his discovery of the law of inclined planes. In describing his discovery, he drew a circle of connected, equal weights, called *clootcrans*, or a wreath of spheres. He was so elated with his discovery that he exclaimed, "What appears a wonder is not a wonder!" Like many in his day, Stevin believed the universe to be a vast array of mysteries that could be explained and understood through diligent study. Most of his subsequent publications included the circle of spheres and his newly adopted motto. Like his advancements in decimals, his discoveries of incline interaction grew out of his uncanny ability to circumvent detailed theory in favor of an understanding of the essence of the mathematical equation. During the 17th century, Sir Isaac Newton would fully develop the theoretical implications of Stevin's discovery.

Along with his contributions to the study of decimals and inclines, Stevin also made a significant advancement in hydrostatics, the study of the pressure that fluids extend or receive. Stevin discovered that the shape of the container does not affect the amount of pressure exerted by the compression of a fluid. Instead, it depends on the height of the liquid and the area of the surface. Always looking for applications for his discoveries, Stevin used his new understanding of hydrostatics to build advanced water mills in several locations and provided improvements to existing water mills.

There is also evidence that suggests that Stevin was the first to discover the law of gravity popularly attributed to Galileo. According to a report published in Flemish by Stevin in 1586, he and a friend dropped two balls of lead, one ten times the weight of the other, from a height of 30 feet. When the objects were dropped at the same time, Stevin discovered that the sounds of impact were simultaneous. This suggested that some force exerted the same pull on objects of different weights.

### Civic Affairs and Defense

In 1588 Stevin turned his attention to civic matters, publishing the treatise *Civic Life*. In 1595 he returned to mathematics with the publication of the pamphlet *Appendice Algebraique*. In the same year, Stevin developed a name for himself in yet another field, publishing the highly regarded work *The Art of Fortification*.

By the end of the 16th century, Stevin came to work for Prince Maurice of Nassau as a private tutor. This job led to a new involvement in civic affairs. Stevin was appointed to an engineering position, and in 1603 named quartermaster of the States Army. At the beginning of the 16th century, the Low Countries (now the Netherlands and Belgium) were in turmoil. A revolutionary movement had begun in the 1580s in an attempt to achieve freedom from Spain. Prince Maurice became an influential leader of the resistance movement. He depended on his master tutor for direction and advice. Although Stevin's exact role in the rebellion is unknown, it is apparent that he deeply impacted the prince. In turn, his presence on numerous committees dealing with military matters influenced the activities of the forces. He was also employed to organize a school for engineers that ultimately was incorporated into the University of Leiden.

During his tenure with Maurice, Stevin compiled and wrote numerous textbooks for the prince's studies. Between 1605 and 1608, the works were published in an extensive volume entitled *Mathematical Memoirs*. He published only two more works in his lifetime. Released in a single volume in 1617, *Marking Out of Army Camps* and *New Manner of Fortification* dealt with practical issues Stevin encountered in his work as a civic servant. *New Manner of Fortification* offered an ingenious defense strategy of flooding the country in the case of an attack, a tactic suited for the waterlogged states of the Low Countries. Although Stevin advocated for the creation of an office of Superintendent of Fortification and recommended himself to run it, his request was rejected.

During the final decades of his life, Stevin married a young woman named Catherine Cray, with whom he had four children before his death sometime during the first few months of 1620. His son Hendrick, who became a scientist, gathered his father's work and did much to preserve it for later generations.

### Books

- A *Biographical Encyclopedia of Scientists*, edited by John Daintith, Sarah Mitchell, and Elizabeth Tootill, Facts on File, 1981.
- Boyer, Carl B., *A History of Mathematics*, John Wiley and Sons, 1968.
- The Cambridge Dictionary of Scientists*, edited by David Millar, John Millar, and Margaret Millar, Cambridge University Press, 1996.
- Duksterhuis, E. J., *Simon Stevin: Science in the Netherlands Around 1600*, Martinus Nijhoff, 1970.

### Online

- "Simon Stevin," *Math and Mathematicians: The History of Math Discoveries Around the World*, <http://www.galenet.com> (January 18, 2001).

"Simon Stevin," *Notable Mathematicians*, <http://www.galenet.com> (January 18, 2001).

"Simon Stevin," *World of Scientific Discovery*, <http://www.galenet.com> (January 18, 2001).

"Simon Stevin," *World of Invention*, <http://www.galenet.com> (January 18, 2001).

"Stevin, Simon," *Merriam-Webster's Biographical Dictionary*, <http://www.galenet.com> (January 18, 2001). □

## Karl Struss

**Karl Struss (1886-1981) was a talented American photographer who played a key role in the early development of cinematography. He won the first Academy Award in that category.**

**K**arl Fischer Struss was born on November 30, 1886, in New York City, the youngest of six children born to Henry W. Struss and his wife Marie. The family was of German background. Henry Struss owned a silk mill. After his economic fortunes took a downturn in the early 1890s, he owned and ran a bonnet-wire manufacturing plant.

According to some sources, Struss did not finish high school because of illness. Others stated that he graduated from DeWitt Clinton High School in New York City. In either case, as early as 1903, Struss became employed at his father's plant, where he worked for the next ten years. Looking for a hobby, Struss began attending night classes in photography at Columbia University Teacher's College in 1908. He spent the next four years studying photography, primarily as a student of Clarence White, a famous pictorial photographer.

### Became Professional Photographer

Beyond a mere hobbyist, Struss proved to be very talented as a photographer. His early work was extremely stylized. These pictures, including some significant shots he took during a trip to Europe in 1909, were in the Pictorial style. Soft focus lenses and related printing techniques were used to create photographs that were blurry and diffuse. To create this diffused look, Struss developed the Struss Pictorial Lens in 1909. It was later manufactured and used in film productions. He was also responsible for other innovative techniques, such as the autochrome, which produced positive transparencies on glass. Another technique was the Hess-Ives process that created color prints on paper. In addition to developing his photographic techniques, Struss taught at Columbia University and the Brooklyn Academy of Arts and Sciences, published writings on photography, and edited a photography magazine, *Platinum Print*.

Struss's talent was noticed by leading photographers in New York City, including Edward Weston and Alfred Stieglitz. The latter owned a gallery, the Albright Art Gallery International Exhibition of Pictorial Photography, and was a key figure in the Photo-Secession group. Stieglitz and his friends founded this organization in 1902 with the goal of

advancing photography as a fine art. Struss was asked to join the Photo-Secessionists. Stieglitz sponsored an early exhibit of Struss's work in 1910 as part of a larger exhibit of Photo-Secession. This led to further publication of his pictures.

Struss's style evolved in the early 1910s, when some critics believe he reached an early peak as a photographer. Unlike most Photo-Secessionists, Struss photographed many pictures of urban architecture, primarily of New York City, in a style that predated modernist photographs, particularly in his overhead views of New York City. His bold, linear photographs focused on principles of design and abstract composition. In a review of a late-twentieth century exhibition of Struss's work from this period, *New York Times* art reviewer Ken Johnson wrote "His rigorously composed views of the city are animated by the tension between timeless reverie and modern urgencies that would soon render Pictorialism obsolete."

Leaving his father's employ in 1913, Struss opened his own photographic studio in Manhattan the following year. For three years, Struss shot portraits, work for advertisements, and pictorial illustrations for magazines such as *Vanity Fair*, *Harpers Bazaar*, and *Vogue*. He also produced publicity stills for organizations like the Metropolitan Opera Company.

### Served in World War I

In 1917, Struss's career was interrupted when he was drafted by the U.S. Army for service during World War I. He was originally assigned to the Signal Corps where he taught photography. Struss also worked with the War Department in developing a secret infrared photographic process to be used in air-based reconnaissance. Struss was transferred because of anti-German sentiment. He was accused of being a German sympathizer and underwent an investigation while serving at the Fort Leavenworth Military Prison's Barracks Guard Unit. Though Struss was ultimately found innocent of any wrongdoing, the accusations lingered and he was unable to completely clear his name. The situation negatively affected his standing in New York City and contributed to his post-military move.

### Began Cinematography Career

In 1919, after his discharge from the military, Struss left New York City and still photography behind. He moved to Hollywood, then a burgeoning film community. The Famous Players-Lasky Studio hired him to create publicity portraits. Within a month, Struss was working as a cameraman. Seven months later he had become a cinematographer. Struss's first film was *Something to Think About* (1920). Cecil B. DeMille put him under contract, where he worked for the next three years. Although Struss was primarily a cinematographer, he also took portraits of stars and other important Hollywood figures including DeMille, Gloria Swanson, and Bebe Daniels. Throughout his career, Struss also dabbled in other forms of still photography and exhibited his work through organizations such as Pictorial Photographers of America. At this time, Struss married Ethel Wall, with whom he had one child.

After Struss's contract with DeMille ended in 1922, he continued to work as a cinematographer on a freelance basis. Over time, Struss developed his own distinctive style. As a cinematographer, Struss was primarily concerned with the lighting, camera angles, sets, and related production details. He left the actual operation of the camera to its operator. Stylistically, Struss favored a soft, romantic presentation of images in a series of gray tonalities. Struss was quoted by Scott Eyman in *Five American Cinematographers* as saying "every picture was always something different; I tried not to use the same formula. It depended on the story. The way I look at it is this: the director is the captain of the ship; I'm the first lieutenant, and the rest of the crew worked directly under me. The director shouldn't care a whoop about anything else; he's got his own problems. I'm his interpreter and I have to give him what I think is good for that story."

Some of Struss's best known work was done on *Ben Hur* (1926), which was shot in Rome. When he joined the project, the film had already been in production for six weeks. Struss was one of 13 cameramen who worked on the film. While he was the lead cinematographer and shot about 60 percent of the final product, another cinematographer, Rene Guissart, received the main credit because of a contractual agreement.

Struss received much acclaim for his work on *Ben Hur* because of his use of filters to create visual effects. In the famed healing of the lepers sequence, red makeup was used to create the sores on the characters. Struss used a red filter to make the sores suddenly disappear, an optical transition. One of Struss's major contributions to cinematography was the use of filters to affect change in tone in black and white film.

### Won Academy Award

Another film in which Struss did acclaimed work was *Sunrise* (1927), directed by F.W. Murnau. Regarded as one of the best silent films ever made, Struss worked with a second cinematographer, Charles Rosher. He used graduated gauze filters to create the lighting effects. For he and Rosher's work on *Sunrise*, the pair won the first Academy Award given for cinematography. Struss was a founding member of the Academy of Motion Picture Arts and Sciences, the body that gives out the Academy Awards.

Struss's career gradually declined in the late 1920s and 1930s, in terms of the quality of his films. In the late 1920s, he worked on most of Mary Pickford's films, including *Taming of the Shrew*. In 1931, Struss was hired by Paramount, where he spent the next 18 years. He worked on many films starring Mae West, Claudette Colbert, Miriam Hopkins, and the musical comedies of Bing Crosby and Dorothy Lamour.

While most of Struss's assignments at Paramount were B pictures, he did make some significant films as well. Struss earned another Academy Award nomination for *Dr. Jekyll*

and *Mr. Hyde* (1932). He created another spectacular special effect using color filters to change the appearance of the actor who played the title character. Working in combination with the actor's make-up, a graduated red-green filter moved across the lens to alter the appearance of his face. Other important films for Struss in the early 1930s were *Island of Lost Souls* (1932) which featured white-on-white fog, and *The Story of Temple Drake* (1933), an adaptation of William Faulkner's *Sanctuary*, which was darkly lit.

Struss's final years at Paramount were rather lean. He did earn another Academy Award nomination for best cinematographer for his first Technicolor film, *Aloma of the South Seas* (1941). After his tenure ended in 1948, Struss continued to work intermittently. He garnered his final Academy Award nomination in 1950 for *Limelight*, directed by silent film comedic genius Charlie Chaplin. In 1953, Struss worked on his first 3-D film, *Cavalleria Rusticana*, which was shot in Rome and starred Anthony Quinn. After filming was completed, Struss remained in Italy for some time, working on comedies starring Sophia Loren.

### Worked in Television

Struss ended his film career in 1959. His last film was *The Rebel Set*. In 1959, he produced a two-minute Chevrolet commercial that won the first Grand Prix Award at the Cannes Film Festival. While continuing to work on commercials, Struss was also employed as a television photographer. He worked on such shows as *Broken Arrow* (1956-60) and *My Friend Flicka* (1956-57). He retired completely in 1972.

Struss died of heart failure on December 16, 1981, at St. John's Hospital, in Santa Monica, California. He was 95 at the time of his death. In summarizing Struss's career, Julian Petley of *International Dictionary of Films and Filmmakers: Writers and Production Artists* wrote, "Never typecast, and always adaptable, he made the very best of changed circumstances and styles, though it's hard to avoid the conclusion that his was a talent that gave of its best in the conditions of traditional Hollywood in its heyday."

### Books

*American National Biography: Volume 21*, edited by John A. Garraty and Mark C. Carnes, Oxford University Press, 1999.  
*The Annual Obituary 1981*, edited by Janet Podell, St. Martin's Press, 1982.

Eyman, Scott, *Five American Cinematographers: Interviews with Karl Struss, Joseph Ruttenberg, James Wong Howe, Linwood Dunn, and William H. Clothier*, Scarecrow Press, 1987.

*International Dictionary of Films and Filmmakers-4: Writers and Production Artists*, edited by Grace Jeromski, St. James Press, 1997.

Katz, Ephraim, *The Film Encyclopedia*, HarperPerennial, 1998.

### Periodicals

*New York Times*, December 19, 1981; August 11, 1995; February 27, 1998.

*Palm Beach Post*, September 24, 1995. □



## Frederick Winslow Taylor

**Frederick Winslow Taylor (1856-1915) consolidated a system of managerial authority, often referred to as scientific management, that encouraged a shift in knowledge of production from the workers to the managers.**

**H**is system broke up industrial production into very small and highly regulated steps and required that workers obey the instructions of managers concerning the proper way to perform these very specific steps. Taylor determined these steps through careful scientific observations, his most significant individual contribution to scientific management. He used these observations to compare the pace at which various workers completed tasks. Taylor's system of management atomized, or separated workers from each other. Workers in his system were given highly detailed work instructions that Taylor's scientific studies had determined to be the very best—that is most efficient—way to perform the specific, isolated, task. Workers became parts of a larger machine and they were expected to understand that their interests were in accord with the interests of managers. This “mental revolution” of interests was, Taylor believed, the most significant contribution of scientific management, in that it reduced management-worker strife.

Born into an economically established old Philadelphia Quaker family, he was the youngest of eleven children. He attended Germantown private school. At sixteen, after a three-year trip through Europe with his family, he was sent to Phillips Exeter Academy in New Hampshire, in preparation for Harvard University. After passing his Harvard en-

trance examinations with honors, he suffered severe eyestrain that precluded his attendance there. On the advice of eye doctors, he went to work for a small machine shop in Philadelphia, where he learned the trades of pattern maker and machinist, after which he took a position at the Midvale Steel Works in 1878. It was here that Taylor eventually became foreman of the machine shop, with expert knowledge of the ways of the work floor. He promptly set out to destroy those ways, particularly the “soldiering” of labor. That is, Taylor knew that workers tended to do much less work than they could really produce; he wanted to increase their productive capacity. Workers resisted his efforts but, after three years, Taylor seems to have succeeded in raising production through constant managerial pressure. His next decade at Midvale was spent in careful, scientific study of these problems (production and worker resentment). He wanted to increase output without having to drive the workers.

In 1881 Taylor published an essay on metal cutting that generated a great deal of attention by engineers because of its rigorous examination of the individual steps involved in cutting metal. In 1895 he began to publish papers on schemes to increase worker incentive. He successfully combined these interests in a June 1903 presentation to 350 mechanical engineers in Saratoga, New York. This essay would stand as his most complete statement of scientific management. Martha Banta called the Saratoga essay, “one of the key documents shaping modern industrialization.” The success of this essay propelled Taylor to the presidency of the American Society of Mechanical Engineers in 1906.

In spite of this honor and his success among engineers, Taylor's work was rarely known outside of the community of industrial engineers until lawyer, reformer, and future U.S. Supreme Court justice, Louis Brandeis tapped his ideas



to help in the Interstate Commerce Commission hearings concerning railroad rates. He used Taylor's scientific management methods as an example of progressive management techniques that could ease the strain on workers even as it raised their pay and increased profits for owners. In 1910, Brandeis argued before the Interstate Commerce Commission (ICC) that wage increases did not necessitate increases in railroad rates. He argued that properly administered railroads, that is, those governed according to the principles of Taylor, did not need to raise rates to increase wages. The Eastern Rate Case, as it came to be known, stimulated a great deal of interest in notions of efficiency. Taylor credited Brandeis with the successful promotion of the system. "I have rarely seen a new movement started with such great momentum as you have given this one," Taylor wrote to Brandeis.

Brandeis, who invented the term 'scientific management,' wrote to fellow lawyer and future U.S. Supreme Court justice, Felix Frankfurter, on February 27, 1911, about his work with the ICC and expressing his belief that scientific management exemplified the future of social order. "The Commission did, I think, quite as much as they could, and rather more than I thought they would with the efficiency argument. They accepted the fundamental principles that improvements in economy and management were possible, and that they must be made before the need would be recognized. Scientific management will follow that inevitably." It did generally follow, and was helped in its inevitability by the 1911 publication of *Principles of Scientific*

*Management*, which combined and set out the various elements of Taylor's program to increase worker efficiency.

Scientific management was the system Taylor devised, borrowing freely from other managerial programs, to increase worker productivity without constant riding by managers. Applicators of Taylor's system first studied a job with attention to the minimum necessary steps needed to complete the task. Each step was then scientifically studied in order to determine the most time efficient means of performing it. Managers could total the time it would optimally take to perform a job by adding the time it should take to perform every step. Workers who could not meet this optimum time would be removed from the job. In his 1947 introduction to the collected works of Taylor, Harlow Person claimed that Taylor's methods involved the "discovery by experiment of the best way of performing and the proper time for every operation and every component unit of an operation in the light of the state of the art, the best material, tool, machine, manipulation of tool or machine, and the best flow of work and sequence of unit operations."

Taylor believed that such a system would give managers more power over workers by removing the guesswork from accounts of performance time and by reducing jobs to their component parts in such a way that workers no longer had the skilled knowledge with which to resist the demands of management. Managers would possess the knowledge and workers would perform their scripted steps. Person explained that Taylor's system created "a new division of labor between management and workers: the assignment to management of the responsibility for discovering the best ways of performing units of operations, and the further responsibility of planning operations and actually making available at the proper time and place, and in the proper quantity, the materials, tools, instructions and other facilities required by the workers." Workers isolated in managerially-governed assembly lines would have no group of fellow workers to rely on to slow down production and would be forced to deal with management individually, a transformation that Taylor believed would make them internalize the perspective of managers as their own.

Taylor's attempt to create new ways of thinking and acting was one of his most significant contributions to the growing science of management, and best exemplifies the intellectual importance of his organization of the workplace. "The most stirring part of Taylor's testimony before the House committee," Person claimed, "is that section in which he develops the thought that true scientific management requires a mental revolution on the parts of management and of workers." This intellectual revolution would bring the perspective of management to the workers and, in this way, workers would begin to understand their interest as being the same as management. "Therefore, true scientific management calls for a unifying point of view and a unity of interests and of efforts seldom present in a particular establishment," Person concluded. Taylor designed his system to produce the understanding and desire to be a good worker according to the needs of management.

This mental revolution was not isolated to the shop floor but extended into all realms of life. The proper arrange-

ment of work would create the proper citizen, he believed. "The writer's observation, however, would lead him to the conclusion that most men tend to become more instead of less thrifty when they receive the proper increase for an extra hard day's work." Taylor told a Congressional Committee questioner who was concerned that increased wages would make workers less frugal. "They live rather better, begin to save money, become more sober, and work more steadily. And this certainly forms one of the strongest reasons for advocating this type of management." Scientific management promised a mental revolution in the relationship of worker/manager, citizen/government and individual/community. "Taylor's development of a science of management," claims William Akin, "moved logically from the microcosm of work, to the organization of the factory, and beyond to society." Scientific management, like much of the progressive movement, promised to create within citizens the desire to behave.

Taylor's productive worker was also a remarkably sober worker. "A careful inquiry into the condition of these men when away from work developed the fact that out of the whole gang only two were said to be drinking men. The fact is that a steady drinker would find it almost impossible to keep up with the pace which was set, so that they were practically all sober." The discipline of scientific management constructed a citizen with particular habits, tastes, and character.

"It is not a question of producing physical changes," Taylor wrote in a piece published posthumously, "but rather of working a great mental revolution in large numbers of men, and any such change demands time, and a large amount of time." In 1915 Morris Cooke, an associate of Taylor's, reminded readers concerning the application of scientific management to governmental institutions that "nothing has been so sufficiently studied as to have reached even an approximately scientific standard. All that can be said is that we have started on the long road." Taylor, he reminded readers, took 26 years to study the cutting of metal; the application in other fields, including Cooke's field of political society, would take at least that long. In 1940, Cooke and CIO vice-president Philip Murray suggested that methods of scientific management offered a light at the end of the tunnel of social fragmentation: "This book is published at a period of world-wide disillusionment. In one field after another the devastating conclusion has been reached that former ways of doing things have been the wrong ones, with results sometimes worse than futile. Certainly no one viewing the American industrial scene dispassionately can avoid the conclusion that there is a better way." Taylorism, they and many others believed, pointed the way to a better workplace and a better society.

Taylor's methods would be tried and applied to an endless range of activities, including education, military discipline, home economics, ergonomics, and medicine. For example, James Phinney Munroe, president of the National Society for the Promotion of Industrial Education, began his 1912 book, *New Demands in Education*, with a statement of the value of efficiency for education: "The fundamental demand in education, as in everything else is

for efficiency—physical efficiency, mental efficiency, moral efficiency." Principals and school administrators around the world, adopted versions of efficient education that bore at least a general relation to Taylor's methods. C. A. Fullerton even presented a paper at the 1912 National Education Association meeting entitled, "The Principles of Scientific Management Applied to Teaching Music in Public Schools." Even the activities of surgeons were studied by Taylor's associate Frank Gilbreth, who had transformed brick laying through Taylorian scientific studies. "If you were laying brick for me," he told one surgeon, "you wouldn't hold your job ten minutes."

Much of the debate surrounding the adoption of Taylor's methods disappeared after the 1920s, but the method continued. The disappearance of the debate reveals a widespread acceptance of much of the power and authority that Taylorism had constructed. The pressures of World War II, in fact, drove wider acceptance of scientific management and made Taylorism one of the most significant aspects of American (and much of the rest of the world's) social organization—connecting people through work and uniting their viewpoints around the perspective of efficient production.

## Books

- Banta, Martha *Taylor's Lives*, University of Chicago Press, 1993.  
 Cooke, Morris Llewellyn and Philip Murray, *Organized Labor and Production*, Harper and Brothers, 1940.  
 Copley, Frank Barkley *Frederick W. Taylor: Father of Scientific Management*, Routledge/Thoemmes Press, 1993.  
 Derber, Milton *The American Idea of Industrial Democracy*, University of Illinois Press, 1970.  
 Haber, Samuel. *Efficiency and Uplift: Scientific Management in the Progressive Era, 1890-1920*, University of Chicago, 1964.  
 Kanigel, Robert, *The One Best Way*, Viking, 1997.  
 Miller, Char Roone. *Taylor's Citizenship: State Institutions and Subjectivity*, Greenwood Press, 2001.  
 Pursell, Carroll *The Machine in America: A Social History of Technology*, Johns Hopkins University, 1995.  
 Taylor, Frederick Winslow, *Scientific Management*, Harper and Row, 1947.  
 Wrege, Charles and Ronald Greenwood. *Frederick W. Taylor: The Father of Scientific Management, Myth and Reality*, Business One Irwin, 1991.

## Periodicals

- American Political Science Review*, 9 (August 1915): 488.  
*Bulletin of the Society to Promote the Science of Management*, (November 1915) Vol. I, No. 6, p.8. (5-15).  
*Bulletin of the Taylor Society*, (December 1916) Vol. II, No. 5, p.9; (August 1917) Vol. III, No. 4, p. 3.  
*Scientific Management* Frederick Taylor, 1911; reprint, Harper and Row, Publishers, 1947. □

# Mike Todd

**American entertainment in the middle of the twentieth century was shaped by the contributions of master showman Mike Todd (1907-1958), a Broadway producer turned Hollywood movie mogul. Todd pio-**

**neered 70-millimeter film, the wide-screen movie spectacular, and the use of major stars in cameo roles.**

Todd became widely known for producing the Oscar-winning star vehicle *Around the World in 80 Days*. He made possible many other films for which he got no formal credit. He popularized Cinemascope and Cinerama, trade names for wide-screen film processes, and he invented the "Todd-AO" system of synchronizing multiple sound tracks on 70-millimeter film. Married to Elizabeth Taylor, he was at the height of his fame when he died tragically.

### Show Business Impresario

Like many other American show business personalities of the early twentieth century, Mike Todd changed his name to disguise his ethnic heritage. He was born Avron Hirsch Goldenbogen (by some accounts, Golbogen) in Minneapolis in 1908. His father was a rabbi who had emigrated from Poland with his wife. The family moved to Chicago in 1918.

From an early age, Todd was a hard worker, compiling an incredible amount of business experience while still a teenager. By the time he was 18, he was president of a construction business that had revenues of more than \$2 million a year. He continued with a variety of business ventures and had a considerable fortune by the time he was in his mid-20s.

Todd was always interested in show business. For a time he worked in Hollywood, soundproofing stages for the early talkies. He was a carnival barker at one point. He also tried his hand as a joke writer for the comedy duo Olsen and Johnson. In Chicago, he opened a nightclub.

In 1936, Todd began producing Broadway plays. He quickly became a top theater impresario, churning out hit after hit. In nine years, Todd produced 16 Broadway shows, including Cole Porter musicals and comedies. Most were wildly successful, and in all they took in more than 18 million dollars at the box office. Many of the big stars of the era appeared in them. Gypsy Rose Lee, the famous striptease artist, headlined *The Streets of Paris*. Mae West starred in *Catherine the Great*. Other Todd hits included *The Hot Mikado*, *Something for the Boys*, and *Up in Central Park*.

### Widening the Screen

Todd's ability to raise money for entertainment projects was well established, and in 1945 he decided to branch out into movies. He formed Michael Todd Productions and soon became a respected and feared Hollywood mogul, a shrewd wheeler-dealer whose backing could jump-start or kill a project. Yet until the mid-1950s his name never appeared on any film credits. Because of this it is difficult to say how many movies he had a hand in financing.

In appearance and style, Todd resembled a Hollywood version of Napoleon—small but commanding and sometimes tyrannical. "Squat, muscular, intensely dynamic,

Mike Todd was the very pattern of the modern major moviemaker—voluble, cunning, full of huckster shrewdness, slippery as a silverfish, and yet undeniably magnetic," wrote S.J. Perelman in the *New Yorker* in 1972. Biographer Alexander Walker described him as "a restless, stocky man with deep-set eyes and a chin that seemed permanently thrust forward, as if its owner were asking himself, 'Is the world ready to face me?'"

The advent of television as a commercial medium sent shock waves through Hollywood in the early 1950s. Todd was one of the first in the movie business to recognize that films needed to be more panoramic to compete. In 1951, Todd partnered with radio commentator Lowell Thomas to form Thomas-Todd Productions to explore the suitability of various wide-screen techniques. Within weeks, Todd zeroed in on the work of French inventor Henri Chretien. In the 1920s, Chretien had adapted the conflux lenses, first used in World War I submarine periscopes, to provide an 180-degree movie image. Todd convinced Twentieth Century Fox president Spyros Skouras to buy manufacturing rights to Chretien's process, which the Frenchman called Cinemascope.

In 1952, Todd joined with Skouras and other partners to form the Cinerama Corporation. The company contracted optics manufacturer Bausch and Lomb to produce a better lens to minimize distortion in Chretien's film process. Todd also decided that a wider film stock was needed to produce Cinerama. He invented a 70-millimeter film in which 65 millimeters were used to hold the elongated Cinerama picture and the remaining five millimeters were reserved for five synchronized sound tracks. Picture and sound could be integrated and projected from a single 70-millimeter projector. With a characteristic lack of humility, Todd named his invention "Todd-AO," with "AO" standing for "all-in-one" synchronized sound and image projection.

Todd enlisted Thomas as narrator and produced a semi-documentary film called *This is Cinerama* to introduce audiences to the new technique. With his son, Michael Todd Jr., Todd supervised the European sequences in the film. The first widely released Cinemascope movie using Todd-AO 70-millimeter film was *The Robe* in 1953. A Biblical epic about the followers of Jesus, the film garnered an Academy Award for Chretien. Todd was not credited for any contribution to the film.

In years to come, other studios would follow with wide-screen innovations, but Todd's was the first, most elegant and most successful method. Among industry insiders, Todd-AO was recognized as one of the saviors of the movie business. And special effects extravaganzas for decades continued to use the 70-millimeter film Todd invented.

### Conquered the World

The restless Todd quickly moved on to exploit the processes he had invented. In 1953, he sold his shares in Cinerama and formed the Magna Corporation with movie executive Joseph Schenk. The company's first project was an adaptation of the hit Broadway musical *Oklahoma*. It was a box-office smash. Interestingly, it combined all of



Todd's major life pursuits: Broadway plays, movies, and the new wide-screen techniques. But once again, Todd's name was missing from the credits.

Despite the lack of formal recognition, Todd's role in 1950s Hollywood was well known. He was an impresario with a clear vision of how to thrill the masses and a solid business plan for getting those thrills to pay off. His next project was his biggest extravaganza ever: an adaptation of the Jules Verne novel *Around the World in 80 Days*. Based on the travels of a Victorian gentleman and his wife in a hot-air balloon, it was an adventure story that could fully utilize Todd's wide-screen palette and also exploit his many connections in Hollywood. A total of 44 appearances by Hollywood stars contributed to the box-office appeal of the spectacular undertaking. Todd coined the term "cameo" to describe these brief star turns, and the cameo has been popular ever since.

For the first time, Todd's name appeared on a film. He was the producer of *Around the World in 80 Days*, and the movie was widely regarded as his baby, a sort of self-homage to his incredible showmanship. "The film is less an exercise in traditional skills than a tribute to its producer's energy," notes *Halliwel's Film Guide*. Perelman was enlisted as the screenwriter for the film, and he wrote about Todd and the project in tongue-in-cheek fashion: "This sinister dwarf who consumed nine weeks of my life has no peer in his chosen profession, which—stated very simply—is to humiliate and cheapen his fellow man, fracture one's self-esteem, convert everybody around him into lackeys, hypocrites and toadies, and thoroughly debase every relationship, no matter how casual. His enormity grows on you like some obscene fungus."

The film crew traveled around the world to shoot vista after vista. Todd frantically dispatched crews to India and Europe, spent money on huge crowd scenes, and manipulated finances and publicity. Perelman coughed up scene after scene written for the growing number of cameos, and Todd paid him on a piecework basis in cash.

Audiences got their thrills and the film won the Academy Award for best picture, but not every critic swooned. In fact, many dismissed the film as something of a giant con job, a bit of cinematic hokum and star-power overkill. "Todd wasn't above putting a few things over on the audience," noted *People* many years later. "He was salesman as much as showman, and in this flaccid film his is the only real energy."

### Liz and Mike

"Mike is the most exciting man in the world," actress Elizabeth Taylor swooned in 1957, explaining why she was marrying Todd. For Todd, it was his third and last marriage; for Taylor, the third of seven. She converted to Judaism in order to wed him.

A year earlier, Todd had tried to get MGM studios to loan him Taylor for a cameo in *Around the World in 80 Days*, offering her a limousine as pay. The studio declined. In June 1956, Taylor announced her separation from actor Michael Wilding. The next day, Todd took her to an office, sat her down, and reportedly told her: "Don't start looking

around for someone to latch on to. You are going to marry only one guy, see, and his name is me." Taylor explained later: "He didn't ask me. He told me. He was irresistible."

A high-profile, cat-and-mouse courtship ensued. He gave her three expensive rings. He treated her irreverently, but also made a public show of lavishing expensive gifts and favors on her. Though Taylor was the far bigger star, she became a part of his public act. Their wedding in February 1957 was a slapdash public spectacle that followed Taylor's "quickie divorce" from Wilding in Acapulco, Mexico. During their honeymoon, Todd hired a ballet troupe to perform privately for them. They then set off to attend openings of Todd's film, which were scheduled around the world on a staggered basis. Todd's congenital restlessness set the terms for their hectic marriage. "I might as well be married to a roulette wheel," Taylor said.

The couple soon had a daughter, Liza. "I have the picture of the year, the bride of the year, and now the baby of the year," Todd exulted. "What more could a man want?" He was laying plans to cast his wife in a spectacular new version of *Don Quixote*. But she owed MGM two more pictures on her contract. Todd, acting as his wife's new agent, negotiated a deal in which MGM agreed to release her temporarily between those films.

Todd and Taylor made plans to adopt a second child, but those plans were never fulfilled. On the evening of March 21, 1958, Mike Todd left California to fly to a dinner in New York. At the dinner, Todd was to be honored as "Showman of the Year." He wanted Taylor to come along, but she was working on an MGM film and had come down with a fever. The two-engine plane was Todd's own Lockheed Lodestar, nicknamed "The Lucky Liz." Over the Zuni Mountains of New Mexico, the Lucky Liz encountered a bad storm. At 2 a.m., the pilot radioed a control tower for permission to climb from 11,000 feet to 13,000 feet to get ice off the wings. That was the last radio communication received from the plane. Its wreckage was found scattered over half a mile across a high valley in the Zuni Mountains. It was a tragic end to the life of one of the era's greatest showmen.

### Books

- Halliwel, Leslie, *Halliwel's Film Guide*, HarperCollins, 1991.
- Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.
- Smith, John M. and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.
- Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

### Periodicals

- Cosmopolitan*, January 1991.
- New Yorker*, March 21, 1994.
- People Weekly*, January 30, 1984.

### Online

- <http://www.cineramaadventure.com/pioneers.htm>
- "Film 100," <http://www.film100.com> □

## Gregg Toland

**Hollywood cinematographer Gregg Toland (1904-1948) was the man who gave *Citizen Kane* its haunting, distinctive look. Toland's pioneering work in deep-focus photography brought a new level of realism to movies, giving sharp detail to all the characters in a scene.**

In the 1930s and 1940s, Toland was recognized as Hollywood's most inventive and creative cinematographer. His innovations in soundproofing cameras, lighting and focusing set a high technical standard for generations of filmmakers. His brilliant compositions contributed heavily to making *Citizen Kane* the top film of all time on most movie critics' lists.

### Quick Rise in Hollywood

Toland was born in Charleston, Illinois, in the prairie lands of southern Illinois. From a young age, he was captivated with the emerging American film industry. He moved to Hollywood as a teenager after studying electrical engineering and working with crude cameras as a hobby. At age 15, Toland landed a job as an office boy with Fox Studios. Within a year, he became an assistant cameraman, working on two-reel comedies for director Al St. John.

In the mid-1920s, Toland worked as second cameraman to cinematographer Arthur Edelson on several films. The first was *The Bat* in 1926, one of the earliest American films to use a few instances of deep-focus photography. Most films of the day used shallow focus, in which only one character or part of the screen is in focus and the rest of the scene is blurred. Deep-focus photography puts the foreground, background and middle ground all in focus, but it was a difficult feat to achieve with the crude cameras of the 1920s.

Also in 1926, Toland was signed by Samuel Goldwyn Studios to become an assistant cameraman to cinematographer George Barnes. Barnes was impressed with Toland's speedy, sure-handed work and grasp of advanced photographic techniques. Toland was fortunate to be working for Goldwyn, who gave him an unusual amount of freedom. It was rare in those days for film credits to be given out liberally, but Barnes had no trouble convincing Goldwyn to give Toland equal billing as co-cinematographer on *The Trespasser* in 1929 and on eight subsequent productions.

Toland's skills as an innovator were badly needed. Movie cameras of the day whirled and clicked. That was not a problem for silent films, but in 1928, with the advent of sound pictures, Toland invented a soundproof housing for cameras, a blimp-like device that enabled directors to shoot close-ups of whispering lovers without camera noise interfering.

In 1929, Toland and Barnes collaborated on *Bulldog Drummond*, another film in which several scenes used a crude form of deep-focus photography. Toland and Barnes used the technique in several other movies, despite the



clumsy film stock and lighting available at the time, which made deep-focus shots extremely difficult. The deep-focus scenes excited critics, but it would be years before technology allowed Toland to perfect the method.

At age 27, Toland became the youngest first-unit cameraman in Hollywood history, getting solo credit for the first time on *Palmy Days*, a 1931 musical starring Eddie Cantor. A year earlier, he and Barnes had shot the Cantor musical *Whoopie*, using two-strip Technicolor. Toland's prestige was rapidly growing. Goldwyn gave him his own camera crew and his choice of subjects.

### Innovations and Oscar Nods

The young cinematographer was such a hot property that Goldwyn had to loan him out to other studios from time to time. He was loaned out to work on *Tugboat Annie* in 1933, *Forsaking All Others* in 1934 and *Mad Love*, a film that featured Toland's first use of the kind of innovative lighting and interiors that would make *Citizen Kane* a landmark.

In many of his films of the 1930s, Toland dabbled with experimental techniques, borrowing images from German Expressionism and other sources. His films often contained moody black-and-white scenes, but the photography was always in the service of the story line and never a distraction. For *We Live Again* (1934) and *The Wedding Night* (1935), his scenes were mostly soft and impressionistic. In a version of the classic *Les Misérables* (1935), Toland used dangerous-looking foreground objects and shadowy depths

to signify peril for the characters. He was nominated for an Academy Award for the film. Another Oscar nomination came in 1937 for the film *Dead End*, in which Toland transformed a back lot at the Goldwyn studios into a gloomy Manhattan neighborhood. Toland was again Oscar-nominated for 1939's *Intermezzo*. By the end of the 1930s, Toland had credits for almost 50 movies.

In 1939, Toland worked as cinematographer on the classic adaptation of Emily Brontë's masterpiece, *Wuthering Heights*. He won an Oscar for the compelling scenes he shot in a variety of settings: claustrophobic, menacing interiors in the mansion; romantic escapades in fields of flowers; a chaotic snowstorm; ghostly images and nightmarish flashbacks. The depth of Toland's concepts and his increasing mastery of complex scenes are evident in this brooding, stunningly photographed film.

Improvements in lenses, faster films and better cameras and Toland's technical and artistic superiority enabled him to produce sharper, more precise images than anyone else at the time. In 1940, his breathtaking shots of Dust Bowl America and a family struggling to survive took John Ford's *The Grapes of Wrath* into mythic territory. That same year, he shot Ford's *The Long Voyage Home*, getting another Oscar nomination for the downbeat story of merchant seamen at the beginning of World War II. Toland told Ford he thought audiences needed to see the story the way they would see with their own eyes—with sharply delineated, deep images rather than the soft, shallow focus often used in cinema. The film was the most accomplished use of deep-focus photography to date. Instead of lighting from rafters on sets that had no ceilings, as had been the custom up until then, Toland had muslin ceilings constructed, enabling sound mikes to be placed above them, and lit most of the interior scenes from the floor to heighten the realism.

### The Wonder Boys

The expressionistic innovations in *The Long Voyage Home* did not hook audiences, but they thrilled critics and photography buffs. Toland was giving cinema a new, more realistic yet at the same time more artistic look. In *American Cinematographer* in February 1941, Toland wrote of his desire to further exploit "the new technical and artistic possibilities offered by such developments as coated lenses, super-fast films and the use of lower-proportioned and partially ceiled [ceilinged] sets." He wrote that he wished that "instead of using them conservatively for a scene here or there" he "could experiment free-handedly with them throughout an entire production." He was soon to get his wish.

Creatively, Toland had been chafing at the bit for years, using innovations judiciously but never being let loose. He had to subordinate his wishes to directors. "I want to work with someone who's never made a movie," Toland said at the time. "That's the only way to learn anything—from someone who doesn't know anything." To that end, Toland courted 23-year-old Orson Welles, a prodigy who had worked at RKO radio and was eager to try his hand at filmmaking. Welles was set to write, direct and star in his first film, an epic about a fictional newspaper magnate who

resembled William Randolph Hearst. It was a match made in movie heaven—an experienced cinematographer hungry for new challenges and a daring young auteur.

Welles persuaded RKO to let him use Toland and his entire camera crew and equipment, borrowing them from Goldwyn. In shooting *Kane*, Toland had free rein to use deep-focus photography, ceilinged sets, low-angle lighting, high-powered arc lamps, coated lenses and all the other tools he had developed throughout his career. Toland used a new lightweight, flexible camera with its own anti-noise device, enabling him to meet Welles's demands for fluidity and unusual perspectives. He used a 24-millimeter lens (rather than the more common longer lenses) and the fastest film available to allow a greater depth of field. Toland's masterful camera techniques allowed Welles to mount long, continuous scenes and minimize editing—a method eagerly imitated by directors for decades to come. Toland used split-focus lenses, double exposures, and other startling techniques, mixing old and new methods.

The result was something entirely new to cinema. For the first time, audiences could see sharply detailed characters and objects in all parts of the screen in nearly every scene. The depth of scenes seemed more imposing. In one famous shot, Welles as Kane is looming in the foreground of a long dinner table with his listless wife at the other end, in the background, but both characters are finely delineated.

Toland's contributions to what is widely acknowledged as the greatest film in American cinema were crucial ones. The fast-working, dynamic cinematographer conferred frequently with Welles, and the young director later admitted that Toland advised him on lighting effects and camera placement. Following the example set by John Ford, Welles ended up giving Toland credit as co-director for *Citizen Kane*.

Audiences at the time were not universally charmed. Many walked out of the picture, upset by wide-angle-lens distortions in some close-ups and other experimental techniques. Even some cinematographers criticized the movie for using outdated camera tricks. After being named Best Picture by the New York Film Critics, it was nominated for several Academy Awards, including Toland for cinematographer, but was booed by the Oscar audience at every opportunity and won only for best screenplay.

Despite the mixed reception for *Citizen Kane*, Toland's fame increased as more critics lauded the film. His workload remained heavy. Though only in his late 30s, he looked older than that. He was thin and pale and walked with bent shoulders. Many of his physical problems were related to alcoholism. Toland often seemed depressed, becoming animated only when talking about his work.

Toland had to leave the last weeks of shooting *Kane* to his subordinates so that he could work with director Howard Hughes on his western *The Outlaw*. Toland used deep-focus extensively again in *The Little Foxes*, where it seemed more accessible to mainstream audiences. During World War II, he served as a lieutenant in the Navy's camera department and shot a documentary, *December 7th*, for John Ford's military unit. After the war, Toland worked on *The Best Years of Our Lives*, again using deep-

focus methods. This time, the technique, used in service of a more reassuring realism, did not disturb audiences, but entranced them.

Toland branched out by working for Walt Disney, shooting the live-action sequences in *Song of the South* in 1946. He also worked that year on *The Kid from Brooklyn*. Shooting two or three films a year was still not uncommon for Toland. In 1947 and 1948, he returned to work for Goldwyn as the cinematographer for three unmemorable films, *The Bishop's Wife*, *A Song Is Born*, and *Enchantment*. At the young age of 44, he died of a heart attack in September 1948 in Hollywood.

Toland's influence continued long after his death. In just a few years, the techniques that seemed so startling in *Citizen Kane* were being adapted and imitated by cinematographers worldwide. Toland's innovations contributed greatly to modern filmmaking as well as to television. The kind of photography that modern audiences take for granted was shaped by Toland's craftsmanship and imagination.

### Books

Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.

Smith, John M. and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.

Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.

### Online

<http://www.cineramaadventure.com/pioneers.htm>

"Film 100," <http://www.film100.com>

"Gregg Toland—Sharp Practice," *The Innovators, Sight and Sound* <http://www.bfi.org.uk/sightandsound/archive/innovators/toland.html> □

## Tomas de Torquemada

**Tomas de Torquemada (1420-1498) served as the Grand Inquisitor in Spain's zealous movement to restore Christianity among its populace in the late fifteenth century. Known for an extreme devotion to his cause and loyalty to his patrons, King Ferdinand and Queen Isabella, Torquemada headed an organization of ecclesiastical courts which imprisoned, tortured, and burned suspected nonbelievers at the stake. It is estimated that at least 2,000 died in Spain during his tenure.**

**T**orquemada was born in 1420 in Valladolid, Spain. He was the nephew of a celebrated theologian and cardinal, Juan de Torquemada, who himself was a descendant of a *converso*. This was the term that designated a Spaniard who had converted to Christianity from Islam or Judaism. In the eighth century, Moors invaded Spain. This powerful group of North African nomadic peoples had originally come from Mauritania. Recent converts to Islam, they



conquered the southern half of Spain and established the Umayyad emirate there. Over the next few centuries Moorish Spain thrived, and great mosques were built; religious tolerance, however, was also the order of the day, and Spain's Christians, Jews, and Muslims coexisted peacefully, however tenuous the arrangement. Even the most famous folk hero from this era, El Cid, was a Christian who entered into the service of a Muslim ruler in the late eleventh century. By the 1200s, however, the Moors were losing much territory to hostile Christian armies from the northern half of Spain, and soon the Moorish strongholds of Toledo and Cordoba began to surrender.

Religious tolerance began to ebb in the newly Christian Spanish kingdoms. Laws against Jews were enacted in several towns and cities. They were compelled to wear a special symbol or were restricted in business matters. They could not work as grocers or butchers, for example, and could not hire a Christian to work for them; in other cases, heavy fines were levied on Jews who did not appear on the religious feast day of Corpus Christi to pay respect to the annual procession. Many Muslims and Jews began to convert, finding it more socially, politically and economically expedient to join the Christian fold. An ancestor of Torquemada's did so in the 1300s. In 1391 unruly summer mobs rioted against wealthy Jews in the kingdom of Castile and forcibly baptized them. The unrest spread to Seville, Cordoba, Valencia and Barcelona. Many of those who refused to convert were slain.

### An Era of Religious Intolerance

New tensions arose, however, for Christians came to regard the conversos with distrust. It was rumored that many conversos practiced their true faith in private or took part in secret and blasphemous ceremonies that mocked the Christian mass. But Christianity itself was far from an orderly, organized religion in Spain at the time. Priests complained that most believers were alarmingly ignorant about the very origins of the faith, its tenets, and the sacraments; many thought that some sort of magic was involved in the liturgy. Such was the situation when Torquemada took his religious vows as a Dominican monk in the mid-1400s.

Torquemada served as the prior of the Monastery of Santa Cruz at Segovia for 22 years. His more public career, however, would be closely linked to Spain's Queen Isabella I. Her marriage to Ferdinand, scion of a long line of anti-Moorish Spanish rulers of Castile and Leon, made her one of the most powerful women in the world in her day. She came to know Torquemada when he was prior of the Monastery of Santa Cruz and she was living in Segovia. She requested that he become her confessor, or personal priest, and when she assumed the throne in 1474, Torquemada rose to a position of great influence at her court and became confessor to Ferdinand as well. She offered the monk grander ecclesiastical titles for his service as an adviser to them, which he declined. Torquemada was already well-known for his fanaticism: he had been the first to introduce a statute of *limpieza sangre*, or "pure blood," into a Dominican house, and had supervised a book burning of works considered heretical at a monastery in Salamanca.

### The Role Accorded the Dominicans

The term "Inquisition" had been used as early as 1233 to designate a new type of ecclesiastical court that could determine heresy among Christian ranks and bring the accused back to the fold; the court also held the power to punish suspected nonbelievers if they refused to confess and repent. The Dominican order to which Torquemada belonged was granted special powers by Rome and came to be the leaders of inquisitions at a local level, first in Germany, then in parts of France and Italy. The initial inquisitions in these places were decidedly unpopular and unsuccessful, and in some cases the inquisitors themselves were killed.

Ferdinand and Isabella, deciding that a wholesale separation of Christians from non-Christians was the solution to Spain's unrest, asked Pope Sixtus IV to establish an Inquisition in Spain in 1478. The first attempts were disorganized and encountered much resistance. Ferdinand and Isabella again asked Rome to intervene. They were then allowed to establish seven Inquisition courts across Spain in February of 1482. Torquemada became head of one of the tribunals, having met the stipulations of the post: the inquisitors had to be at least forty years old, possess a flawless reputation, and be well-versed in theology or canonical law.

### A Medieval Holocaust

The Inquisition launched a reign of terror in Spain. People could be summoned from their homes and taken to a secret place for questioning simply on the basis of an anony-

mous denunciation made to the Inquisition authorities. The accused were kept in darkness so they could not see their accusers or judges, and testimony that would normally be discounted in a court of law—from thieves, the excommunicated, or criminals—was acceptable. The accused was not allowed to have a lawyer or legal clerk to help him with his case, since they, too, would be viewed as accomplices to heresy by the court. They were also compelled to swear an oath of truth before taking the stand, and a refusal to utter the oath was automatic grounds for imprisonment. The *auto-da-fe*, or a mass public bonfire of nonbelievers, began to occur with alarming frequency.

In 1483 Torquemada became Grand Inquisitor of Castile, and on October 17, 1483, Ferdinand appointed him chief inquisitor of Aragon. He convened a general assembly of the other inquisitors in 1484 in Seville, and gave them an outline with 28 points to conduct their inquiries. In 1488 he was named head of the Consejo de la Suprema y General Inquisicion, which gave him virtual papal powers over a large part of Spain. Nothing could take place without his approval, including a prison term, an excommunication order, or an *auto-de-fe*; he also controlled the priests and bishops, and even went after some of them as heretics as well. Opposition remained strong in many places; in some cities, Jewish or converso families had risen to prominence in politics and finance and spoke out against the Inquisition's methods, which included heinous, though bloodless according to Church law, forms of torture. Jews, however, were immune from prosecution by the Inquisition, since it was an ecclesiastical court charged with determining heresy within its own ranks.

### Abuse of Power

The terror and officially sanctioned lawlessness of the Inquisition was the result of its violation of several human rights tenets. The prosecutor and judge were the same person, which compelled him to make his charges stick to the defendant at all costs. Secondly, all suspects were presumed guilty, and Torquemada instructed his judges that a person might outwardly be very devout, but in his or her heart could be a nonbeliever; it was the judge's role to ask a series of questions on theological topics to determine his true belief. If the defendant still professed his innocence—his belief in Christianity as dictated by the Church, that is—he could be imprisoned for an unspecified length of time. Those who survived, confessed, and were set free were forced to wear a *sanbenito*, or special penitential garment with a large "X" on it. Those convicted and excommunicated could appeal to the Holy See in Rome, but Torquemada had jurisdiction over all appeals as well. The property of those condemned was seized by the inquisitors for the state, and in other cases bribes were paid for release.

Torquemada's role as Grand Inquisitor allowed him to ruthlessly implement these policies across the entire Iberian peninsula. Scholars estimate that under Torquemada's watch, 2,000 to 8,800 Spaniards were burned at the stake. His powers sometimes invoked the wrath of Rome, but he was closely allied with Ferdinand and Isabella, who were

determined to eradicate Spain's religious problems-by ridding the kingdoms of non-Christians entirely. A large number of those summoned before the Inquisition courts were conversos; in Catalonia, 1,199 were tried between 1488 and 1505, and 1,191 of them were conversos. Some Jews settled old scores, lying about conversos who had treated them with disdain, and accused the new Christians of practicing Jewish customs in secret.

### Spain's Jews Expelled

The dilemma led many to suggest that Spain's Jews should be expelled en masse, and Torquemada convinced Ferdinand to enact a decree that would ban Judaism from Spain entirely in 1492. A coalition of powerful Jewish families offered the king 30,000 ducats in return for rescinding the expulsion decree, and Ferdinand contemplated accepting their offer. Reportedly Torquemada appeared before his patron with a crucifix, said, "Judas Iscariot sold Christ for 30 pieces of silver; Your Highness is about to sell him for 30,000 ducats. Here He is; take Him and sell Him," and with those words laid the cross on the table. Ferdinand submitted, and some 80,000 Jews were forced into exile. That same year, Spanish royal forces had seized that last stronghold of Moorish Spain at Granada, making the country, at least outwardly, a homogenous Christian nation.

The Inquisition still continued, however. Torquemada served as Grand Inquisitor until his death on September 16, 1498, in the city of Avila. Diego de Deza succeeded him and the Inquisition was carried on, in varying degrees of harshness, for the next 300 years. After the rise of Protestantism in the late 1500s across many other parts of Europe, and the subsequent pyrrhic religious wars this engendered, the Inquisition courts in Spain were used to root out anti-Catholic sentiments. It spread to Spanish colonies in Central and South America as well. It was abolished by a Revolution of 1820, but only in 1869 was a law guaranteeing religious liberty for all enacted in Spain.

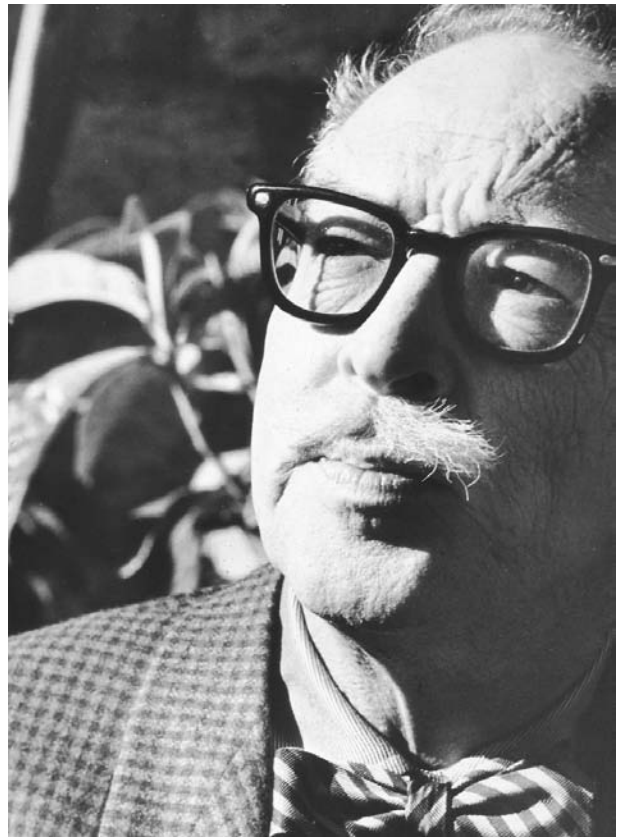
### Books

Kamen, Henry, *The Spanish Inquisition: A Historical Revision*, Yale University Press, 1998.

O'Brien, John A., *The Inquisition*, Macmillan, 1973. □

## Dalton Trumbo

**Though he experienced success as a novelist and a screenwriter, Dalton Trumbo (1905-1976) is best known as a member of a group he would have preferred never existed-the "Hollywood Ten." After refusing to cooperate during the House Committee on Un-American Activities hearings in the late 1940s, Trumbo and nine other screenwriters and directors were sent to jail and later blacklisted in Hollywood.**



**D**alton Trumbo was born in Montrose, Colorado on December 5, 1905. His family moved to Grand Junction, Colorado when he was seven years old. As a boy, Trumbo was indifferent to all sports, and had no interest riding horses, a popular past time in his home state. His passions, reading and writing, were considered more intellectual. During his high school years, he secured a job as a cub reporter for the *Grand Junction Sentinel*, and covered everything from school and athletic news, to crime and obituaries.

### Depression Years

Trumbo went on to study at the University of Colorado (1924-25) where he wrote for the school newspaper as well as the *Boulder Daily Camera*. During Trumbo's freshman year, his father lost his job and the family moved to Los Angeles. Realizing there would be no money coming for his education, Trumbo decided to join the family in California. Soon after, his father died.

Despite the tragedy and the family's poverty, Trumbo announced his plan to study at the University of Southern California. But since he needed money for college as well as the family, he took a job at a bakery in downtown Los Angeles. Although he did not plan to work there long, he stayed on at the bakery from 1925 until 1932, by which time he was beginning to establish himself as a writer. He also attended USC during those years.

In the early years of the Great Depression, continual poverty forced Trumbo to embark upon a brief criminal

career. He was involved with check kiting and bootlegging for a short time. Writing was what he had wanted to do. While still working at the bakery (and doing some illegal activity) he wrote a piece about bootlegging, which was accepted by *Vanity Fair*.

When Trumbo quit the bakery, he went to work as the associate editor of *The Hollywood Spectator*, for which he was already a contributor. Trumbo's first article for *The Film Spectator* was titled "An Appeal to George Jean," a rebuttal of a *Vanity Fair* piece about the showiness and wealth of Hollywood, written by George Jean Nathan. Eventually Trumbo was promoted to managing editor of *The Hollywood Spectator*, but quit when his irregular pay became nearly nonexistent. The magazine folded soon after.

Trumbo's first published short story, "The Wolcott Case," appeared in *International Detective Magazine* in 1933. He then worked as a ghostwriter on a biography of Metternich-Metternich in *Love and War*—that was published in England. By 1934, he was sketching out an outline for a novel, set in Colorado. That novel, published in 1935, became *Eclipse*, the Depression-era story of a young businessman who loses everything, eventually his life. It was also Trumbo's first published attack on the capitalist system.

### Became a Screenwriter

In 1934, while working on the novel, Trumbo was hired as a reader in the Warner Brothers story department. In October of 1935, he became a Warner Brothers screenwriter—something he only expected to tide him over until he had established himself as a novelist. Trumbo, of course, would rise from the Warner's B-picture unit to become one of Hollywood's most successful screenwriters, with more than fifty screenplays and adapted stories to his credit.

With the 1936 release of *Road Gang*, Trumbo was on his way as a screenwriter. That same year he also wrote the screenplay for *Love Begins at 20*. In 1936, the busy Trumbo also published a satirical novel, *Washington Jitters*. The novel was nearly adapted into a play. Eventually it did run on Broadway, but lasted only 24 performances. Later in 1936, Trumbo got his first taste of politics Hollywood style when he was forced to leave Warner Brothers for Columbia Pictures.

### First Blacklist

Trumbo had joined the Screen Writers Guild as soon as he was eligible. The Guild had been the bargaining agent for screenwriters, but its president, John Howard Lawson (later another member of the Hollywood Ten), was perceived as using it for political purposes. An opposing union, the Screen Playwrights, was formed which the studios quickly embraced. When Warner Brothers tried to force Trumbo to resign from the guild and join the new, company union, he refused and his contract was voided. Later the Screen Writers Guild, which had lost approximately 80 percent of its membership, affiliated with the Authors Guild of America.

Trumbo found that he was now blacklisted, though it lasted for only about six months. In the end, he signed with Columbia, where he co-wrote the story for *Tugboat Princess* (1936), and wrote the screenplay for *The Devil's Playground*

in 1937. Columbia also attempted to team up Trumbo with William Saroyan. Their collaboration proved less than fruitful, but the two became friends.

Trumbo's next stop was with Metro-Goldwyn-Mayer (MGM) where he worked for two years but produced nothing. The reason being that during that time he was obsessed with a carhop at a local drive-in, Cleo Fincher. Soon after meeting her, Trumbo began their courtship, which culminated in their marriage.

Although he had lost his job at MGM, Trumbo did manage to sell a story to Warners that became 1939's *The Kid from Kokomo*. He then hooked on with RKO for whom he wrote more B-pictures. At this time Trumbo had a new novel in the works. It was a manuscript that he worked on as Europe edged closer to war, and it would become Trumbo's definitive statement on the subject.

*Johnny Got His Gun* is one of the great antiwar novels of world literature. Ironically the novel, about a severely wounded war veteran—he has lost his limbs and his face—was published in 1939, two days after the World War II began. The book was awarded the American Booksellers Award.

The award and his numerous screenplays helped Trumbo move up the Hollywood ladder, but the turning point in his Hollywood career came when RKO assigned him to work on *Kitty Foyle* in 1940. He'd already written eight B-pictures for the studio, and the success of this film would make or break him. Trumbo had enough confidence in his talent to agree to work on *Kitty Foyle*. His condition was that RKO would cancel his contract. They did and he worked on the movie.

The upshot was that Trumbo received an Academy Award nomination and was more sought after than ever before. Unfortunately he followed this up by agreeing to write a novel for Paramount, which the studio would then produce. The result, *The Remarkable Andrew*, has been considered by many, including Trumbo himself, to be the worst thing he ever wrote.

In 1943 Trumbo joined the Communist Party. He had more or less been a fellow traveler for years and saw no reason not to join. As he explained to Bruce Cook in *Dalton Trumbo*: "Some of my best friends were Communists. And no one pressed me to join. There was really no reason to. I came to trust them, to like them. And when the war came, I worked with the Communists during the war—Communists and others—until it seemed to me that I was traveling under false colors. I hope this doesn't sound as some might interpret it, but the growing reaction against communism—and in Hollywood the formation of the Motion Picture Alliance for the Preservation of American Ideals—convinced me that there was going to be trouble. And I thought I wanted to be a part of it if there were."

Trumbo's political allegiance was not yet an impediment to his career. Over the next couple of years he wrote the screenplays for such films as *A Guy Named Joe* (1943), *Thirty Seconds over Tokyo* (1944), and *Our Vines Have Tender Grapes* (1945), as well as various stories that became screenplays. It wasn't until after the war that the bottom dropped out of Trumbo's career.

## The Hollywood Ten

The hearings of the House Committee of Un-American Activities (HUAC), began with Alger Hiss, a U.S. government official accused of being a communist. It gained even more notoriety through its attempt to politically "clean up" Hollywood. In October of 1947, Trumbo was called to testify before the Committee. He proved to be an unfriendly and hostile witness of the HUAC. Along with nine other screenwriters and directors—"the Hollywood Ten"—Trumbo was sentenced to federal prison for contempt. Ironically, Trumbo resigned from the Communist Party in 1948 (his own problems were overwhelming his activities), though he continued to support them whenever he could.

The activities of the Hollywood Ten consumed Trumbo's energy over the next couple of years, but in the end he went to prison. Trumbo served time in the Federal Correctional Institute in Ashland, Kentucky from June 1950 to April 1951. Upon his release, he found he was on the new Hollywood blacklist. He sold his California home and moved to Mexico, where he and other blacklist members formed a small, tight-knit community.

The only way he could get work—which now paid a good deal less than he had been earning—was through pseudonyms or by having others act as a front for him. Many times, he simply was not credited as a film's screenwriter. Under these conditions, Trumbo produced some of his best work at far lower wages. Trumbo at this time also earned extra money writing for women's magazines using his wife's name.

## Blacklist and Awards

In 1953, he wrote the story for *Roman Holiday*. It was fronted by his friend, screenwriter Ian McClellan Hunter, who was himself later blacklisted. The film won many Academy Awards, including best screenplay. However, it would be many years until he was formally acknowledged as the writer of this film.

Trumbo's blacklist work included the screenplays for *Carnival Story* (1954) and *The Court-Martial of Billy Mitchell* (1955). In 1956, using the pseudonym of Robert Rich, he wrote the story and screenplay for *The Brave One*, for which he won another Academy Award. Trumbo worked on seven more films before he wrote the screenplay for *Spartacus* (1960). With this film, his name was finally listed in the credits, at the insistence of producer and star Kirk Douglas, thus ending the blacklist.

Trumbo's next project was *Exodus* (1960). He also wrote the screenplays for *The Sandpiper* (1965), *Hawaii* (1966), *The Fixer* (1968), *Johnny Got His Gun* (1971), *Papillon* and *Executive Action* (both 1973). He directed *Johnny Got His Gun* and appeared in *Papillon*.

As a writer, Trumbo published *Chronicle of a Literal Man* in 1941, the play *The Biggest Thief in Town* in 1949, and the posthumous *Night of the Aurochs* in 1979. His nonfiction work included *Harry Bridges*, published in 1941, *Time of the Toad*, 1949, and *The Devil in the Book*, 1956. In 1970, *Additional Dialogue: Letters of Dalton Trumbo, 1942-62*, edited by Helen Manfull, was published.

In 1970, Trumbo gave a speech to the Screen Writers Guild. As noted on the *Spartacus Internet Encyclopedia*, website, Trumbo reflected, "The blacklist was a time of evil. Caught in a situation that had passed beyond the control of mere individuals, each person reacted as his nature, his needs, his convictions, and his particular circumstances compelled him to."

A few years later, in 1975, another barrier was broken. It was long after the time of the blacklist, and Hollywood was making up for its past injustices by acknowledging the uncredited writers and directors. In a formal ceremony, Trumbo received his 1956 Academy Award for best screenplay.

Trumbo died of a heart attack on September 10, 1976, in Los Angeles. In 1992, his widow accepted a posthumous award from the Writer's Guild of America for *Roman Holiday*.

## Books

*Additional Dialogue: Letters of Dalton Trumbo, 1942-1962*, edited by Helen Manfull, M. Evans and Company, 1970.  
Cook, Bruce, *Dalton Trumbo*, Charles Scribner's Sons, 1977.  
Navasky, Victor S. *Naming Names*, The Viking Press, 1980.

## Periodicals

*Los Angeles Times*, March 25, 1992.  
*Time*, May 24, 1993.

## Online

"Dalton Trumbo," *Books and Writers website*, <http://www.kirjasto.sci.fi/trumbo.htm> (March 11, 2001).  
"Dalton Trumbo," *The Internet Movie Database (IMDb)*, <http://www.imdb.com> (March 25, 2001).  
"Dalton Trumbo," *Spartacus Internet Encyclopedia*, <http://www.spartacus.schoolnet.co.uk/USATrumbo.htm> (December 11, 2000).  
"Dalton Trumbo," *Suite101.com website*, [http://www.suite101.com/article.cfm/directors\\_corner/25828](http://www.suite101.com/article.cfm/directors_corner/25828) (March 11, 2001).  
□

# Jethro Tull

**Jethro Tull (1674-1741) experimented with new farming techniques and invented mechanical agricultural equipment. He demonstrated on his farm near Hungerford, England, that planting seeds in rows and tilling and hoeing increased production and profits. Hull wrote two editions of *The Horse-Hoeing Husbandry*, which spread his ideas to other farmers and contributed greatly to the Agricultural Revolution.**

Tull was born to Jethro and Dorothy Tull, in Basildon, Berkshire, England, and baptized there on March 30, 1674. He grew up on a country estate. At the age of 17, he went to Oxford to study at St. John's College, but he



left before graduating. While a student in London, Tull became a musician. He learned how to play the organ and understood how it operated mechanically—knowledge he would later apply to his seed-drill invention. In 1693 he became a law student at Gray's Inn and also studied for two years at Staple Inn. Tull qualified as a barrister in 1699, although he never practiced law. He had hoped to use his understanding of the legal system in government service, but ill health changed the course of his professional life.

The year 1699 was an eventful one for Tull. Besides becoming a barrister, he made an unusually brief tour of the Continent (Europe) and married Sussanah Smith of Burton-Dasset, Warwickshire. A tour of the Continent was a requisite part of a wealthy young man's education at the time, most lasting around two years. Tull's tour was probably only four months long, yet it gave him a glimpse of agricultural practices outside England. After their marriage, Tull and his wife settled on his paternal farm. They had one son and four daughters. Their son, John, pursued financial speculation as an adult and was incarcerated at Fleet Prison for debt. He died without heirs.

Why Tull took up farming is uncertain. It may have been because he had inherited the family farm, because he had financial problems, or because of his ill health (he had a tubercular condition). What is certain is that it was not by choice. Yet, he made the best of his lot and became one of the originators of modern methods of farming. "In short, the whole concept of thorough tillage, row cropping, and keeping the soil surface as bare as possible emerged from the brain of Jethro Tull," summed up Bob Rodale in "The Regenerative Concept."

### Influence on Agricultural Revolution

Around the time of Tull's birth, hunger was a persistent problem throughout Great Britain, so farmers began growing more crops and experimenting with manure and fertilizers to increase production and profits. These experiments, however, had to have been hindered by the open field system of landownership, which forced cooperation and adherence to traditional methods. For a thousand years, arable lands in England had been laid out in fields around villages. Each landowner had narrow, long strips of land for planting that covered both the best and worst ground. Farmers agreed which strips were in production, which were fallow, and shared in the plowing. The Enclosure Movement plotted the common fields into privately held "enclosed" fields. Enclosure landowners received a piece of property in proportion to the amount they owned under the open field system. The larger fields enabled farmers to experiment with new, efficient methods and enticed the aristocracy to exploit estates with agricultural enterprises in the early years of the eighteenth century. Between 1700 and 1845, 6 million acres of English fields were enclosed as farm mechanization increased.

When Tull began farming in 1700, he, too, was interested in improving production. But scientific knowledge of plant physiology was limited. Tull and his contemporaries believed that matter was composed of four elements—earth, air, fire, and water—and Tull extrapolated that plants

assimilated nutrients by combining the elements. According to the "Washington's Five Farms" web site, "Jethro Tull . . . believed that plants had tiny mouths on their roots which ate the foods in the soil." He thought plants absorbed and digested fine particles of earth, then discharged waste into the atmosphere. He called roots the stomach and intestines of plants; their leaves were lungs, and sap was blood. He did not think water formed any part of the food for plants.

Tull had seen firsthand the importance of cultivation when he had visited the vineyards of France and Italy. The loosened soil permitted air and moisture to reach the roots of growing plants. Apparently, "Tull thought that perhaps loose soil fit better in the plants' 'mouths,'" speculated a writer for the "Washington's Five Farms" web site. Manures, Tull thought, helped feed plants because they assisted with the breakdown of earth particles. But he also thought manures affected the taste and composition of food and promoted weed growth. He advocated instead pulverizing the soil, planting with drills, and thorough tilling during the growing period to promote production.

Of necessity, Tull invented a seed-drill, four-coulter plow (one with four discs or knifelike projections), and horse-hoe to carry out his theories. The standard practice of the time was to broadcast (simply throw or spread) crop seeds and watch them sprout and grow along with weeds. Tull had the idea less seed would be needed and production would increase if crops were sown in rows that could be weeded. He hired workers to make furrows into which to sow and cover seeds, but they balked at trying a new sowing method. So Tull decided to build a machine to sow seeds as he wanted.

Farmers from Babylon to China had used seeding devices for thousands of years. A setting-board with regularly spaced holes was devised in 1601. Planters used a dibble to make uniform holes in the soil to accept the seeds. In the late sixteenth century, Italian Taddeo Cavalini invented a mechanical seed-drill that he claimed could sow twice the area, using half the seed, and yield one-third more. Several Scots patented seed-drills in the early 1600s, but none were successful. John Worlidge, an Englishman, designed a seed-drill and illustrated it in his 1699 book *Systema Agriculture*. Tull would admit at a later date that he was familiar with this work.

The seed-drill Tull invented in 1701 has been called the first or earliest agricultural machine because it had internal moving parts. Its rotary mechanism was the foundation of all subsequent sowing implements. Tull's knowledge of the workings of the organ helped him with the machine's design, which he documented for prospective makers with a written description and five sketches. It is doubtful, however, he had the skills to actually build it. G. E. Fussell remarked in *Jethro Tull: His Influence on Mechanized Agriculture* that it is thought Tull's "drills were made by an ingenious cabinet-maker of Soho Square, and it is certain that men of that trade did make drills for inventors who followed Tull's path." Tull's seed-drill planted three rows simultaneously and incorporated three previously separate actions into one: drilling, sowing, and covering the seeds. A hopper dispensed seed into a box that dropped it in a regu-

lated amount. A harrow cut the drill (groove in the soil) for receiving the seed, and a plow turned over the soil to cover the sown seed. Tull experimented with the machine at Howberry Farm, Crowmarsh, near Wallingford.

As explained in “The Agricultural Revolution” web essay, “Experiments showed Tull that crops grew better if he periodically removed the weeds and broke up the soil between the rows of plants. Tull invented a horse-drawn cultivator to do this work.” His horse-hoe or hoe-plow pulverized the soil, pulled up grass and roots, and left them to dry on the surface. He also invented a 4-coultered plow that made vertical cuts in the soil before the plowshare. By using his implements, Tull was able to produce good crops for several years in succession and reduced the need for fallowing. In an experiment at Prosperous Farm, he released moisture from springy soil on a hill by plowing across it—a process that is now called contour plowing.

Tull’s implements, necessary for his new system of farming, divided farmers into two groups: those set in their ways and those willing to experiment. “From the very beginning there was antagonism to their use on the one hand, and great enthusiasm in their favour on the other. Tull’s own labourers had forced him to design these things,” pointed out Fussell. Other farmworkers were as reluctant as the inventor’s own laborers to use implements. One nobleman landowner shamed his plowman into using a four-coultered plow after personally demonstrating how the thing was used.

Despite resistance, use of the drill and hoeing increased steadily as machines improved. No agricultural censuses were taken in England before the 1860s and none of agricultural machinery before World War II, so it is impossible to say with certainty to what extent Tull’s machines were made and used and his farming system adopted. What is certain is that by 1866 the seed-drill was one of the most common implements on English farms.

### Influence of Writings on Agriculture

Tull’s new farming system and implements were well known and supported by eminent men of his era. In 1729 a party of noblemen met with Tull and persuaded him to write a book about his agricultural experiments and the scientific reasons for his actions. Tull had nearly 40 years of fieldwork behind him when he wrote *The New Horse-Hoeing Husbandry; or, an Essay on the Principles of Tillage and Vegetation*. First published in 1731, it was greatly expanded for the next edition, published under a slightly altered title in 1733. Later it would be translated into French, Dutch, German, and other European languages. The book contains Tull’s ideas on plant physiology and advice on plant culture. It also describes the three implements he invented.

Although *The Horse-Hoeing Husbandry* books generated imitators, disciples, and other books based on Tull’s practices, they also “aroused the most ferocious and unbridled criticism and were condemned in unmeasured terms as being rubbish,” declared Fussell. Those embracing the Tullian system included members of the Society of

Improvers in the Knowledge of Agriculture in Scotland. However, few landowners anywhere practiced the pure Tullian system. The Equivocal Society, which defended current agricultural practices, was one of the most adamant opponents of Tull’s system. Tull responded to the society’s criticism by demeaning their system, calling it Virgilian husbandry; he thereby brought himself more denunciation. “At a time when classical learning was the foundation of all education, [Tull] provoked criticism of a formidable cast,” observed Fussell. *Georgica*, written by Virgil, was considered the “apotheosis of agricultural wisdom” and above question.

The debate over Tull’s theories would go on for more than a century, and as late as the mid-nineteenth century treatises were being published on his principles. The influence of his ideas on farming—and production of a greater food supply when they were applied—was unmistakable. “Within 50 years [of the introduction of Tull’s new farming system] the ability of farmers to assume a position of dominance over nature had increased dramatically,” claimed Rodale. By the twentieth century, Tull’s basic principles—tilled earth, inter-row cultivation, and mechanical drilling of seeds—had been generally adopted. His system, noted Rodale, also “helped set the stage for the very serious problems [such as erosion and high energy use] that farming faces today,” but “the brilliance of his thinking, and the creative way he engineered farm equipment encouraged at least 10 generations of successive agricultural researchers to merely improve and fine-tune his method, rather than to envision a whole new and more sustainable form of agriculture.” Fussell defended the eighteenth-century agriculturalist by stating: “It was in the realm of practice, not in that of science, that Tull made his greatest contribution: his science was not learned until he had long used his practice and was limited to the state of knowledge in his day that led him into the errors which have been made a stick to beat him with by critics possessed of modern theories.”

Tull’s poor health deteriorated as the controversy over his writings and farm system wore on. He died on February 21, 1741 at Prosperous Farm. He is buried at Basildon, where a memorial to him was erected at the local church in 1961.

### Books

Fussell, G. E., *Jethro Tull: His Influence on Mechanized Agriculture*, Osprey, 1973.

### Online

“The Agricultural Revolution,” AP European History, [http://www.eurohist.com/the\\_agricultural\\_revolution.htm](http://www.eurohist.com/the_agricultural_revolution.htm) (December 8, 2000).

“Mechanical Farming,” Millennium Stamps, [http://www.royalmail.co.uk/athome/millennium\\_stamps/mc1/theme/theme35.htm](http://www.royalmail.co.uk/athome/millennium_stamps/mc1/theme/theme35.htm) (December 8, 2000).

Rodale, Bob, “The Regenerative Concept,” Rodale Institute, <http://www.rodaleinstitute.org> (December 8, 2000).

“Washington’s Five Farms: Fertilizers,” <http://www.mountvernon.org> (December 8, 2000). □



## Melvin Van Peebles

**Multi-talented and prolific, Melvin Van Peebles (born 1932) paved the way for modern African American filmmakers and rap artists. Called “the godfather of modern black cinema” because of his controversial 1970 film, *Sweet Sweetback’s Baadasssss Song*, Van Peebles also wrote novels, wrote and produced Broadway musicals and TV shows, acted for film and television, and released several spoken-word albums in which he helped invent what later became known as rap music.**

**B**orn Melvin Peebles in 1932 on the south side of Chicago, he added the “Van” later. His father was a tailor, and, starting at the age of ten, he worked in his father’s shop most of the time he wasn’t in school. He later told an interviewer that his long hours in the shop “didn’t give me a work ethic as much as it gave me a work routine. It’s just something you do; you don’t even think about it.”

After graduating from high school in Chicago in 1949, Van Peebles attended West Virginia State College, then transferred to Ohio Wesleyan University, where he graduated with a bachelor of arts degree in 1953. Van Peebles then joined the Air Force and was a flight navigator on a B-47 bomber for three years.

After leaving military service, Van Peebles briefly lived in Mexico, where his son Mario was born. He next moved to San Francisco and got a job driving cable cars. In his spare time, he did paintings and wrote short stories. On the advice of a friend, Van Peebles turned a story about driving a cable

car into a movie. Teaching himself film techniques, he made several short films: *Sunlight*, *A King*, and *A Pick Up for Herrick*. Though he had no musical training, he wrote his own soundtracks and played them on a kazoo.

Van Peebles took his films to Hollywood, hoping they would open doors, but instead he was offered jobs as an elevator operator and a dancer. His dreams dashed, Van Peebles decided to pursue a doctoral degree in astronomy, his other love. He moved to Holland and took graduate courses in astronomy while also studying at the Dutch National Theatre.

Contacted by movie lovers in France who had seen and liked his short films, he quit astronomy and moved to Paris but at first found no backers to make movies. He began doing street performances, playing his kazoo and singing and dancing for coins. Because he was unlicensed, he sometimes got arrested for begging. Eventually he became editor of a humor magazine and began writing novels. Between 1964 and 1967 he had five novels published.

With a \$70,000 grant from the French Cinema Center, he adapted his novel *La Permission* for the screen and filmed it as *The Story of a Three-Day Pass*. A saga about a romance between a black American soldier and a young white French woman, it was released in 1968 and submitted as the French entry in the San Francisco Film Festival.

### Shock Therapy for Hollywood

*The Story of a Three-Day Pass* brought Van Peebles attention in Hollywood and an opportunity to direct *Watermelon Man* for Columbia Pictures. *Watermelon Man* was the story of a white bigot who turns into a black man. It was the first time an African American had directed a mainstream Hollywood feature. The studio wanted Van Peebles to shoot alternate endings—one in which the pro-



tagonist becomes a black militant, and another in which he wakes up and discovers it was all a dream. Van Peebles intentionally “forgot” to shoot the second ending so that the first would have to be distributed.

With his salary from that film and a \$50,000 loan from Bill Cosby, Van Peebles financed an independent production that set the film industry on its ears. His often scatological, rude and unabashed *Sweet Sweetback’s Baadasssss Song* caused a sensation. Van Peebles not only wrote, produced, edited and directed the film, he composed its score and played the starring role. It was shot in 19 days in the Watts section of Los Angeles. The story of a pimp and street hustler who turns into a revolutionary leader and fights back against police brutality, the film was a favorite of Black Panther Party leader Huey Newton. Brash and vulgar, it included Van Peebles’s ten-year-old son Mario in an explicit sex scene.

*Sweetback* was given an X rating. Van Peebles fought back, making T-shirts that read “Rated X By an All-White Jury.” After theater owners deleted controversial scenes, he brought a federal lawsuit to get the film restored to its original form. The notoriety over the “X” rating only increased the film’s popularity.

Critic Laurence Kardish recalls that the film “wore its X rating like a badge of honor and swept through urban theaters like a house on fire. It proved at once there was an enormous audience for independent films, ones where blacks did something they had not done in earlier American films: fight back. *Sweetback* is the first American film with a

black protagonist who refuses to adapt to the daily humiliations of racism.”

Though slammed by many critics, the film was a big hit and led to a spate of “blaxploitation” movies, films in which Hollywood trafficked in lowbrow African American humor, sex and violence. Within two years after the release of *Sweetback*, Hollywood released dozens of such movies. Suddenly there were numerous roles for black actors, and opportunities for black producers and directors in the film industry.

“Blaxploitation would not have taken place without the huge financial success of *Sweetback*,” Van Peebles told Julie Dash for *Interview* magazine. “The formula of *Sweetback* was preempted—taken and perverted and watered down and used in a counterrevolutionary way.” Van Peebles told the web site Motorbooty: “Hollywood wanted the money but they didn’t want the political implications, so [they] took the more cartoonish elements and pushed them.”

Documentary filmmaker Saint Clair Bourn said of *Sweetback*: “He made a film in Hollywood that a lot of black people came to see, and Hollywood saw that there was an audience that they didn’t know about and used his model. They took out the politics, they took out the music, and made a bunch of films based on what he started.” The film was also notable for its topical soundtrack, which introduced the jazz-funk group Earth, Wind and Fire backing Van Peebles’s own rapping.

Van Peebles became an instant hero in the African American artistic community. Without compromising his integrity, he had made a Hollywood box office hit and opened doors. “Melvin was our living legend” in the 1970s, wrote Dash in *Interview*. “He was one of few black directors whose movies were getting released.” He inspired an entire generation of black filmmakers, including Spike Lee and John Singleton, whose movies of the 1980s and 1990s owed a debt to *Sweetback*’s gleeful barrier-smashing.

### Did It His Way

Staging benefit concerts for the Black Panthers and making his mark as an independent auteur of the stage and screen, Van Peebles defied every stereotype. While others wore Afros, he sported a ponytail. He launched a parallel career as a spoken word recording artist. In all, he created nine albums, including five solo efforts. His performances were accompanied by suites for violin or cello, free-form pieces Van Peebles often wrote himself.

Many music critics credit him with being a pioneer of rap music, starting with his groundbreaking 1968 recording *Brer Soul*. A series of rhythmic monologues about urban life, the album was a form of storytelling done to jazz-based soul music and gospel influences. “I found it necessary to invent a style,” Van Peebles explained later. “I decided to sublimate the orchestration, to minimize it so people would be forced to concentrate on the words.” In another interview, he said: “My music didn’t fall into the format of gospel or blues or spirituals, so I did another form that suited the music and story: talk-rapping, which eventually became rap.” An interviewer for Motorbooty characterizes Van

Peebles's albums as "theatrical vignettes, hysterical monologues, and lyrical soliloquies, all delivered in a gruff, tone-deaf bark that sounds like a drunken, funky uncle."

In whatever endeavor he pursued, Van Peebles always insisted on artistic control. He wrote and staged two Broadway shows, *Ain't Supposed to Die a Natural Death*, in 1971 and *Don't Play Us Cheap: A Harlem Party*, a 1972 Gospel-influenced musical. Van Peebles made *Don't Play Us Cheap* into a film in 1973, and it won first prize at the Belgian Film Festival.

### Ventured in New Directions

Throughout his career, Van Peebles experimented with many forms of expression. In the 1970s, he released the albums *As Serious As a Heart Attack* and *What the \_\_\_\_ You Mean I Can't Sing?* He helped write the script for the film *Greased Lightning*, released in 1977. In the late 1970s, Van Peebles wrote scripts for television, including the pilots *Sophisticated Gents* and *Just an Old Sweet Song*. In 1984, he wrote and produced the off-Broadway musical *The Champpeen*.

Van Peebles continued to confound expectations. In the 1980s he made a brief foray into Wall Street and then wrote a successful book about investing and stock market trading, *Bold Money*.

In 1989, with his son Mario Van Peebles, he directed, produced and co-starred in the film *Identity Crisis*. The father-son team wrote the book *No Identity Crisis* to chronicle the making of the film. Van Peebles had roles in such films as *True Identity* in 1991, *Boomerang* in 1992, *Posse* in 1993, *Terminal Velocity* in 1994, *Panther* in 1995, and *Smut* and *Time of Her Time* in 1999. *Panther* was based on a novel Van Peebles was writing about the Black Panther Party. At the urging of his son, he turned it into a screenplay, and his son directed the film. Though many critics said it overly romanticized the militant group, *American Visions* called it a "truly inspirational film that illumines a history that hasn't been taught to young people."

In 1998, Van Peebles narrated and starred in a documentary film *Melvin Van Peebles' Classified X*, about the history of images of African Americans in Hollywood films. Shot in video, it was made originally for Euro TV.

His spoken-word recording *Cruel Jim Crow (Posse Don't Play That)* was included in the soundtrack of *Posse*. In 1995, Van Peebles made a musical comeback with his first album in 20 years, *Ghetto Gothic*. Backed by chamber music, Van Peebles spun musical tales based on topical issues like spousal abuse. He also became host of National Public Radio's weekly *BlueStage* program. In 1998, he toured with a cabaret show entitled *Melvin Van Peebles' Roadkill Wid' Brer Soul*.

His collaborations with his son were notable for their uncompromising politics. In 1996, they co-created a made-for-TV movie, *Gang In Blue*, about a white supremacist police group, in which each man appeared. The film was based on real gangs of racist cops in several American cities. With his son, he produced another made-for-cable-TV

movie, *Riot*, which examined the 1992 Los Angeles riots from four different perspectives.

In 1997, Stephen King produced his own television mini-series based on his book *The Shining*, and Van Peebles played the psychic hotel cook who befriends a clairvoyant child. In 2000, Van Peebles released *Bellyful*. Written 30 years earlier, the film was financed in Europe and shot in France. It is about a white French couple who adopt a child at an orphanage, not realizing the child is of mixed racial ancestry.

Whatever the medium, Van Peebles refused to compromise. "People often say I'm brave or insightful, but I'm just ornery," he told *Billboard* magazine in 1995. "I really do most stuff like I cook: I cook what I like because no one else does it."

### Books

- Katz, Ephraim, *The Film Encyclopedia*, Harper, 1998.
- Smith, John M. and Tim Cawkwell, *The World Encyclopedia of Film*, Galahad Books, 1972.
- Thomson, David, *A Biographical Dictionary of Film*, Knopf, 1994.
- Van Peebles, Melvin and Mario, *No Identity Crisis: A Father and Son's Own Story of Working Together*, Simon and Schuster, 1990.

### Periodicals

- American Visions*, April-May 1995.
- Billboard*, March 4, 1995; July 11, 1998.
- Entertainment Weekly*, November 29, 1996.
- Essence*, October 2000.
- Film Quarterly*, Fall 1995.
- Interview*, May 1993.
- Jet*, September 23, 1996; July 24, 2000.
- People*, March 7, 1994; April 28, 1997.
- Publishers Weekly*, May 25, 1990.
- Variety*, Feb. 9, 1998.

### Online

- "Classified X (Melvin Van Peebles)," *Film Scouts*, <http://www.filmscouts.com/scripts/film.cfm?Film=class-x>
- "Melvin Van Peebles," *Motorbooty.com*, <http://www.motorbooty.com/new/features.html>
- "Melvin Van Peebles," *Film 100* <http://www.film100.com>
- "Van Peebles, Melvin," *Africana.com*, [http://www.africana.com/tt\\_097.htm](http://www.africana.com/tt_097.htm) □

## Vincent of Beauvais

**Vincent of Beauvais (ca. 1190-ca. 1264) was a Dominican cleric who took it upon himself to compile the *Speculum majus*, an encyclopedia of all human knowledge up to the time of Louis IX of France. An industrious man with strong organizational skills, Vincent spent more than two decades researching and writing this work, which covers the areas of nature, education and history.**

The exact date of Vincent of Beauvais's birth is unknown but is placed between 1184 and 1194 in Beauvais, France, during the first reign of Philip-August. Sometime between 1218 and 1220, Vincent entered the Dominican order in Paris and began his studies at the house of the Rue Saint-Jacques. It was a time of religious fervor, and his order was charged with overseeing the Inquisition, but Vincent chose to lead a quiet, academic life. He spent most of his life in the monastery at Beauvais but was called for periodic visits to Louis IX at Royaumont where the king had founded an Abbey in 1228. Vincent lectured at the monastery and preached at court, making knowledge accessible to the residents of court.

In his role as priest and theologian, Vincent had access to vast libraries and soon conceived of the idea to compile an encyclopedia of all knowledge. His strong organizational skills and intense curiosity made him well suited to a life of research and writing. Recognizing a need to organize all existing knowledge for the benefit of humanity, he established his goal and soon undertook the enormous task of collecting and cataloguing all information available to that time. He was aided in his effort by his royal patron Louis IX, King of France, who helped him with the purchase of books and by giving him unlimited access to the royal library, which contained nearly 1,200 manuscripts. Vincent's dedication to his research earned him the nickname "Liborum helluo" or devourer of books.

### The *Speculum Majus*

For over two decades Vincent studied the scholars, organizing their work into one massive book he titled *Speculum majus* or "great mirror." His contemporaries complained that science, teaching and reading were on the decline, and he wrote the *Speculum majus* because he believed that inspired ideas easily sink into oblivion and must be preserved for future generations.

The *Speculum* was originally divided into two parts, *Speculum naturale* and *Speculum historiale*. A third part, *Speculum doctrinale* was originally an appendix to the *Naturale* but, Vincent eventually presented it as a full third part in its own right. He catalogued the three parts in great detail, covering the areas of nature, education and history. The work was written over a span of 24 years—from its beginning in 1220 to 1244—and is considered the most comprehensive and influential of any similar reference work.

The first part of the *Speculum majus* is titled *Speculum naturale*, the "mirror of nature." This part summarizes all knowledge of nature. With feverish activity he set about collecting the flowers of the ancient world in order to begin his first classification and save the heritage of the past. Its 32 books and 3,718 chapters cover a variety of natural sciences, including agriculture, botany, cosmography, mineralogy, physiology, physics, and zoology.

Vincent wrote the second part of the *Speculum majus* on instruction, or education, and titled it *Speculum doctrinale*, the "mirror of teaching." It consists of seventeen books and comprises 2,374 chapters. The thesis of the *Speculum doctrinale* is that the purpose of education is to

acquire the knowledge of how to serve God. His chief purpose was to impart knowledge yet not influence individual will. The purpose of *Speculum doctrinale* is to summarize all scholastic knowledge of the age. Here he discusses all things relating to education, including astronomy, anatomy, geometry, instincts, industrial and mechanical arts, passions, poetry, logic, medicine, rhetoric, surgery, the philosophy of law, and the administration of justice.

The first book of the *Speculum doctrinale* gives the key to an understanding of the purpose of the work in full—that is, the restoration of fallen humanity through discipline and the study of philosophy. Throughout the seventeen books of *Speculum doctrinale* Vincent considers the various human conditions—as individuals, as parts of families and as a members of society.

His third part is the *Speculum historiale*, the "mirror of history." In its 31 books and 3,793 chapters, Vincent relates all of history's events. It first covered from the beginning of time, as referenced theologically, to 1244. It is a compilation of extracts from other chroniclers, and Vincent later extended it to bring the world up to the date of 1250. As with the other books, *Historiale* interprets history in the light of strict Christian doctrine, beginning with the creation as it is explained in the Bible and following the order of the six days of creation as described in Genesis.

The fourth part, *Speculum morale*, the "mirror of morality," has been closely studied, and experts agree that it was written in the beginning of the fourteenth century and was fraudulently introduced into the works of Vincent of Beauvais. It was exposed as a fraud only about 200 years ago. Close examination determined that references to events that occurred after Vincent's death proved it could not have been written by him but rather by an author or authors unknown.

To compile such an enormous work, Vincent studied the writings of 450 Greek, Hebrew and Roman scholars. He was meticulous in his research. He screened his authorities carefully, warned his readers that all authorities do not have the same value, and categorized his references as great, mediocre, of little or no authority at all. He was modest in ascribing credit to his sources. Vincent is respected for presenting Greco-Roman scholars in a positive light, with particular attention to Roman statesman/philosopher Cicero, Greek philosopher Aristotle and Greek physician Hippocrates.

The *Speculum majus* is considered one of the most influential of all early encyclopedias and was used by later authors such as Geoffrey Chaucer, author of *The Canterbury Tales*. It was also known and used extensively by scholars of the Italian Renaissance.

The *Speculum majus* was translated from Latin into French in 1328 and translated and printed by William Caxton, English printer and publisher, in 1481 under the title *The Myrroure of the World*. Numerous works were undertaken after the *Speculum*, but few had the same impact or made such enormous contributions to human knowledge.

### Other Writings

In 1250 Vincent of Beauvais was appointed lector and chaplain to the royal court of his friend and patron, Louis IX. His role at court was not that of teacher, but rather as a theoretician of education. Vincent provided the material and principles, but the actual application was left to court scholars. As with most royal parents of the time, Louis maintained a somewhat remote relationship with his children. Queen Marguerite, wife of Louis IX, on the other hand, was very concerned about the proper education of her children. To help the royal instructor and at the request of Queen Marguerite, Vincent composed *De eruditione filiorum nobilium*, (*On the Education of Noble Sons*). This work was written between 1247 and 1249 and was intended to enumerate the needs of young Louis (1244-1260) and his sister, Isabelle (1242-1271). Vincent dedicated this treatise to Queen Marguerite. *De eruditione* put particular emphasis on the need for selecting the right tutor for royal children. This work is defined by some as high-minded, quoting from many of the authorities of the day, but providing little practical application.

The last nine chapters of *De eruditione filiorum nobilium* discuss the education of girls. Vincent is specific about the importance of teaching girls good morals and manners, especially regarding chastity, modesty and humility. He stresses the importance of not allowing daughters in public alone and suggests that daughters of noble birth should have supervised readings of the Bible varied with periods of prayer and sewing. He also decries the attention paid to physical appearance and discourages girls and women from taking any action to improve their looks.

Vincent of Beauvais was very conscious of politics, and in his treatise on the subject he emphasizes that the authority of the Church and the consent of the people are most important. His political thoughts on the education of rulers display an anti-feudalistic attitude toward lords and vassals. He gives specific direction on the education of rulers, favoring limitations on monarchical power and attention toward democratic thinking. He wrote that monarchy should not be based on power alone, and he believed that excessive power led to increased evil. He also wrote *Tractatus consolatorius de morte amici* to Louis on the death of one of his sons.

Vincent of Beauvais's source of inspiration was divine love. He was a humble soul who saw life only as a means for obtaining heaven. His purpose in preparing *Speculum majus* was to collect and catalogue arguments to confirm Christian faith. He died in Paris, and his epitaph puts his death at 1264. He left a legacy of erudition, his *Speculum majus* survived him as the greatest encyclopedia up to the eighteenth century and retains that title today.

### Books

Gabriel, Astrik L., *The Educational Ideas of Vincent of Beauvais*, University of Notre Dame Press, 1962.

Labarge, Margaret Wade, *Saint Louis: Louis IX, Most Christian King of France*, Little, Brown and Co., 1968.

Potamian, Brother, *Catholic Encyclopedia*, Robert Appleton Co., 1912. □

## Erich von Stroheim

**Erich von Stroheim (1885-1957) is best known to the filmgoing public for his acting roles as monocle-wearing Nazi officers and other villains, which earned him the nickname "the man you love to hate." However, during the 1920s and early 1930s von Stroheim also directed and wrote screenplays for films in Hollywood, most notably the silent film *Greed*. After World War II, he left the United States and worked in Europe until his death in 1957. He returned to Hollywood only once, to portray Gloria Swanson's butler/ex-husband in Billy Wilder's 1950 film classic *Sunset Boulevard*.**

Von Stroheim enjoyed telling elaborate tales about his youth in Vienna as Erich Oswald Hans Carl Maria von Stroheim, the son of a noble Austrian family; however, the truth was far different. He was born Erich Oswald Stroheim, on September 22, 1885, in Vienna, Austria. However, rather than being a wealthy member of the Austrian aristocracy, his father, Benno Stroheim, sold straw hats for a living. Although von Stroheim claimed that he had served several years in the Austrian military, he actually had worked as a supervisor in his father's hat factory. In 1909 he decided to start a new life in the United States. When he landed at Ellis Island, he was penniless but listed himself as "von Stroheim," so people would think he was an Austrian aristocrat.

By 1912 von Stroheim had moved to San Francisco and had begun to write short plays. He also met and married Margaret Knox, a young woman from a wealthy California family. The marriage was stormy, and Knox filed for divorce after only a year. Von Stroheim then turned to acting; unverifiable Hollywood legend says that he acted in D. W. Griffith's classic silent film, *The Birth of a Nation*, breaking two ribs in a stunt fall. During World War I his Austrian background came in handy. He played assorted villains in films such as *Sylvia of the Secret Service*, *Hearts of the World*, *The Hun Within*, and *The Heart of Humanity*, in which his loathsome character tosses a baby out of a window.

Von Stroheim remarried in 1915, this time to Mae Jones, a New York seamstress. This marriage also was stormy and, although it produced a son (Erich von Stroheim, Jr.), the couple soon separated and divorced in 1919. He had become involved with another woman, Valerie Germonprez, and she became his third wife; they later had a son, Josef.

### Studio Conflicts Plagued Directing Career

After the war, von Stroheim needed to move in a new direction, since there was less of a market for Germanic villains. He decided to try directing silent films, basing his first effort, *Blind Husbands* (1919), on his own short story.



The film tells the story of an American couple vacationing in Austria, who meet a flirtatious Austrian officer (played by von Stroheim). The husband falsely suspects that his wife has been unfaithful and confronts the officer while the two men are mountain climbing. When the husband says he will not harm the officer if he confesses to the affair, the officer does so out of fear. However, the husband then cuts their connecting rope, and the officer dies. *Blind Husbands* introduced new levels of realism and sexual explicitness into film, themes that would be repeated in von Stroheim's later films and that would cause him frequent problems with film censors.

Von Stroheim followed up by directing two films that focused on marital infidelity and other scandalous behavior, *The Devil's Passkey* (1920) and *Foolish Wives* (1922). These films established his reputation in Hollywood as both a gifted actor and director. However, they also gave hints of the problems that would follow with studio executives. Publicists for Universal first decided to promote *Foolish Wives* by billing it as "the first million dollar film ever made." Despite the fact that the film was a great success with the public, it ran far over budget and barely made a profit; and it was originally so long that the studio had to cut its length by a third. When the same problems surfaced on von Stroheim's next film, *Merry-Go-Round*, and he refused to cooperate, Universal fired him midway through the shooting.

After his ties to Universal were severed, von Stroheim moved to Goldwyn Studios. There he began work on what

critics consider his masterpiece, *Greed* (1924). Based on Frank Norris's 1899 novel *McTeague*, *Greed* does not have any of the decadent aristocrats of von Stroheim's earlier films. Instead, it focuses on poor settlers in turn-of-the-century California. McTeague is a kindhearted but unlicensed dentist who marries Trina, the daughter of German immigrants. His lack of credentials is exposed by Marcus Schooler, one of Trina's former suitors, and the couple plunges into poverty. Trina begins to hoard gold, and, when she will not give McTeague any of it to buy food, they struggle and she is killed. Schooler is part of a posse that chases McTeague into Death Valley; handcuffed together and lost in the desert, McTeague and Schooler die. *Greed* is summarized by biographer Peter Noble as abounding with "squalor, poverty, misery, lust, revenge, fear-and greed."

Despite its rather sordid subject matter, von Stroheim's greatest struggle to bring this film to the public was not with film censors. Instead, he once again went head to head with studio executives. Goldwyn originally had agreed to fund a film eight reels long, but agreed to twelve reels after von Stroheim completed his shooting script. This would have been a film over two hours long, definitely the upper limit for silent films. Von Stroheim proceeded to shoot hundreds of hours of film on location in San Francisco and Death Valley, eventually far exceeding his budget and creating a finished product of at least forty reels (somewhere between seven and nine hours long). When the studio insisted on drastic cuts, von Stroheim invited journalists to private viewings of the complete film. Although those who saw the film praised it in news articles, von Stroheim and then studio editors proceeded to cut it down drastically. Meanwhile, Goldwyn had been part of a merger that produced Metro-Goldwyn-Meyer (MGM), and the new studio's managers chopped still more film. Finally, a two-hour version was finally released to the public.

Despite the problems with *Greed*, the following year MGM asked von Stroheim to direct a silent version of the Lehar operetta, *The Merry Widow*. He totally revised the operetta's libretto and inserted sexually explicit scenes, and the studio decided that it no longer could work with him. Next he directed, cowrote, and starred in *The Wedding March* for Paramount Studios. Once again a von Stroheim film ran to excessive length. As a result, only its first half was shown in the United States; the second was released in Europe as *The Honeymoon*. In 1928 von Stroheim was hired to direct another silent film, *Queen Kelly*. Actress Gloria Swanson starred in and produced this film. She fired von Stroheim midway through the shooting; a final version was pieced together but quickly withdrawn from theaters. In 1932 von Stroheim started work on Fox's "talkie," *Walking Down Broadway*. Not surprisingly, he went over budget and could not meet the production schedule, and the studio shut down the filming.

### Returned to Europe as Actor

*Walking Down Broadway* would be von Stroheim's final attempt at directing. He returned to character acting and appeared in several films during the early 1930s, including *Three Faces East*, *Friends and Lovers*, *The Lost*



*Squadron*, *Crimson Romance*, and *The Crime of Dr. Crespi*. Von Stroheim's personal life took several disastrous turns during these years. His wife Valerie was horribly burned when a shampoo solution caught fire at a beauty parlor. Although she eventually recovered, she was badly scarred, and the marriage disintegrated. Von Stroheim's second son, Josef, became seriously ill with what was mistakenly diagnosed as polio. In the midst of these crises, his ex-wife Mae Jones sued him for child support.

Given these awful events and von Stroheim's increasing difficulties in working with Hollywood studios, it is no surprise that, in 1936, he returned to Europe and remained there until the outbreak of war was imminent. While in Europe he acted in several films, most notably Jean Renoir's classic *La Grande Illusion* (1937). In this film he played the commandant of a German prisoner of war camp during World War I. Von Stroheim often clicked his heels together as a greeting, instead of shaking hands, because he detested contact with men. At his first meeting with Renoir, he was firmly kissed on both cheeks by the Frenchman, who idolized von Stroheim. However, in this case von Stroheim actually returned the gesture. The two men shared tears and hugs, as well as arguments about the plot, throughout the filming. In 1939 von Stroheim returned to the United States, along with his new companion, French actress Denise Vernac. He and his third wife Valerie never divorced, but he remained with Vernac for the rest of his life. During World War II von Stroheim appeared in numerous American films, such as *I Was an Adventuress*, *The North Star*, *Five Graves to Cairo*, *The Lady and the Monster*, and *The Mask of Dijon*.

### **Sunset Boulevard Crowned Career**

When World War II ended, von Stroheim and Vernac went back to Europe and settled at a chateau outside of Paris. In 1949 director Billy Wilder asked him to return to the United States and appear in his upcoming film, *Sunset Boulevard*. The film would tell the story of aging film star Norma Desmond (played by aging film star Gloria Swanson), who becomes involved with and then kills a young screenwriter played by William Holden. Von Stroheim, although initially reluctant, finally agreed to play the part of

Desmond's butler, who is revealed to be her ex-husband as well. *Sunset Boulevard* received numerous Academy Award nominations and awards in 1951, including von Stroheim's only Academy Award nomination during his career, as Best Supporting Actor.

In Europe von Stroheim acted in a few films and co-wrote several screenplays, but never again returned to directing films. In 1956 he began to suffer severe back pain that was diagnosed as cancer. He eventually became paralyzed and was carried to his drawing room to receive France's Legion of Honor award from an official delegation. Von Stroheim died at his chateau on May 12, 1957, accompanied by his longtime lover, Denise Vernac.

More than 30 years after von Stroheim's death, Ric Schmidlin and Glenn Morgan of Turner Classic Movies embarked on the huge project of restoring his silent film *Greed*. Since MGM executive Irving Thalberg had ordered the uncut film to be burned long ago, Schmidlin and Morgan had to use hundreds of still photographs to assemble a four-hour-long film, which was released in 1999. *Variety* praised this attempt to restore one of the "most celebrated and mourned mutilated masterpieces in cinema history."

### **Books**

- Curtiss, Thomas Quinn, *Von Stroheim*, Farrar, Strauss and Giroux, 1971.  
 Koszarski, Richard, *The Man You Loved to Hate*, Oxford University Press, 1983.  
 Lennig, Arthur, *Stroheim*, University Press of Kentucky, 2000.  
 Leonard Maltin's *Movie Encyclopedia*, Penguin/Dutton, 1994.  
 Noble, Peter, *Hollywood Scapegoat: The Biography of Erich von Stroheim*, Arno Press, 1972.

### **Periodicals**

- Atlantic*, September 1987, p. 73.  
*Film Comment*, November 1999, p. 10.  
*Variety*, September 13, 1999, p. 44.

### **Online**

- "Biography for Erich von Stroheim," *Internet Movie Database*, <http://www.imdb.com> (December 6, 2000). □

# W

## Jay Ward

**At the peak of his fame, Jay Ward (1920-1989) was always being pestered with requests for his biography. But he felt that his life had been so relatively uneventful-for the man behind Rocky and Bullwinkle, one of the most groundbreaking and eccentric shows on television-that no one would be interested. To make up for it, he and co-producer Bill Scott created a fictional executive producer, Ponsonby Britt, O.B.E., with a bio to match the impressive name.**

**Y**et Ward's own life was complex and interesting enough for the man who was responsible for the first animated cartoons made specifically for television. He also produced the best television animation in almost four decades and helped create a number of characters that have become a permanent part of the American landscape.

From the beginning, his life was different from most. He was born J (no period, he was to choose his own name later) Troplong (French, his mother's birth name) Ward in San Francisco on September 20, 1920. His parents separated soon afterward, and his father moved to New York. Ward stayed in San Francisco with his mother, a well-known singer and dancer.

Ward's early life was no more eventful than most. He did well in school and, though not naturally gifted, pushed himself to succeed in sports. He received an undergraduate degree from the University of California-Berkeley in 1941, then enrolled at the Harvard Graduate School of Business Administration. His time there was interrupted when the

United States entered World War II and Ward was drafted. He spent the duration in the Army Air Force. In 1943 Ward married a girl he had met while at Harvard. When discharged, he returned to complete his studies.

Some people never figure out that they have chosen the wrong profession. Ward got the message early, dramatically, and painfully. With his fresh Harvard MBA, he opened a real-estate office in Berkeley, California. On the very day he opened the office, he was at the front door speaking to the mailman, as a lumber truck went out of control on a nearby hill and plummeted through the front window of the office, running over Ward and pinning him against a wall. Ward suffered a broken kneecap, and severe muscle injuries in his legs. This incident marked the beginning of psychological problems that would haunt him for the rest of his life.

### Birth of Crusader Rabbit

It was at this time that Ward's career underwent a major shift. While recuperating from his injuries, he was visited by a childhood friend, Alex Anderson. Anderson was an artist who had apprenticed at his uncle, Paul Terry's Terrytoon animation studio. He had been impressed by a cartoon sequence in a Walt Disney feature that merged narration with storyboard sketches, the static drawings used to determine the order of action and scenes in a film or cartoon. This was in contrast to Disney's usual lush, expensive full animation cartoons, where each frame of film requires a different drawing of the entire character or characters moving only slightly each time, creating a flowing movement for the characters or objects when filmed. This appealed to the writer in Anderson, also a talented and funny animation artist. He saw the "moving comic strip" as a way to produce inexpensive cartoons specifically for television. Scenes

could be reused and, when a turn of the head or raising of the arm were necessary, the part in motion could be redrawn and placed over the characters' body. This process became known as limited animation, and is the basis for most television animation.

Anderson had already created the concept he wanted. It was the concept that would become a signature of future Jay Ward productions. He thought it should feature a strong lead character in a small body, partnered with a sweet good-natured friend in a larger, even threatening body. Strong narration and funny writing was needed to offset the limited animation. Ward decided to team up with Anderson. *Crusader Rabbit* and *Rags the Tiger* were born.

It was a new concept for television programmers, who were already buying 20-year-old theatrical cartoons cheaply from distributors. Ward and Anderson showed the pilot for *Crusader Rabbit* to NBC. The network was interested but nervous about dealing with two men with no experience. Ward and Anderson teamed with experienced filmmaker Jerry Fairbanks and formed Television Arts. Fairbanks already had signed an agreement with NBC as the exclusive supplier of filmed shows for the network. NBC ordered 130 episodes; Ward and Anderson got to work. After a few shows were completed, NBC decided not to air the show itself, preferring to offer it in syndication to its affiliates. After the 130 episodes were delivered, NBC decided not to renew.

When Television Arts tried to take its profits from the series and move on, Ward and Anderson learned that Fairbanks had been using NBC to bankroll his own productions and was now in debt to the network. NBC now owned the films, and the Television Arts agreement meant that that they were entitled to their share of Fairbanks' share, which was nothing. In 1953, Television Arts took Fairbanks and NBC to court. The case lasted over three years and, in the end, Ward and Anderson lost.

Once the fight over the *Crusader Rabbit* cartoons had ended, Ward was contacted by Leonard Key, another high school friend. Key had been on the periphery of the original series, and convinced Ward that he could find the money to produce some new, color *Crusader Rabbit* episodes. Anderson was involved in an advertising agency and had no desire to continue making cartoons. That was okay, because it seemed that Television Arts no longer owned the rights to the characters. Not able to fight this time, Ward and Key backed out. New episodes of *Crusader Rabbit* were produced by another company.

### In Bullwinkle's Corner

Fortunately, Ward found another partner, writer/voice actor Bill Scott. Scott started in animation with the Army Air Force's First Motion Picture Unit (FMPU), creating training cartoons during World War II. He then worked as a writer for the innovative cartoon studio, United Productions of America (UPA). Scott also performed various functions on the televised *Gerald McBoing-Boing Show*.

In the late 1950s, the television industry was in a state of transition. For most of the history of network broadcasting, on both radio and television, a sponsor would purchase

a specified time period from the network, usually a half-hour or hour. It was then up to that sponsor, usually through their advertising agency, to determine the content, stars, and overall quality of a show. By the late 1950s, the cost of producing a quality television series each week had risen to the point where most sponsors no longer wanted to pay the entire amount themselves. The networks began to produce and schedule the shows, selling advertising time in small amounts—usually 30 seconds or a minute—to sponsors.

Ward's idea for inexpensive limited animation still appealed to sponsors. A pilot was prepared, with Ward and Scott gathering the voices that would make Rocky and Bullwinkle famous: Scott as Bullwinkle, veteran radio and cartoon voice actor June Foray as Rocky and numerous female characters, Paul Frees as every character Bill Scott didn't play, and radio actor William Conrad as the ever-present narrator. The recording sessions directed by Scott, were a lot of fun. Frees would always try to break-up Conrad, the consummate veteran. Ward was always there, the appreciative audience.

The gestation of Rocky was long and sometimes painful for Ward. The pilot was created with almost no budget and therefore featured very limited animation. Ward was not proud of it, but knew that they would do better once someone was willing to pay for it. His friend Len Key had created some capital by forming a distribution company, Partners in Television (PAT). PAT showed the pilot film to an advertising agency, Dancer-Fitzgerald-Sample (D-F-S). They showed it to their biggest client, General Mills, who agreed to sponsor the show. General Mills bought time on ABC. Jay Ward, who once looked forward to running his own company, now had to answer to partners, an ad agency, a sponsor, and a network.

It was about this time, in 1959, that Ward suffered the second catastrophic event—after the truck accident—that was to shape the remainder of his life. While on a cross-country plane trip, Ward suffered a panic attack and began to hyperventilate. Unfortunately, someone gave him oxygen, which caused permanent nerve damage. For awhile, Ward's claustrophobia was complicated by agoraphobia, a fear of open spaces. He spent months in his apartment, to recuperate. From that point on, Ward's shyness and diminished physical ability made him less open to meeting with strangers. Just as his name was becoming known, so was the persistent rumor that he was an inaccessible recluse.

Ward might have preferred it that way. PAT and D-F-S had entered into an agreement that gave the agency much production power. One of the demands was that the show be very cheap to produce. PAT set up an animation studio in Mexico City, with mostly inexperienced employees. It was very difficult to oversee production and maintain quality from such a distance, and the look and sound of the first few years of Bullwinkle disappointed Ward greatly.

*Rocky and his Friends* finally made its first appearance on television and was an immediate hit. The critics loved the humor that could be enjoyed on many levels by many ages, from children to the politically savvy. They overlooked the poor quality of the animation. All of the credit for the show's success was given to Ward, and that allayed his

disappointment somewhat. He began to hold big publicity events for Rocky and Bullwinkle and other creations, and was always the genial host, hiding his shyness and illness with a loud bravado.

### After Bullwinkle

For the next few years Ward continued to oversee the production of Rocky, as well develop other projects. A new segment joined *The Bullwinkle Show* when it debuted in prime time on network television, *Dudley Do-Right*, a parody of Nelson Eddy Canadian Mountie melodramas of the 1930s. Dudley, too, was an immediate success and can still be seen today. The cartoon series *Hoppity Hooper* and *Fractured Flickers*, where silent films were dubbed with humorous new dialogue and sound effects, both made it to television for short runs. Ward kept trying to develop live-action series for the networks, but only one of these, *Nut House*, made it to pilot stage.

In 1967, ABC bought an entirely new show from Jay Ward Productions. Free at last from the demands of partners and sponsors (although never network censors), Ward's studio produced the series that they would be proudest of, *George of the Jungle*. This was another anthology series, this time featuring the title Tarzan spoof, the witty superhero parody *Super Chicken*, and the lackluster car racing series *Tom Slick*. Although designed for a juvenile audience, it still featured tight, witty writing, strong voice performances from Ward's regular crew, and the addition of some of the highest quality limited animation to ever appear on television.

After *George of the Jungle*, Ward, with his dwindling crew, tried to create some more shows, but nothing seemed to inspire him. He was enjoying semi-retirement and running the Dudley Do-Right Emporium next door to the studios, selling merchandise bearing his characters. He continued to produce Captain Crunch commercials for Quaker Oats until 1984, when the studio closed. Whatever thoughts of returning to the cartoon business Ward might have had ended with the deaths of Bill Scott in 1985 and Paul Frees in 1986. Ward's own health began to fail in 1987; he had cancer of the kidney. He died at home in Los Angeles on October 12, 1989.

Ward's fame was a collaborative effort, and he would be among the first to acknowledge that. The Jay Ward stable of characters really came out of the work of men like Bill Scott, Alex Anderson, and a talented group of writers and performers. But as many of them have said, it was Ward's spirit that motivated them, and the laughter Ward would provide as audience and arbiter that rewarded them.

### Books

Scott, Keith, *The Moose That Roared*, St. Martin's Press, 2000.

### Online

"Professor Neon presents" *The Jay Ward Animation Special*, <http://www.vortex.com/av/#JayWard1> (January 2, 2001) □

## Dutch Warmerdam

**Cornelius "Dutch" Warmerdam (born 1915) dominated the sport of pole vaulting in the early 1940s. Using a bamboo pole, Warmerdam was the first person to vault over 15 feet, and he remained the only person able to do so until 1951. If World War II had not intervened, he would likely have been an Olympic champion.**

Warmerdam, the third son of an immigrant from Holland, was called "Dutch" by his friends, and was known as a good-natured, modest boy and a good student. Because he skipped the third grade, he graduated from high school at age 16. He began vaulting when he was twelve years old, reaching 8 feet in that year, and increasing it to 9 feet by the time he was 13. By the time he was 16, his highest mark was 12'3", and his greatest vaulting achievement was a tie for third place in the 1932 California state high school meet.

With such an unspectacular performance, Warmerdam didn't receive any offers of scholarships from college coaches, and because college was too expensive, he stayed on his father's 40-acre peach and apricot orchard, and worked for a year and a half. During that time, he kept practicing his vault on a runway and pit he built in his father's fruit drying field.

His high school coach knew that he was still vaulting, and happened to mention Warmerdam's outdoor practice to a salesman who was passing by. Curious, the salesman drove past the farm and saw Warmerdam hurling himself over a high bar on the far side of a spinach field. He called Fresno State track coach Flint Hanner and told him he had just seen a young man vaulting well over 13 feet. Hanner went out to the farm to see Warmerdam for himself, and made a scholarship offer. In the spring of 1934, Warmerdam began his studies at Fresno, and vaulted 13-6.

In 1935, when he was 19, he vaulted 14-1 7/8, less the five inches away from the world record. He tied for first at the West Coast Relays with five men, including some of the best vaulters in the world. Warmerdam's amazing potential was somewhat untapped, however, because he wasn't interested in full-time training, preferring to lead a more well-rounded life than most other athletes. He took off from training in the summer, and in the fall, he only trained in order to compete in indoor meets. In addition, he played basketball, and was good enough to be a captain of the team.

### An "Unbreakable" Barrier

In 1936, handicapped by a broken ankle, he beat his own personal best by only an inch. He took time off from competing and made a little money by picking cotton in the sweltering San Joaquin Valley. His father saw that he was discouraged about his lack of progress in his sport and said, according to Corder Nelson in *Track's Greatest Champions*, "Don't quit; keep at it."



Warmerdam did keep at it. Like many vaulters of the time, he dreamed of vaulting over 15 feet, but that height seemed like an impossible barrier. At the time, Americans dominated the event, and by the late 1930s, vaulters Earle Meadows and Bill Sefton were close to reaching the goal. On May 29, 1937, they both vaulted 14-11, leading to hopes that they would make the 15-foot mark in the near future. They never did.

Many observers of the sport believed it was simply impossible for human beings to propel themselves that high. At the time, vaulters used fairly rigid bamboo poles, very different from the flexible carbon-and-fiberglass poles currently used, and landed in sand-and-sawdust pits instead of on the currently used air-and-plastic cushions. According to Corder Nelson in *Track's Greatest Champions*, Warmerdam once described the process of vaulting: "No athlete has much left after sprinting 50 yards at top speed, yet I still have to figure on the body shock that comes when the pole strikes the ground. The pole vibrates, jars your whole system. It can tear loose the grip of your right hand. It can do something to destroy the physical coordination so necessary to finish the job after momentum ends at the crossbar."

"They told him it was physically and geometrically impossible" to go over 15 feet, Warmerdam's wife Nita told John Canzano in the *Fresno Bee*. Warmerdam met her at a community dance in 1937, and they would eventually marry in 1940. In 1938, the year Warmerdam graduated from Fresno State, he cleared 14-6. In 1939, in Boston, he

made 14-6 1/8, setting a world indoor record. By 1940, he had a job teaching history and geometry in a small mountain town. He pole vaulted in his spare time, using a heavily taped pole that had been discarded by the Stanford University team. After a disastrous outdoor meet during which he could only clear 12-6, he began training again, practiced his sprint, lost ten pounds, and worked on his vault for several hours a day until he regained his old form.

### Broke 15-Foot Barrier

He was now vaulting for the San Francisco Olympic Club. During his time with the club, he won or tied nine National Amateur Athletic Union (AAU) titles, seven of which were outdoors. Right from the beginning, he began closing in on the 15-foot barrier. He vaulted 14-4 at Stanford on April 6, 1940. On April 13, feeling good, he attended a small meet at Berkeley. His first few vaults, at 14-2, 14-5, and 14-8 1/2, seemed ridiculously easy. Exhilarated, he told the officials to set the bar at 15 inches.

On his first try he missed, but he realized the miss was very close and he could make it if he tried again. Nelson wrote, "It was a hard, struggling effort, but his body flew off the pole, and he was above the bar, wonderfully free." Thus, he set the world's first 15-foot record. On June 29, he beat his own world record, with 15-1 1/2. "It was big for me because it was in Fresno and my folks were there to see me," he said, according to Nelson.

Once Warmerdam had accomplished the 15 feet, he altered people's perceptions of previously "unbreakable" barriers—perhaps the true barriers were in people's minds, not in their bodies. According to Canzano, Stanford track coach Dink Templeton wrote, "I doubt that the achievements of any other man in the entire history of American athletics has ever had so great an effect, not only on American sports but on the minds of American people, as those of Warmerdam from the day in Berkeley when he first vaulted to the supposedly impossible 15 feet." He eventually reset the outdoor world record at 15-7 3/4; this new record would stand for 15 years. Bob Richards became the only other person to vault over 15 feet in 1951, but was never able to beat Warmerdam's record. Warmerdam also held the indoor world record at 15-8 1/2, which he set at a meet in Chicago in 1943. This record stood until 1957, when Californian Bob Gutowski finally broke it. In the course of his career, Warmerdam made 45 vaults over 15 feet. At the time, no one in the world had ever vaulted over 15 feet. According to Nelson, Bob Richards once said of Warmerdam, "Warmerdam was part sprinter, part shock-absorber, part acrobat, and part strong man. He wasn't human."

### War Prevented Olympic Competition

Despite his immense talent as an athlete, Warmerdam never got to compete in any Olympics, because World War II intervened. As Ron Fimrite noted in *Sports Illustrated*, "Make no mistake, Warmerdam was a great champion; it's just that the war stole from him the sort of immortality that comes only in the Olympic Games for a track and field

athlete. On the other hand, he lived through [the war], and for that he is eternally grateful."

The Olympic Games were canceled in 1940 and 1944 because most of the nations of the world were fighting one another. Warmerdam, like many other athletes, enlisted in the armed forces; he signed up for Navy duty early in 1943, and served as a lieutenant. Initially, he was posted as a physical-training officer, and his superiors urged him to continue pole-vaulting, because it would impress potential recruits. He did continue, and won two of his AAU championship titles. His wins did attract attention; in the *Monmouth College Courier*, Patrick DuMais quoted an Associated Press article from that time, which commented, "The indoor track season which has straggled along to packed houses with only a pair of stars, becomes a three-ring circus Saturday night in Madison Square Garden, with the return to competition of pole-vaulting Cornelius Warmerdam."

By 1944, however, the Navy needed him for more urgent pursuits, and he was assigned to be the fire- and damage-control officer on the escort carrier *Matanikau*. On the ship, of course, he could no longer vault. By the summer of 1945, the *Matanikau* was sent to help in the invasion of Japan, and Warmerdam, like the other men on board, grew nervous. On deck during their off-duty hours, they played basketball to try and keep their minds off the fact that their ship would soon be in the midst of battle. Ron Fimrite quoted Warmerdam, who said, "I saw us as a sitting duck." When they were almost to the Marshall Islands, they received word that President Truman had ordered that the cities of Hiroshima and Nagasaki be leveled with atomic bombs. The bombing ended the war, and to this day, Warmerdam believes his life was saved when his ship did not have to go into battle.

### Became a Coach

After the war, pole vaulting changed. Bamboo was in short supply, and metal poles were lighter. They didn't last long, however, because fiberglass soon became the material of choice. Even after the war ended, however, Warmerdam's pole-vaulting days were over, and he officially retired from competition in 1946. He now had a wife and family to support, so in 1947, he took a coaching job at Fresno, his old school. According to Olympic rules at the time, athletes could not participate in the Games if they made money from their sport, so he was disqualified from all future Olympics because he was a coach. This is unfortunate, because when the 1948 Olympics took place, he was still the best pole vaulter in the world, even though he had taken time off during the war. While he was coaching the Fresno team, Warmerdam "fooled around" with the pole, and easily vaulted higher than any of the Olympic team vaulters.

Eventually he did compete again. In 1975, he won the national decathlon championships for athletes aged 60 and over. Surprisingly, the pole vault was his worst event. He told Fimrite in *Sports Illustrated*, "I'd been doing 12 ft. 6 in. in practice, but couldn't do any better than 11 ft. 4 in. in the meet. I was using a fiberglass pole."

In December of 2000, Warmerdam accepted USA Track and Field's award for American Pole Vaulter of the Century, in Reno, Nevada. In *Track's Greatest Champions*, Corder Nelson summed up his career by writing, "In the entire history of track and field, no athlete's superiority has been so unquestioned as Warmerdam's." Nelson also quoted 1904 Olympic sprinter Nat Cartmell, who said "Warmerdam is the only all-time, indisputable, supreme champion the athletic world has ever known." Warmerdam, who is a professor emeritus of physical education at California State University, Fresno, is in his mid-eighties and still active. He jogs and plays golf with friends a few times each week.

### Books

*Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1988.  
Nelson, Corder, *Track's Greatest Champions*, Tafnews Press, 1986.

### Periodicals

*Fresno Bee*, January 23, 2000.  
*Monmouth Courier*, September 22, 2000.  
*Sports Illustrated*, Fall, 1991, Vol. 75(18).

### Online

*Encyclopedia Britannica*, <http://www.britannica.com/seo/c/cornelius-warmerdam/> (December 28, 2000). □

## Johnny Weissmuller

**Johnny Weissmuller (1904-1984), who played the role of Tarzan in films made during the 1930s, was one of the best swimmers of the twentieth century. He won five Olympic gold medals, set 24 world records, and won 51 AAU titles.**

Although many older sources claim that Weissmuller was born in Windber, Pennsylvania, the son of Austrian immigrants, it has become known since his death that he was born in Freidorf, near Timisoara, Hungary (now in Romania). His parents immigrated to Windber when he was three years old, and his father supported the family by working as a coal miner. Later, Weissmuller simply claimed that he had been born in Pennsylvania.

### "You Might Break Every Record There Is"

Weissmuller, who only attended school through the eighth grade, was sickly and weak as a child, and his family doctor put him on a special high-nutrition diet and advised him to take up swimming to strengthen his body. When he was a young boy, his father moved the family from Pennsylvania to Chicago, where Weissmuller joined the YMCA when he was 14. At age 15, he joined the Illinois Athletic



Club. The coach there, Bill Bachrach, said, "Swear that you'll work a year with me without question and I'll take you on. You won't swim against anybody. You'll just be a slave and you'll hate my guts, but in the end you just might break every record there is," according to Ralph Hickok in *A Who's Who of Sports Champions*.

In *Biographical Dictionary of American Sports*, James D. Whalen wrote, "Bachrach, a gruff individual weighing 350 pounds, yelled at the exhausted Weissmuller during workouts, 'Form! Never swim for speed-always for form!'" His advice paid off. Weissmuller trained for over a year, then attended his first competition, the 1921 Amateur Athletic Union (AAU) outdoor championship. He won the 220-yard freestyle swim. The only event he lost, the 440-yard freestyle, would be the only race, of any distance, that he ever lost during his entire swimming career.

In 1922, Weissmuller set world records in the 150-yard backstroke and the 300-meter freestyle. He also won national championships in the outdoors 100-, 220-, and 440-yard freestyle events and in the indoor 100- and 220-yard events. He won all the same championships in 1923, and also set a world record in the 150-yard backstroke. His new record was 6.8 seconds faster than the old one. On July 9, 1922, he became the first person ever to swim 100 meters in less than a minute, completing the distance in 58.6 seconds. He also broke the 5-minute barrier in the 440-yard freestyle swim.

## Two-Time Olympian

Weissmuller swam in the 1924 Olympics in Paris, and won gold medals in the 100- and 400-meter freestyle events. He set a world record of 5:04.2 in the 400, and his time of 59.0 in the 100 was an Olympic record. At the same Games, he was a member of the gold-medal-winning 4-200 freestyle relay team as well as the bronze-medal-winning U.S. water polo team. In the same year, he beat his own world-record 100-meter time, lowering the record to 57.4 seconds. This time wasn't beaten until 1944.

In 1925, 1926, and 1927, he won 15 more national titles. He held the record for the 100-yard freestyle, with a time of 51.0 seconds, for the next 17 years, and his record for the 200-meter freestyle stood for seven years. At the 1928 Olympics in Amsterdam, he won more gold medals in the 400-meter freestyle and as a member of the 4 × 200-meter relay team.

In addition to being a fine athlete, Weissmuller was good-looking, with broad shoulders, narrow hips, and long legs. He weighed 195 pounds and was six feet, three inches tall. He also had a gift for entertaining crowds. Between serious swimming events, he often made the crowds laugh by doing comedy dives. After the 1928 Olympics, he became a professional swimmer, and performed at exhibitions all over the United States. In 1940, when he was 36, he broke his own 100-yard freestyle record, swimming the distance in 48.5 seconds. Bill Bachrach's insistence on good form was apparent in his style; as Pat Besford wrote in *Encyclopedia of Swimming*, "His high-riding stroke, with its pull-and-push arm stroke, independent head turning action for breathing and deep flutter leg-kick, was revolutionary and had a tremendous influence on the development of the crawl throughout the world."

## Tarzan was Born

Weissmuller's second career as an actor began in 1932, and might not have begun at all if Metro-Goldwyn-Mayer studios (MGM) had not had a very successful jungle movie, *Trader Horn*. The studio had a great deal of extra jungle footage, and not wanting to waste it, decided to use it to make a film based on the book *Tarzan*, by Edgar Rice Burroughs, about a man who had been abandoned in the jungle during his infancy and then raised by apes. According to Gabe Essoe in *Tarzan of the Apes*, MGM director William S. Van Dyke said, "What I want is a man who is young, strong, well-built, reasonably attractive, but not necessarily handsome, and a competent actor. The most important thing is that he have a good physique. And I can't find him." The studio considered hundreds of candidates with no success. *Tarzan* screenwriter Cyril Hume was staying at the same hotel as Weissmuller. When he saw the champion swimmer in the hotel pool, he knew he'd found the man the studio wanted. According to Essoe, Van Dyke later praised Weissmuller's ability to be comfortable wearing almost nothing. He said, "Most actors without clothes are undressed rather than naked and are too self-conscious to act naturally." Because Weissmuller was a swimmer, he was used to being in public while wearing only swim trunks.

At first, Weissmuller wasn't interested in the movie part, and in fact he had signed an exclusive contract with BVD, a manufacturer of swimsuits and underwear, as a spokesman for their products. BVD refused to release him from the contract and let him act for MGM. MGM, undaunted, sent over a team of lawyers to try and convince the executives at BVD to come to an agreement. Eventually, the two sides made a deal. If BVD would let Weissmuller act for MGM, MGM would allow BVD to photograph all the big MGM stars in swim suits. This list included stars such as Greta Garbo, Joan Crawford, and Jean Harlow. MGM would hire Weissmuller for seven years, beginning with a pay rate of \$500 a week, with raises of up to \$2,000 a week during that time.

The producer of the film, who didn't follow sports, had no idea that Weissmuller was a well-known Olympic champion and at first, wanted to change his name. According to Besford, he said, "Johnny Weissmuller, that's too long, it won't go on the posters, we'll have to change it," until someone told him who Weissmuller was.

Although Edgar Rice Burroughs's original Tarzan was a "noble savage" who was a cultured gentleman who spoke several languages, the film Tarzan is an animal-man who can barely speak. *Tarzan, the Ape Man* was well-made for its time, starred the beautiful Irish actress Maureen O'Sullivan, and featured scanty costumes, romance between Weissmuller and O'Sullivan, little dialogue, and a lot of jungle action. It was an immediate success with both the public and critics, who praised its sweeping action, entertaining story, and its actors. Essoe quoted critic Thornton Delehanty, who wrote that Weissmuller was "the complete realization of this son-of-the-jungle role. With his flowing hair, his magnificently proportioned body, his catlike walk, and his virtuosity in the water, you could hardly ask anything more in the way of perfection."

### "Would Always Be Tarzan"

Weissmuller would go on to star in eleven more Tarzan movies, half for MGM, and half for RKO. The MGM films were of higher quality, and according to Scott Siegel and Barbara Siegel in the *Encyclopedia of Hollywood*, *Tarzan and His Mate* 1934 "is considered the cream of the crop." They also wrote, "For generations who saw Weissmuller swinging from vines on the big screen, and their children who saw him doing the same when the movies were rebroadcast on television, Weissmuller would always be Tarzan."

Throughout the Tarzan series, Weissmuller swam in at least one scene—usually more—showing off his famous form and speed, and often wrestled crocodiles or other watery menaces. Fortunately, the role did not demand much acting ability; in the *Encyclopedia of Hollywood*, Scott Siegel and Barbara Siegel wrote, "Weissmuller was a wooden actor with a halting speech pattern that worked just fine for the monosyllabic role of the ape man created by Edgar Rice Burroughs." At the same time, however, Weissmuller was well aware that he was not a particularly skilled or expressive actor, and he retained a sense of humor about his lack of acting talent and his character's limited conversational

ability. Of his role as Tarzan, he once said, according to Hickok, "It was up my alley. There was swimming in it, and I didn't have much to say." He commented that the secret of his success as Tarzan was his ability to grunt, according to Ray Narducy in the *International Dictionary of Films and Filmmakers*. He also joked about his character's frequent habit of swinging through the treetops on a long vine; according to Robert A. Newton and Gwendolyn Wright Nowlan in *Movie Characters of Leading Performers of the Sound Age*, he said, "The main thing is not to let go of the rope."

When Weissmuller grew older and loincloths no longer flattered him, he starred in the low-budget *Jungle Jim* series, in which his character was very similar to Tarzan, except that he wore clothes. The first of these adventures was filmed in 1948; 15 more were made, although in the last three, his character was called "Johnny Weissmuller," not "Jungle Jim." In 1956, he appeared in a television series called *Jungle Jim*, which lasted for 26 episodes. Weissmuller only played in one film that did not involve Tarzan or Jungle Jim. Titled *Swamp Fire*, the film also starred Buster Crabbe, another swimmer who played Tarzan in a rival film company's film in the 1930s.

After retiring from the movies, Weissmuller gave his name to a swimming pool company, the Johnny Weissmuller Swimming Pools Company, a franchise based in Chicago, and had a fairly successful business career. He was also manager of the International Swimming Hall of Fame in Fort Lauderdale, Florida. His love life was less successful; he married six times. He had three children, Wendy, John, and Heide, with his fifth wife, Allene Gates. His autobiography, *Water, World and Weissmuller*, was published in 1967.

Weissmuller's last film appearance was in a film called *The Phynx* in 1970. After battling a series of strokes and surgeries, he died at his home in Acapulco, Mexico in 1984.

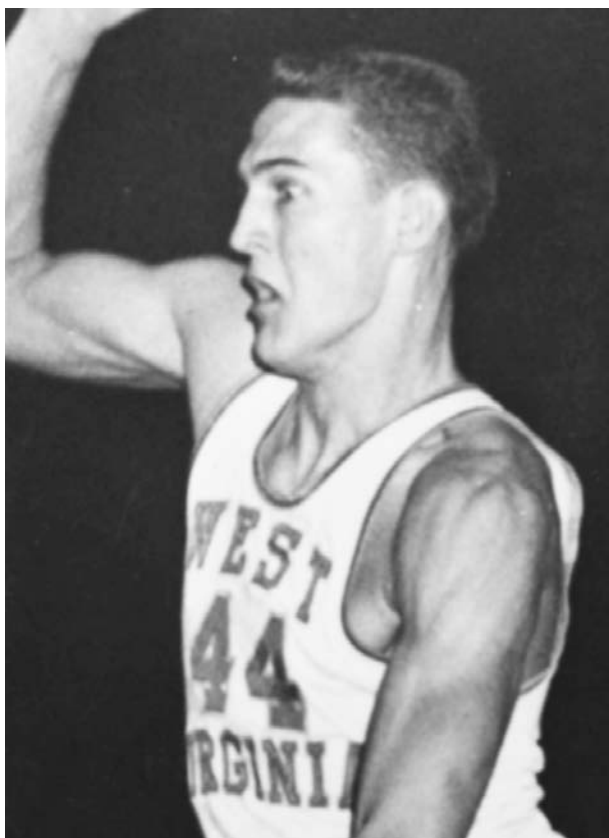
### Books

- Besford, Pat, *Encyclopedia of Swimming*, St. Martin's Press, 1976.
- Biographical Dictionary of American Sports*, edited by David L. Porter, Greenwood Press, 1989.
- Essoe, Gabe, *Tarzan of the Apes*, Citadel Press, 1968.
- International Dictionary of Films and Filmmakers 3*, 3rd ed., edited by Amy L. Unterberger, St. James Press, 1997.
- Newton, Robert A. and Gwendolyn Wright Nowlan, *Movie Characters of Leading Performers of the Sound Era*, American Library Association, 1990.
- Siegel, Scott, and Barbara Siegel, *Encyclopedia of Hollywood*, Facts on File, 1990.

### Online

- Encyclopedia Britannica*, <http://www.britannica.com/seo/j/johnny-weissmuller> (December 28, 2000). □





## Jerry West

Nicknamed “Mr. Clutch” and “Mr. Consistency,” Jerry West (born 1938) is considered one of the best shooting guards in National Basketball Association (NBA) history. He excited fans during his playing career with the Los Angeles Lakers, and later enjoyed great success as an executive for the team.

In a *NBA.com Features* article profiling Jerry West, Tom Scharpling wrote: “His game was heaven-sent, striking a balance between lunch pail grit and fluid beauty. He was an automatic scorer, lethal on defense, and could pass, rebound-whatever his team required.” Scharpling continued, “And while basketball was something West excelled at, it was also something that frustrated him, tormented him, never gave him a moment to appreciate it as just a game.”

### Early Life

Jerry Alan West was born on May 28, 1938, in the quiet town of Cheylan, West Virginia, near the state capital of Charleston. He was one of six children of Howard Stewart and Cecil Sue West. As noted in his biography on the *NBA.com* website, tragedy struck the family, and 12-year-old Jerry, when his older brother David, was killed in the Korean War. His biography noted, “The tragedy turned

young Jerry inward, forcing him to develop his own coping mechanisms.”

West’s *NBA.com* biography noted that he was a small and shy boy, who did not make any of his junior high sports teams. He began a regimen to improve his basketball skills. West practiced in the rain, mud, and snow. He would forget to go home to eat dinner, and would practice shooting until his fingers bled. Eventually, West’s hard work paid off. He made the varsity team at East Bank High School, and excelled in his senior year, becoming the first high school player in state history to score 900 points in a season. West then led his team to a state championship. In his book *Basketball Superstars-Three Great Pros*, Les Etter added, “In his honor, East Bank High School changed its name to West Bank for one week.”

### Collegiate and Olympic Star

Although recruited by many schools, West opted to attend and play basketball for West Virginia University. Etter noted, “The change from a small high school to a large college full of strangers wasn’t easy for West. His classroom work dropped, and that was discouraging. But on the basketball court, it was a different story.” As a West Virginia Mountaineer, West was twice named an All-American. In 1959, he led his team to the NCAA basketball tournament championship game. Even though they lost, West was selected the most valuable player for the tournament. In 1960, as co-captain of the U.S. Olympic basketball team, he won a gold medal. Reflecting back, West shared with Scharpling: “Winning a gold medal was a watershed moment for me. None of the players today would understand, but to win the Olympics as an amateur was an incredible thrill.”

### Entered the NBA

Writing for *Sports Illustrated*, Richard Hoffer noted that after West won an Olympic gold medal, he “was astonished when the Lakers, just then picking up to move from Minneapolis to Los Angeles, drafted him in the first round in 1960.” West recalled, “I didn’t think I was good enough to play in the NBA.” He signed a \$15,000 contract with the Lakers. However, West did not have an overly impressive rookie season. In “The NBA at 50,” a May 1996 interview for *NBA.com*, West recalled, “I was like a fish out of water.”

West’s second year went much better. Scharpling noted, “West nearly doubled his scoring output, pumping in 30.8 points per game (ppg), and adding 7.9 rebounds and 5.4 assists a game. West and [Elgin] Baylor became the Lakers’ dynamic duo.” That season, West played in his first NBA finals. The Lakers played the Celtics, but lost. In his *NBA.com* biography, West called the loss “particularly heartbreaking.” West’s strong ethic and dedication were legendary around the league. Etter observed, “He was always the first player out to practice and the last to leave.” In his biography on the *NBA.com* website, it stated, “Equally legendary was West’s tolerance for pain. Not blessed with great size, strength or dribbling ability, West made up for these deficiencies with pure hustle and an apparent lack of regard for his body. He broke his nose at least nine times.”

As noted in his biography on the *NBA.com* website, "most of West's legendary exploits came during the postseason." In the 1965 finals, he averaged 46.3 points per game, that remains the highest ppg average for any playoff series. During the 1969 finals against Boston, West was awarded most valuable player honors, the first and only time the award has gone to a member of the losing team. In "The NBA at 50" interview, West recalled, "I thought we should have won in '69-I felt we had the better team. Those are the ones that leave emotional scars." Despite the fact that he had yet to win an NBA championship, West was still highly-regarded by his peers. Etter commented, "All the coaches and players who know Jerry think he's one of basketball's best. He's got everything. He can shoot, he has quick hands, and he's fast as lightening. Add courage and dedication to the game, and you've got Jerry West." In his career, West and the Lakers lost eight of nine times in the NBA Finals. As noted in his *NBA.com* biography, West described his feeling as "unbelievable frustration," and commented, "It would almost be better not to get to the playoffs at all than to go so far but no further."

### The 1971-72 Lakers

"The Los Angeles Lakers weren't getting any younger as they entered the 1971-72 season," noted the *NBA.com* website article "Lakers Win 33 in a Row." The team's core players were in their mid-30s, and Baylor would retire eight games into the season because of bad knees. However, the article noted, "New coach Bill Sharman, made several key moves to invigorate the Lakers." Prior to the start of the season, West had contemplated retirement. In his *NBA.com* biography, it noted that West was frustrated by the thought of injuries and losing in the finals. The biography recounted that "West returned and helped make history." On November 5, 1971, the Lakers began a 33 game winning streak. At year's end the team was 69-13, the best single-season record in NBA history. The Lakers, and West, were determined to win the NBA title.

In the finals against the Knicks, the Lakers won the series in five games. In "The NBA at 50" interview, West reflected, "The '71-72 season was the culmination of an awful lot of frustration for the people I had played with in Los Angeles. It was a year that everything just seemed to go perfectly. It was an opening in the clouds. There were no injuries at all. It was almost a perfect season."

However, West was disappointed with his own performance in the playoffs. In the *The Official NBA Encyclopedia*, edited by Jan Hubbard, West commented, "I played terrible basketball in the Finals, and we won. That didn't seem to be justice for me personally because I had contributed so much in other years when we lost. But maybe that's what a team is all about." West would play for two more seasons.

### Retired From the NBA

At the end of the 1972-73 season, the Lakers again lost in the NBA Finals. The following season, an injury sidelined West. He was only able to play in 31 games. In 1974, at the age of 36, West retired. At that time, he was the NBA's third-

leading career scorer, with 25,192 points in 932 games, and was the fifth player in NBA history to score 20,000 points. He would be inducted into the Naismith Basketball Hall of Fame in 1979. Despite the accolades, he was unhappy.

### Life Away From Basketball

With marriage to his wife, Jane, in trouble, and his career over, West was, according to Hoffer "essentially lost." A friend shared with Hoffer, "What would he do now that the cheering had stopped? He was searching for something. It was a depression that all great actors and athletes go through." West eventually turned to golf. Hoffer noted, "The golf was necessary therapy during a strange time, when West seemed frantic to shed his past life, layer by layer." He even gave away some of his personal possessions, both athletic awards and clothes.

In the midst of this turmoil, West met a young woman, Karen Bua. She shared with Hoffer, "He was just starting a divorce and was not a happy person. Very famous, had done everything and was just empty." The couple would later marry and have two sons.

After being away from the NBA for two years, West became the head coach of his Lakers in 1976. In three seasons, they went 145-101 and returned to the playoffs. Despite a winning record, West was not happy. Jack Kent Cooke, then owner of the Lakers, commented, "He was only moderately successful as a coach, because he could never understand why average players couldn't do the things he did so easily." Eventually, West quit, never to return to coaching. He became a successful scout for the Lakers, and was soon to find his niche in the NBA.

### Began Second Career as NBA Executive

In 1982, West became the general manager for the Los Angeles Lakers. Scharpling wrote that West "went on to become one of the masterminds of the Lakers' return to dominance in the '80s, first as a GM, then as a VP of Basketball Operations." West, always modest, told Scharpling, "I live my life by my instincts solely. That's the way I was as a player, and that's how I am as an executive." Hoffer noted that West was a man who took chances. In the 1989 NBA draft, he selected Yugoslavian player Vlade Divac, considered by some to be "strictly a novelty act." Instead, Hoffer noted, he "came up with Kareem Abdul-Jabbar's successor for the next decade." He also "took chances" on players like Byron Scott, A.C. Green, Mychal Thompson, and Orlando Woolridge. All proved to be good moves for West.

Refusing to take credit for the Lakers success throughout the 1980s and 1990s, West told Hoffer, "We've been fortunate." He attributed much of the team's success to Earvin "Magic" Johnson and Abdul-Jabbar. He added, "Two of the greatest players to ever play the game, on one team, and that rarely happens. Our job is so much easier when those people have been around."

In 1996, West made his biggest moves as an executive. He traded the popular Divac for 17-year-old Kobe Bryant. West then, as Earl Bloom described in a report for *Knight-Ridder/Tribune News Service*, "pursued Shaquille O'Neal

with the same guile and intensity he displayed in his Hall of Fame playing career." Bloom continued, "West was the one who wanted to take a last shot at the biggest prize on the NBA free-agent market." He would sign O'Neal to a seven-year, \$120 million contract.

Despite the addition of the two superstars, West still worried about the details. In an article for *Los Angeles Magazine*, Chris Connelly wrote, "Rest assured, in West's basketball world, there is no such thing as 'small stuff,' and he sweats every single bit of it—the players, the team, the coaches, the competition." However, it all paid off. After a shortened season due to a strike, the Lakers won the 2000 NBA championship. West took it in stride, and then announced his retirement a short time later. As noted in his official statement on *NBA.com*, West stated: "I have been blessed with the privilege to play for and work for the best athletic franchise in all of sports, and I will always treasure that experience. As I watch their progress with great interest and pride, I will remain their biggest fan."

Time will tell if West returns to the NBA in some capacity, but he will always be remembered. As his *NBA.com* biography states: "Combine a deadly jump shot, tenacious defense, obsessive perfectionism, unabashed confidence, and an uncompromising will to win, and you have Jerry West, one of the greatest guards in NBA history."

### Books

*Basketball—Professional Sports Team Histories*, Edited by Michael L. LaBlanc, Gale Research, 1994.  
 Etter, Les, *Basketball Superstars—Three Great Pros*, Garrard Publishing Company, 1974.  
*Great Athletes—The Twentieth Century*, Salem Press, 1992.  
*The Official NBA Encyclopedia*, Edited by Jan Hubbard, Doubleday, 2000.

### Periodicals

*Knight-Ridder/Tribune News Service*, May 22, 1995; July 19, 1996.  
*Los Angeles Business Journal*, February 9, 1999; August 14, 2000.  
*Los Angeles Magazine*, June 1998.  
*Sport*, October 1995.  
*Sporting News*, January 16, 1995; May 22, 1995.  
*Sports Illustrated*, April 23, 1990; August 17, 1992.  
*Time*, August 21, 2000.

### Online

"How West Won," *NBA.com*, [http://www.nba.com/features/IS\\_jerrywest\\_aprilmay00.html](http://www.nba.com/features/IS_jerrywest_aprilmay00.html) (January 28, 2001).  
 "Laker Legends: Jerry West" *Legends—Los Angeles Lakers*, [http://www.geocities.com/Colosseum/Field/1844/past\\_west.html](http://www.geocities.com/Colosseum/Field/1844/past_west.html) (January 25, 2001).  
 "NBA History: Lakers Win 33 in a Row," *NBA.com*, [http://www.nba.com/history/lakers33\\_moments.html](http://www.nba.com/history/lakers33_moments.html) (January 27, 2001).  
 "NBA History: Mr. Clutch Sinks a 60-Footer," *NBA.com*, [http://www.nba.com/history/mrclutch\\_moments.html](http://www.nba.com/history/mrclutch_moments.html) (January 27, 2001).  
 "NBA History: West Averages 46.3 PPG," *NBA.com*, [http://www.nba.com/history/65west\\_moments.html](http://www.nba.com/history/65west_moments.html) (January 27, 2001).

"NBA.com History: Player-Jerry West," *NBA.com*, [http://www.nba.com/history/west\\_bio.html](http://www.nba.com/history/west_bio.html) (January 27, 2001).

"NBA.com History: Top 10 Teams—'72 Lakers," *NBA.com*, <http://www.nba.com/history/72lakers.html> (January 27, 2001).

"Statement from Jerry West," *NBA.com*, [http://www.nba.com/Lakers/west\\_statement\\_000807.html](http://www.nba.com/Lakers/west_statement_000807.html) (January 27, 2001).

"The NBA at 50: Jerry West," *NBA.com*, [http://www.nba.com/history/west\\_50.html](http://www.nba.com/history/west_50.html) (January 28, 2001). □

## Billy Wilder

**Billy Wilder (born 1906) has been honored repeatedly as one of Hollywood's finest directors, writers, and producers. He created more than 50 films, encompassing such well-known comedies as *The Apartment* and *Some Like It Hot* and award-winning dramas including *Sunset Boulevard* and *The Lost Weekend*. While Wilder retired from filmmaking in the early 1980s, many of his films continue to be popular among filmgoers and are regarded as classics by critics and the film community.**

Billy Wilder was born Samuel Wilder in Sucha, part of the Austro-Hungarian Empire (now Poland), on June 22, 1906. His mother, Eugenia, had spent several years in the United States. Hollywood legend says that she nicknamed her son after Buffalo Bill. His father, Max, who operated cafes and hotels, often drifted from job to job and had financial problems. Young Billy spent much of his time playing billiards and observing the hotel and cafe patrons. He became very interested in the films of Ernst Lubitsch.

After spending several months at the University of Vienna studying law, Wilder left and became a reporter. Although he was quite a success at this job, one of his assignments failed when Sigmund Freud refused to be interviewed. In 1926 Wilder moved to Berlin and wrote film scenarios; to help make extra money after the death of his father, he also worked as a dance partner for hire at a local hotel. By 1933 Wilder had fled to Paris because his Jewish heritage and leftist politics put him at increasing risk in Germany. He had some success there in selling scenarios and had already directed a film when he was offered a minor contract in Hollywood. Wilder left Europe and lost touch with his family; it was not until after World War II ended that he would discover their fate.

### Found Long-term Writing Partner

Wilder knew little or no English, had little money, and had no home when he arrived in Hollywood; another Hollywood legend says that he lived in the ladies' room of a hotel. He was befriended by actor Peter Lorre and eventually found regular work, first at Twentieth Century Fox. One of his earliest film credits was as a writer for *Music in the Air* (1934), which featured the young actress Gloria Swanson; many years later she would become the star of Wilder's



great film *Sunset Boulevard*. Wilder then went to Paramount Studios, where he was able to work under his role model, Ernst Lubitsch, who then headed production.

At Paramount Wilder was assigned to co-write a script for *Bluebeard's Eighth Wife* (1936) with Charles Brackett, a law school graduate and former drama critic. The two men, according to *New Yorker* writer David Freeman, were complete opposites, often screaming at each other during work sessions and threatening to break up the team. However, *Bluebeard* marked the beginning of a long working relationship between Brackett and Wilder. They wrote 13 screenplays together, including the scripts for Lubitsch's hit comedy *Ninotchka* (1939), for which Wilder received his first Academy Award nomination (Best Writing, Screenplay).

### Turned to Directing

As Wilder became a more successful scriptwriter, he also began to direct the resulting films, perhaps because that way he could protect the integrity of what he had written. Again according to Freeman, director Wilder frequently shot a film before he had finished writing the script and improvised scenes along the way, thus making it much more difficult to replace him. The Wilder-Brackett team carried on (with Wilder directing, Brackett producing, and both writing the scripts) until they finally dissolved their partnership after completing work on *Sunset Boulevard* in 1950.

High points of Wilder's early films include *Double Indemnity* (1942) and *The Lost Weekend* (1945). In *Double Indemnity*, a classic of the film genre called *film noir*, Barbara Stanwyck and insurance agent Fred MacMurray murder her husband to get the proceeds of an insurance policy. Brackett so much disliked the story that detective author Raymond Chandler had to replace him as scriptwriter. Brackett returned to cowrite *The Lost Weekend*, which starred Ray Milland as an alcoholic who hits bottom. For this film, Wilder won his first two Academy Awards: Best Director and Best Writing, Screenplay. The film also was named Best Picture and Milland Best Actor. However, around this time Wilder's marriage to his first wife, Judith, fell apart. After an affair with actress Doris Dowling, he married another actress, Audrey Young. Both women had appeared in *The Lost Weekend*, but Young's footage was edited out of the final version.

After completing *The Lost Weekend*, Wilder accepted an appointment to the Army's Psychological Warfare Division in Germany. His difficult task was to try to determine which members of the German film and theater industry during World War II would be acceptable to help rebuild it. Freeman tells how Wilder had to interview one ex-Nazi SS officer who had played Jesus Christ in a prewar play and wanted to do so again. Wilder reportedly said that the actor could play the role only if real nails were used during the crucifixion. While in Germany, Wilder finally had discovered the fate of his family: his mother, grandmother, and stepfather all had died at Auschwitz.

The experience in Germany certainly affected two of Wilder's later films, both set in Germany. *A Foreign Affair* (1948), on its surface a comedy about a romantic triangle in postwar Berlin, won Wilder an Academy Award nomination for its screenplay. However, the film was withdrawn from circulation after being criticized in Congress for being vulgar and joking about the war's aftermath. *Stalag 17* (1953) starred William Holden as a con artist in a prisoner of war camp in Germany, and won Wilder another Academy Award nomination, this time for best director.

### String of Hits 1950-1960

In 1950 Wilder and Brackett co-wrote and Wilder directed *Sunset Boulevard*, which is widely regarded as the greatest of Wilder's films, as well as one of the best depictions of the Hollywood film industry. The story of aging film star Norma Desmond (played by aging film star Gloria Swanson) is told by her lover, a young screenwriter played by William Holden, who is shown drowned in a swimming pool as the film begins. Some film executives were furious at Wilder for his sarcastic and dark portrait of Hollywood, summarized in Desmond's classic line, "I am big. It's the pictures that got small." But *Sunset Boulevard* was a huge success; it was nominated for eleven Academy Awards, and Wilder won Oscars for Best Writing, Story and Screenplay. However, this film also marked the end of the Wilder-Brackett writing team. In his future films Wilder first worked independently and then teamed up in 1956 with I.A.L. Diamond, with whom he collaborated until Diamond's death in 1988.

After the success of *Sunset Boulevard*, Wilder created a string of hit films during the 1950s. These included the original *Sabrina* (1954), a romantic comedy starring Humphrey Bogart, Audrey Hepburn, and Wilder regular William Holden; *The Seven Year Itch* (1955), another comedy perhaps best remembered for the scene in which Marilyn Monroe's dress is blown over her head by the draft from a subway grate; and *Witness for the Prosecution* (1958), a courtroom drama based on an Agatha Christie play and starring Charles Laughton, Marlene Dietrich, and Tyrone Power.

*Some Like It Hot* (1959) tackled two unlikely subjects for a comedy of the time: mob violence and cross-dressing. Wilder was discouraged from making the film by many of his friends; according to Maurice Zolotow in *Billy Wilder in Hollywood*, producer David O. Selznick said bluntly that, "Blood and jokes do not mix." However, the final product was a great success. Band musicians Tony Curtis and Jack Lemmon witness a mob massacre in the late 1920s and hide, dressed as women, in a traveling all-woman band whose vocalist is ukulele-playing Marilyn Monroe. Curtis, re-disguised as a wealthy playboy, becomes involved with Monroe, while Joe E. Brown, an aged and slightly daft millionaire, pursues Lemmon (in female disguise). Forty years later, the American Film Institute selected *Some Like It Hot* as the funniest American film ever made.

In *The Apartment* (1960), Wilder again called on Jack Lemmon, teaming him with an actress who had not yet become a major star, Shirley MacLaine. Lemmon is a clerk who lends his apartment to executives in his firm for secret meetings with their girlfriends. MacLaine is an elevator operator who becomes suicidal after being rejected by one of the executives. Despite its subject matter (once again, shocking for a film of the time), *The Apartment* was enormously popular. Wilder won Oscars for Best Director, Best Picture, and (with cowriter I.A.L. Diamond) Best Writing, Story and Screenplay.

### Received Many Honors after Retirement

Through the 1960s and 1970s, Wilder worked on several more films, although none was as successful as his previous ones. They included: *One Two Three* (1961); *Irma La Douce*, which once again paired Shirley MacLaine and Jack Lemmon (1963); *The Fortune Cookie* (1966); *The Private Life of Sherlock Holmes* (1970); and *The Front Page* (1974). Wilder directed his last film, *Buddy Buddy*, in 1981; it was not a critical or commercial hit. He consistently denied that he had retired and continued to meet with his longtime collaborator, I.A.L. Diamond, to discuss new ideas for films, but none moved beyond the discussion stage. Wilder told *New York Times* reporter Michiko Kakutani in 1996 that the only film of recent years that he had found "stimulating" was *Forrest Gump*.

Even though he no longer released new material, Wilder's existing body of films continued to be acknowledged as among Hollywood's finest and wittiest work. In 1982 he was honored at a gala event by the Film Society of Lincoln Center. During a pre-event interview, he told the *New York Times* what makes a film successful: "The basic

point is to bring them in and keep them awake. The picture where it starts at 8, and at midnight I look at my watch and it's 8:15—that's the kind of picture I hate." The Academy of Motion Picture Arts and Sciences presented him the Irving G. Thalberg Memorial Award in 1988, in recognition of his long and outstanding filmmaking career. And, in 1993, Andrew Lloyd Webber created a hit Broadway musical based on *Sunset Boulevard*. In January 2000 Wilder, then ninety-three, appeared at an event held in his honor by the Academy of Motion Picture Arts and Sciences, in preparation for a retrospective show of his films.

The American Film Institute lists four of Wilder's films among its top 100 films of all time: *Sunset Boulevard*; *Some Like It Hot*; *Double Indemnity*; and *The Apartment*. In *Conversations with Wilder*, fellow filmmaker Cameron Crowe summarized Wilder's body of work: "Billy Wilder's work is a treasure trove of flesh-and-blood individuals, all wonderfully alive. In his canon of work are fall-down-laughing comedies, stinging character studies, social satire, true suspense, aching romance, the best in life, the sad and the giddy, the ironic and harrowing all have equal weight in his work."

### Books

- Crowe, Cameron, *Conversations with Wilder*, Random House, 1999.
- Sikov, Ed, *On Sunset Boulevard: The Life and Times of Billy Wilder*, Hyperion, 1998.
- Wood, Tom, *The Bright Side of Billy Wilder, Primarily*, Doubleday, 1970.
- Zolotow, Maurice, *Billy Wilder in Hollywood*, Putnam's, 1977.

### Periodicals

- New York Times*, May 4, 1982; May 10, 1991.
- New York Times Magazine*, July 28, 1996.
- New Yorker*, June 21, 1993.
- Variety*, April 22, 1996; January 17, 2000.

### Online

- Academy of Motion Picture Arts and Sciences, <http://www.oscars.org> (November 7, 2000).
- AFI's 100 YEARS, 100 MOVIES (America's Greatest Movies), <http://www.filmsite.org/afi100films.html> (November 7, 2000).
- "Billy Wilder," *Internet Movie Database*, <http://www.imdb.com> (November 3, 2000).
- "The Top 100," *American Film Institute Online*, <http://www.afionline.org/100laughs/list.asp> (November 6, 2000). □

## William of Sens

When a fire ravaged a large part of Canterbury Cathedral in England shortly after the death of Thomas a Becket, archbishop of Canterbury, during the twelfth century, it was the Frenchman William of Sens (died 1180) who was commissioned to repair the structure. He brought with him the Gothic style

**of architecture that was popularized first in France and then spread quickly throughout Europe.**

The exact date and location of William of Sens's birth are unrecorded, but he is associated with the town of Sens in northern central France on the Yonne River. Sens has a rich religious history as an uninterrupted archiepiscopal see (a cathedral town under the authority of an archbishop) from the eighth century until 1622, when the city became a separate archdiocese. In the early sixteenth century, it was a bastion of the Holy League, a union of three Catholic powers (Spain, Venice, and the Roman papacy) that fought Turkish dominance in the Mediterranean.

William of Sens is credited with being largely responsible for the construction of one of the oldest Gothic cathedrals, the Cathedral of Saint-Etienne, which was begun in 1140. In addition, his name is associated with Notre Dame Cathedral in Paris, as well as with cathedrals at Reims and Soissons. As a master mason and architect, William is also identified with other buildings in France such as Valenciennes.

### Gothic Architect

William of Sens lived during the period when Gothic architecture flourished, a period that stretched from the mid-twelfth century through the end of the fifteenth century. He is identified as the true mason of the Gothic Age, working with wood as well as stone. In his designs he used the pointed arches, flying buttresses, and rib vaulting so well known in Gothic architecture, emphasizing vertical lines of tall pillars and spires to create greater interior heights. It was his mastery of this style that brought him to the attention of those seeking to repair Canterbury Cathedral.

### Thomas a Becket

Were it not for a confrontation between Archbishop Thomas a Becket and King Henry II, William of Sens would not have journeyed to England, and Canterbury Cathedral might be a much different building than it is today. In December 1170 Becket quarreled with King Henry II. Later that month, on December 29, four ambitious knights interpreted this quarrel as a sign from Henry to do away with the archbishop. They killed him in the cathedral. Immediately following the murder, miracles were reported to have occurred at Becket's tomb. Four years after Becket's death, a fire destroyed the quire (choir) and apse (recessed section) comprising the entire east wing of the cathedral except the outer walls. Much of the cathedral was already in a state of disrepair, and the monks took advantage of the situation to contract for major repairs so badly needed.

William of Sens was already a well-known architect and was one of several contacted to examine the cathedral and make proposals for its repair. He made the startling recommendation of tearing down the damaged area and replacing it with something new. William was subsequently chosen to complete the work, and he elected to use the new Gothic style to replace the older Norman style of architecture.

According to the records of the monk Gervase of Canterbury, "Dismissing the rest they chose him for the undertaking. . . . He made the most ingenious machines for loading and unloading ships, and for drawing the mortar and stones. He delivered also to the masons models in wood for cutting the stones." William's design for Trinity Chapel included a new shrine to Thomas a Becket. The design featured a chapel off the quire with a circular chamber at its eastern end. This chamber is referred to as the *Corona*, named for the relic of Becket's head.

### Work on Canterbury Cathedral

In 1175 William was given the task of repairing the foundation of the choir and extending it eastward. The original Romanesque style was replaced by one of the first Gothic expressions in England. William is credited with planning the entire quire and surrounding structural alterations. This included the flying buttresses similar to those in the Notre Dame Cathedral. The repairs are most notable for their length and height, culminating in the Trinity Chapel at the east end of the quire. The quire and chapel were completed with a three-story elevation with vertical shafts and horizontal stringcourses. It is here that William introduced vaulting in six parts forming the high arcades. He also introduced stone columns in contrasting colors.

### A Tragic Fall

In 1178 or 1179, during the reconstruction of Canterbury Cathedral, William of Sens toppled from the scaffolding above the altar. He was injured seriously. Although he attempted to direct work from his sickbed, he soon had to give up the project and return to France. William of Sens died in France on August 11, 1180, as a result of the injuries he had sustained in his fall. His successor, William the Englishman, appears to have remained true to Sens's plans, completing the eastern portion of the church in 1184.

### His Legacy

Although William of Sens did not live to see the cathedral completed, his work was naturalized as "English Gothic," taking its beginnings from French design and French materials. His design for the shrine of Thomas a Becket remains one of the most visited sites in the world, known both for its historical significance as the place of Becket's death, as well as for its beauty and serenity.

### Books

Kostof, Spiro, *A History of Architecture: Settings and Rituals*, Oxford University Press, 1995.

Pevsner, Nikolaus, John Fleming, and Hugh Honour, *A Dictionary of Architecture*, rev. ed., Overlook Press, 1966.

### Online

"The Canonization of Becket and Later Rebuilding Projects," *Canterbury Cathedral—A Virtual Tour*, <http://www.faculty.de.gcsu.edu/~dvess/ids/medieval/canterbury/canterbury.shtml> (January 21, 2001).

"Canterbury Cathedral," *Encarta Online*, <http://encarta.msn.com/index/conciseindex/ad/print.asp?8=761580848=0=1> (January 21, 2001).

- "Canterbury Cathedral," *Medieval Cathedrals in England and Wales A-Z Guide*, [http://britainexpress.com/Where\\_to\\_go\\_in\\_Britain/Cathedrals/Cathedrals1.htm](http://britainexpress.com/Where_to_go_in_Britain/Cathedrals/Cathedrals1.htm) (February 4, 2001).
- "The Cathedral," *The Online Guide to Canterbury*, <http://thycotic.com/guide/sights/cathedral.html> (January 21, 2001).
- "Gothic Architecture," <http://www.homebase-bbs.com/public/and/unit3/gothic.htm> (February 4, 2001).
- "Gothic Architecture," *Hutchinson Dictionary of the Arts*, 1998, accessed through <http://www.elibrary.com/> (February 4, 2001).
- "Gothic Architecture and Art," *Columbia Encyclopedia*, 5th ed., 1993, accessed through <http://www.elibrary.com/> (February 4, 2001).
- "Quire," *Canterbury Cathedral Official Website*, <http://www.canterbury-cathedral.org/histinterior4.html> (January 21, 2001).
- "Sens," *Columbia Electronic Encyclopedia*, <http://www.infoplease.com/ce6/world/A0844434.html> (February 4, 2001).
- TimeRef*, <http://www.btinternet.com/~timeref/hplc.htm> (February 4, 2001).
- "William of Sens," *Catholic Encyclopedia*, <http://newadvent.org/cathen/15638b.htm> (January 18, 2001).
- "William of Sens," *Encyclopaedia Britannica*, [Britannica.com.htm](http://britannica.com.htm) (January 7, 2001).
- "William of Sens," *William of Sens and.htm* (January 17, 2001).

□

## Louis Wirth

**Louis Wirth (1897-1952) was a sociologist from the "Chicago school" tradition. His research was concerned with how Jewish immigrants adjusted to life in urban America, as well as the distinct social processes of city life. Wirth was a strong supporter of applied sociology, taking the knowledge offered by his discipline and using it to solve real social problems.**

Louis Wirth was born on August 28, 1897 in the small village of Gemuden, Germany. He was one of seven children born to Rosalie Lorig and Joseph Wirth. Gemuden was a pastoral community and Joseph Wirth earned a living as a cattle dealer. The Wirths were one of only a few Jewish families in the village. Both of his parents were active in their religious community.

Wirth and his siblings attended the local Protestant elementary school and were taught religion and Hebrew privately. Most children from Gemuden went to work after finishing the eighth grade and very few had the opportunity to go on to secondary school. Wirth's mother strongly supported her children's education. When Wirth finished grade school, his mother arranged for her brother, Isaac Lorig, to take Wirth and his older sister, Flora, to the United States where her four brothers lived so they could continue their education. In 1911 Wirth and his sister moved to Omaha, Nebraska to live with Emanuel Lorig and his family. There they learned English and went to high school. Wirth worked

in his uncle's dry goods store. This uncle expected him to help with the business once he graduated from high school. Instead, Wirth won a regional scholarship to the University of Chicago and went to college.

### Sociological Training

Wirth began his college career as a pre-medical student, but soon realized he was more interested in sociology. At that time the famous "Chicago school" of sociology was just beginning. Wirth was educated by the founders of this classical school—Albion Small, W.I. Thomas, Robert Park, Ernest Burgess, and George Mead. They developed a particular approach to urban sociology, focusing especially on immigration and assimilation, that strongly shaped Wirth's academic career. Wirth embraced the city of Chicago and took advantage of the cultural, educational, and political resources that it had to offer. During this time he developed his political beliefs, which were decidedly anti-capitalist. He also reconsidered his religious beliefs, declaring himself to be an atheist. Wirth served as president of the Cosmopolitan Club, which was concerned with world political and social issues. In 1917 he met Mary Bolton, a student from Paducah, Kentucky, whom he would eventually marry.

Wirth received his Bachelor's degree in 1919 and began to work full time as a social worker for Jewish Charities of Chicago. He was still enrolled at the University of Chicago as a part-time graduate student. In 1922 he returned to Germany for the first time since 1911 and brought Mary Bolton with him to meet his family. There was some tension in the family towards the interfaith relationship, but they soon learned to like his future wife. When the couple returned to the United States they were married on February 14, 1923. Wirth then became a full-time graduate student while his wife worked as a social worker. He completed his master's degree in 1925 and his dissertation a year later.

### Researched Jewish Immigration

Wirth's graduate work explored how Jewish immigrants assimilated into American culture. He used his position at the Jewish Charities in Chicago to interview Jewish families and try to understand how they adapted to urban American life after living in rural European communities. Wirth concluded that there was "cultural conflict" between old values and new experiences that led to social disorganization among Jewish immigrant communities. According to biographer Roger A. Salerno, Wirth's graduate work was his "first significant expression of interest in urban social disorganization, ghetto life, assimilation, consensus, and urban cultural conflict."

Wirth pursued these themes in his doctoral dissertation on the Jewish ghetto. He examined the historical development of this ethnically segregated enclave in the city and the sociological organization of ghetto life. In an article entitled "The Ghetto" published in the *American Journal of Sociology* in July 1927, Wirth wrote that "The ghetto exhibits at least one historical form of dealing with a dissenting minority within a larger population, and as such has served as an instrument of control." This work was published as a book called *The Ghetto* in 1928 and was Wirth's only authored

book published during his academic career. It was well received in the academic community as representative of the "Chicago school" and an important work in Jewish studies.

### Academic Career

Wirth began teaching part-time at the University of Chicago as a graduate student in 1925 and remained there until 1928. When he did not receive a permanent teaching position at Chicago he moved with his wife and daughter, Elizabeth, to New Orleans, where he got a teaching position at Tulane University. Wirth remained at Tulane until 1930, but his contract was not renewed after that. It is believed that Wirth's progressive views on racial assimilation did not sit well with conservative southern university officials.

Wirth spent the following year traveling in Europe on a fellowship from the Social Science Research Council. He was studying the sociology of knowledge and met with some of the leading European scholars of that time, including Karl Mannheim. While he was in Europe, his former mentor, Robert Park, became acting chairperson of the Department of Sociology at the University of Chicago. He offered Wirth a faculty position. In 1931 Wirth became an assistant professor at the University of Chicago. That same year he also served as the secretary and treasurer of the American Sociological Association and the managing editor of the *American Journal of Sociology*. In 1932 Wirth and one of his graduate students, Edward Shils, finished a translation of Karl Mannheim's book *Ideology and Utopia*.

In 1938 Wirth and his assistant, Margaret Furez, compiled the first *Local Community Fact Book* containing important census data on 75 Chicago communities. The book became instantly popular among academics and public officials alike. The same year Wirth published his most famous paper, "Urbanism as a Way of Life," in the *American Journal of Sociology*. This paper was Wirth's only published attempt at proposing a formal theory of urbanism. It combined both European and Chicago School perspectives to analyze urbanization as a social process. According to biographer Roger A. Salerno, "It represents the epitome of classic urban sociological literature. By utilizing the concepts, methods, and pragmatic posture of his teachers, Louis Wirth attempted to create a theory of urbanism which would be representative of an urban sociological paradigm in the tradition of the Chicago school." In this essay Wirth wrote that "The distinctive feature of man's mode of living in the modern age is his concentration into gigantic aggregations around which cluster lesser centers and from which radiate the ideas and practices that we call civilization."

In this essay Wirth explained that size, density, and heterogeneity defined the city. It was these three features that created the specifically urban way of life. Like the classical theorists Max Weber and Emile Durkheim, Wirth believed that the development of institutions and bureaucracies created an impersonal, segmented, and superficial lifestyle which would lead to personal and community breakdown. Because of these views, the "Wirthian" perspective became associated with a pessimistic type of urban theory. However, Wirth himself also saw beneficial features

of urban life. In particular he noted that the city afforded a great deal of personal freedom and mobility that led to greater opportunities for personal expression and creativity.

### Family and Community Life

As Wirth was establishing his academic career in Chicago, he was also trying to help his family escape Nazi Germany. At this time Wirth and his wife lived in a small apartment near the university with their two daughters, Elizabeth and Alice. In the late 1930s the Wirths sponsored the immigration of 13 relatives from Germany, including Wirth's parents. The family members lived in the Wirth apartment until they were able to establish themselves. In 1941 the Wirths were finally able to buy a house.

Aside from Wirth's academic responsibilities, he was also involved in citizen's groups and government projects. He believed that sociological knowledge should be applied to practical problems and had a strong sense of social commitment. He spent more of his time speaking in public than in writing. He regularly attended professional meetings, conferences on housing, public hearings, and various community group meetings. He was an active member of the Urban League, the American Jewish Committee, president of the University of Chicago Quadrangle Club, and president of the Society for Social Research. He also belonged to the Public Administration Clearing House, the American Society of Planning Officials, and the National Association of Inter-group Relations.

Since Wirth was so interested in putting sociology into practice, it is no surprise that he was a strong supporter of urban planning. It was a way in which Wirth could take the knowledge gained through sociological research and use it to solve urban problems, such as housing development, zoning, and other land use issues. Urban planning became popular during the Roosevelt administration, it was recognized that engineers and architects alone were not sufficient to solve urban problems and social scientists were welcomed into the arena. In 1944 Wirth became the director of planning for the Illinois Post War Planning Commission.

### End of Career

Wirth was not comfortable with theory construction and did not pursue the ideas he put forth in "Urbanism as a Way of Life." Instead he focused more attention on public speaking and applied sociology. He continued to be heavily involved in his professional responsibilities, serving as president of the American Sociological Association in 1947 and the first president of the International Sociological Association in 1950. Wirth died of a heart attack in Buffalo, New York on May 3, 1952, while participating in a conference on race relations and community living.

Wirth was a product and a pillar of the Chicago school of urban sociology. He was well respected as a scholar, teacher, and social activist. His early work on Jewish immigration is a classic example of this tradition and made a significant contribution to both sociology and Jewish studies. He was a strong proponent of the human ecology perspective on urban sociology and trained a generation of sociologists in this tradition. His best-known work, a theo-



retical article on urbanism, shaped the direction of urban sociology. However, it is ironic that he is best known for his theoretical work when, in fact, his lifelong focus was on applied sociology. He believed in using knowledge to solve real problems and was himself an active and dedicated community member.

### Books

Salerno, Roger A., *Louis Wirth: A Bio-Bibliography*, Greenwood Press, 1987.

Wirth, Louis, *The Ghetto*, University of Chicago Press, 1928.

Wirth, Louis, *On Cities and Social Life: Selected Papers*, University of Chicago Press, 1964.

### Periodicals

*American Prospect*, May 22, 2000. □

## Charles Frederick Worth

**Credited with developing the bustle, Charles Frederick Worth (1825-1895) rose from humble beginnings to create the first fashion empire. He dictated his style preferences to the crowned heads of Europe during the mid-nineteenth century.**

Charles Frederick Worth was the founder of Paris *haute couture*—high fashion. A talented designer with a savvy head for business, his fashion empire spanned the nineteenth century, growing amid the increasing opulence, wealth, and luxury of France's Second Empire, the reign of Britain's Queen Victoria, and America's Gilded Age. Raised in the Age of Reason, he used the technology of the industrial era to transform the decoration of women from a cottage-based craft into a major industry.

### Family's Poverty Results in Unexpected Career

Worth was born October 13, 1825, in Bourne, Lincolnshire, England. While he was descended from several generations of attorneys and was raised to assume a life of affluence, his comfortable lifestyle was disrupted by his father's alcoholism when Worth was eleven. Losing everything, his mother, Mary Worth, was forced to clean houses to support her family, while Charles was also forced to go to work. Apprenticed to a printer but finding the work not to his taste, Worth left after one year and in 1838 went to work as a bookkeeper for the London yard goods firm of Swan and Edgar. Like many such firms, Swan and Edgar supplied ladies with fabric yardage that would be taken to a dressmaker to create one-of-a-kind gowns and other garments. Worth later moved to Lewis and Allenby, London silk merchants, where he stayed until 1845. At Lewis and Allenby Worth learned about textiles. He also observed the social intricacies of fashionable society, and vowed to be a part of it someday. During his time off from work, the young ap-



prentice visited art galleries, where his study of the clothing of past eras would influence his later designs.

After moving to Paris in 1845, Worth found work with a fabric and dress accessories shop, Maison Gagelin. In his shop M. Gagelin employed young women to model shawls, cloaks, and other accessories for his clients. Worth fell in love with one of these models, Marie Vernet, and the two were eventually married. They would go on to have two sons, Gaston and Jean-Philippe.

Desiring that his wife look her best, Worth designed and constructed several simple yet elegant gowns for Marie to wear while modeling Gagelin's wares. Soon customers were asking Worth to make gowns for them as well. He proposed a scheme whereby he would design and construct several dresses from Gagelin silks that could be sold alongside the shop's dress goods, but Gagelin was skeptical, as purchasing ready-made garments was unheard of in the mid-nineteenth century. However, Worth's talent as a dressmaker and designer was soon the talk of Paris, and fashionable ladies flocked to view his latest creations. Denied a partnership by Gagelin, Worth eventually broke out on his own and started his own ladies' dress shop, Worth and Bobergh, in 1858. His financial partner was Otto Bobergh and the two men located their shop in Paris on the rue de la Paix.

### Age of Conspicuous Consumption

The economic advances of the Second Empire (1852-1870), ruled over by Napoleon III and his wife, the Empress

Eugenie, provided many in the French upper class the economic means to afford the luxury goods Worth produced. In the United States, as well, the mid-1800s saw the growth of industrial empires whose creators demanded luxurious, ostentatious surroundings. Mimicking the royal families of Europe, these “nouveau riche” worshiped all things European. Architecture of the period reflected this trend, and by the 1880s lavish Italianate “cottage” studded the residential neighborhoods of posh Newport, Rhode Island, their polished marble walls lined with gilt-framed works by the Old Masters.

While the male members of this new upper class attended to business, their wives and daughters spent their time calling on friends, attending parties, and planning shopping trips to Paris. In addition to embodying the era's conspicuous consumption, the less a woman appeared to be capable of performing any useful task, the more positively it reflected upon her husband's social standing. Restricted by a tightly laced, constricting corset that made breathing difficult since the age of eight, the average young lady of fashion was burdened as well by several layers of petticoats; a hairstyle that required painstaking attention; a crinoline constructed of watch-spring wire that prevented her from either sitting comfortably on a chair or passing through a narrow doorway; a tightly fitted bodice the sleeves of which often prevented her from raising her arms; and the necessity of changing her garments several times a day as required by the meal to be served, the company to be entertained, or the function to be attended.

Even more than today, the clothes a woman wore were crucial in retaining and even elevating her position in society. Every activity required a particular mode of dress, from the reception gown for greeting guests at home, to visiting dresses, to dinner dresses, lavish evening gowns, and fanciful gowns specially designed for costume balls. And there was also fashion's cardinal rule—never wear the same dress twice—which meant that the average woman of the upper classes donned a minimum of two new dresses each day.

Breaking the monotony of social outings and needlework for wealthy women was the arrival, each fashion season, of a new trunk full of clothes from Paris. Appearing in a gown made in Paris guaranteed that one would appear distinguished, and Paris fashions were commonly seen gracing everything from debutante balls to weddings. In addition to their stylish designs, ordering garments was simplified in France, and high-quality fabrics and trims, a good fit, good construction were available for far less than they were in New York City.

### Courts Favor with European Royalty

Even before opening his shop, or atelier, Worth knew he needed to attract the patronage of women in court circles in order to become a success. He decided to earn the goodwill of the fashion-conscious Princess Pauline von Metternich, who was married to the Austrian ambassador to France. Gaining the princess as a client would allow Worth to gain the patronage of the equally fashionable Empress Eugenie. His plan proved successful, and by 1864 Worth had become couturier to the French court.

Among Paris dressmakers, Worth soon reigned supreme. The street in front of 7 rue de la Paix was lined with carriages from morning to night, and the shop itself buzzed with the gossip of fashionable women from around the world. Worth could often be found at the center of a rapt audience of these women, garbed as they were in colorful, rustling silks. He would often call certain women forward to critique their ensemble, finding favor or criticizing as was his whim. The Empress Eugenie joined her court in frequenting his shop, and other royal clients included Queen Victoria and the Empress Elizabeth, for whom he designed a dress for her coronation as Queen of Hungary. Among the American women who patronized his shop in later years were the Astors, Carnegies, Rockefellers, and Vanderbilts, who all made frequent appearances. While many of Worth's clients would spend upwards of \$10,000 a year on their wardrobes, still others were willing to spend that same sum on a single ball gown.

### From Designer to Innovator

In producing the 6,000 to 7,000 gowns and 4,000 outer garments he designed and sold each year, Worth used the most beautiful fabrics he could find. In an effort to support the textile industry in his own country, he often looked to French weavers. The famed silk mills of Lyon frequently submitted samples of their new patterns for Worth's approval, and his fabric orders would sometimes determine a weaver's production output for an entire year. Worth's attention to quality and detail was painstaking; the inside of his garments was often finished equally as well as the outside.

While much of Worth's success was due to the fact that he used the best fabrics and employed the best dressmakers in Paris, he also made use of his artistic genius. He is credited with popularizing the cage crinoline—a bell-shaped framework formed from a series of horizontal hoops and suspended with tapes from the waist to support the weight of overskirts—as well as for its demise in favor of a half-crinoline that pushed the skirt's fullness to the back. The half-crinoline eventually became the bustle, a fixture in women's dress during the 1870s and 1880s.

Crinolined ball gowns were among Worth's most popular creations. He is also credited with creating the first walking skirt by trimming enough length from the hem of a dress to allow the skirt to clear the ground and not drag in the mud. He favored jaunty hats over the bonnets that had been in favor for years, and designed several hats in his shop.

Some of Worth's innovations were technical in nature. He sped up the patternmaking process by creating a system of standardized, interchangeable components—from sleeves to collars to bodices—so that a single pattern piece could be used in numerous garments. He also used the newly invented sewing machine as much as possible, relying on hand sewing for only delicate finish work. Rather than shunning modernization, he willingly used the laces, ribbons, and other trims produced by machine instead of by hand and readily available in quantity.

Worth was also the first designer to organize and show an entire collection of clothes in advance. The first man to become prominent in the field of women's fashion, he was also the first to use young women as models for entire outfits. In addition to his private customers, Worth's clientele included American seamstresses who purchased garments to copy for ladies longing for the Worth look but unable to travel to Paris. In this way, Worth pioneered the technique of designing dresses for the purpose of being copied in French workrooms and then distributed throughout the world.

Practical as well as fanatical, Worth realized that women have as great a need for housecoats, maternity dresses, and mourning clothes as they had for fancy evening dresses, and he designed fashionable clothing for even these mundane uses. He also was sensitive to the likes and dislikes of his clients, creating designs based upon the individual woman rather than the prevailing trend. His clients included leading members of the Comedie Francaise, whom Worth costumed based on the works of Titian, Rembrandt, and other artists.

### Business Outlives French Empire

In 1870 the Second French Empire fell, forcing Empress Eugenie into exile in England. During France's attack by allied European forces, Maison Worth was transformed into a hospital for injured French soldiers. In January of 1871 France surrendered to the Prussian army, but during the civil unrest that followed many French symbols of the aristocracy were destroyed.

After the French government had been restored, the doors to luxurious Parisian shops bearing such names as Worth and Cartier once again opened their doors. As most of the ladies of the French court had long since departed, clients of Maison Worth now numbered chiefly British, American, Swedish, Italian, and Russian. Fortunately for Worth, the spending habits of these foreign women caused a boom in business. His prices became even more exorbitant, and his income of \$80,000 a year was an enormous sum by nineteenth-century standards. Business flourished and by 1871 Worth had 1,200 people in his employ.

### Talent Surpassed Only by Ego

Worth's sense of style and his head for business were enhanced by an unusually large ego. Probably the first dressmaker to sign his name to his work by using a label sewn into the garment, he nurtured the mystique that made him a legend to his fans, adopting autocratic mannerisms. He also affected a Bohemian style in his own wardrobe, often appearing in a black skullcap. Caricatures of Worth appear in many novels of the period, including works by Emile Zola, Henry James, and Edith Wharton.

In keeping with his desire for social status, Worth devised his own coat of arms, which he had worked into the

iron gates of his home in Suresnes. The design featured a stylized cornflower of blue and a snail.

Worth's combination of genius and arrogance captured the imagination of his female clients, and he soon had absolute control over the world of Paris fashion. While his genius was lauded during his lifetime, some critics commented on his high prices—often higher still for Americans—and his dictatorial nature. In part as a reaction to his ornate fashions, advocates of a reformed "aesthetic" dress began to call for the abolition of the corset, crinoline, and other unnatural paddings. Instead they advocated the wearing of undecorated dresses sewn from modest fabrics and designed to drape loosely from the shoulders to the floor.

### The Death of Worth

While his works continued to be featured in *Harper's Bazaar*, by the 1890s Worth had lost his monopoly on French fashion. Designers such as Paquin, Doucet, and Felix soon began to find favor with the wealthy set. Upon his death in Paris on March 10, 1895, Worth's shop was turned over to his sons. Jean-Philippe, in addition to being raised in atelier Worth, had studied painting, while Gaston, Worth's older son, competently handled the businesses finances.

The two brothers proved successful in continuing their father's success, albeit on a less intensive scale. Creating elegant gowns in the tradition of his father, Jean-Philippe was also responsible for costuming some of the era's most notable actresses, who still relied on private dressmakers rather than theatrical designers for the clothing they donned on stage.

At the turn of the century the reputation of Maison Worth declined in favor of such young, innovative designers as Paul Poiret, who discarded corsets in favor of the straight, waistless styles that would come to characterize women's fashions during the 1920s. Following World War II, Jean-Philippe confined himself to making gowns for state occasions attended by the few remaining members of the European nobility. He and his brother were patronized by an increasingly older clientele until, in 1956, the House of Worth closed its doors. Today Worth's gowns can be viewed at museums around the world, including the Metropolitan Museum of Art and the Costume Institute.

### Books

- De Marly, Diana, *The History of Haute Couture, 1850-1950*, Holmes and Meier, 1980.
- Ewing, Elizabeth, *History of Twentieth Century Fashion*, third edition, Costume and Fashion Press, 1992.
- Paris Fashion*, edited by Ruth Lynan, M. Joseph, 1972.
- Saunders, Edith, *The Age of Worth*, Indiana University Press, 1955.
- Worth: *The Father of Haute Couture*, [London], 1980.
- Worth, Jean Philipe, *A Century of Fashion*, translated by Ruth Satl Miller, Little, Brown, 1928. □

## HOW TO USE THE *SUPPLEMENT* INDEX

The *Encyclopedia of World Biography Supplement* Index is designed to serve several purposes. First, it is a cumulative listing of biographies included in the entire second edition of *EWB* and its supplements (volumes 1–21). Second, it locates information on specific topics mentioned in volume 21 of the encyclopedia—persons, places, events, organizations, institutions, ideas, titles of works, inventions, as well as artistic schools, styles, and movements. Third, it classifies the subjects of *Supplement* articles according to shared characteristics. Vocational categories are the most numerous—for example, artists, authors, military leaders, philosophers, scientists, statesmen. Other groupings bring together disparate people who share a common characteristic.

The structure of the *Supplement* Index is quite simple. The biographical entries are cumulative and often provide enough information to meet immediate reference needs. Thus, people mentioned in the *Supplement* Index are identified and their life dates, when known, are given. Because this is an index to a *biographical* encyclopedia, every reference includes the *name* of the article to which the reader is directed as well as the volume and page numbers. Below are a few points that will make the *Supplement* Index easy to use.

**Typography.** All main entries are set in boldface type. Entries that are also the titles of articles in *EWB* are set entirely in capitals; other main entries are set in initial capitals and lowercase letters. Where a main entry is followed by a great many references, these are organized by subentries in alphabetical sequence. In certain cases—for example, the names of countries for which there are many references—a special class of subentries, set in small capitals and preceded by boldface dots, is used to mark significant divisions.

**Alphabetization.** The Index is alphabetized word by word. For example, all entries beginning with *New* as a separate word (*New Jersey*, *New York*) come before *Newark*. Commas in inverted entries are treated as full

stops (*Berlin*; *Berlin, Congress of*; *Berlin, University of*; *Berlin Academy of Sciences*). Other commas are ignored in filing. When words are identical, persons come first and subsequent entries are alphabetized by their parenthetical qualifiers (such as *book*, *city*, *painting*).

Titled persons may be alphabetized by family name or by title. The more familiar form is used—for example, *Disraeli, Benjamin* rather than *Beaconsfield, Earl of*. Cross-references are provided from alternative forms and spellings of names. Identical names of the same nationality are filed chronologically.

Titles of books, plays, poems, paintings, and other works of art beginning with an article are filed on the following word (*Bard*, *The*). Titles beginning with a preposition are filed on the preposition (*In Autumn*). In subentries, however, prepositions are ignored; thus *influenced* by would precede the subentry *in* literature.

Literary characters are filed on the last name. Acronyms, such as UNESCO, are treated as single words. Abbreviations, such as *Mr.*, *Mrs.*, and *St.*, are alphabetized as though they were spelled out.

Occupational categories are alphabetical by national qualifier. Thus, *Authors, Scottish* comes before *Authors, Spanish*, and the reader interested in Spanish poets will find the subentry *poets* under *Authors, Spanish*.

**Cross-references.** The term *see* is used in references throughout the *Supplement* Index. The *see* references appear both as main entries and as subentries. They most often direct the reader from an alternative name spelling or form to the main entry listing.

This introduction to the *Supplement* Index is necessarily brief. The reader will soon find, however, that the *Supplement* Index provides ready reference to both highly specific subjects and broad areas of information contained in volume 21 and a cumulative listing of those included in the entire set.

# INDEX

## A

**AALTO, HUGO ALVAR HENRIK** (born 1898), Finnish architect, designer, and town planner **1** 1-2

**AARON, HENRY LOUIS** (Hank; born 1934), American baseball player **1** 2-3

**ABBA ARIKA** (circa 175-circa 247), Babylonian rabbi **1** 3-4

**ABBAS I** (1571-1629), Safavid shah of Persia 1588-1629 **1** 4-6

**ABBAS, FERHAT** (born 1899), Algerian statesman **1** 6-7

**ABBOTT, BERENICE** (1898-1991), American artist and photographer **1** 7-9

**ABBOTT, GRACE** (1878-1939), American social worker and agency administrator **1** 9-10

**ABBOTT, LYMAN** (1835-1922), American Congregationalist clergyman, author, and editor **1** 10-11

**ABBOUD, EL FERIK IBRAHIM** (1900-1983), Sudanese general, prime minister, 1958-1964 **1** 11-12

**ABD AL-MALIK** (646-705), Umayyad caliph 685-705 **1** 12-13

**ABD AL-MUMIN** (circa 1094-1163), Almohad caliph 1133-63 **1** 13

**ABD AL-RAHMAN I** (731-788), Umayyad emir in Spain 756-88 **1** 13-14

**ABD AL-RAHMAN III** (891-961), Umayyad caliph of Spain **1** 14

**ABD EL-KADIR** (1807-1883), Algerian political and religious leader **1** 15

**ABD EL-KRIM EL-KHATABI, MOHAMED BEN** (circa 1882-1963), Moroccan Berber leader **1** 15-16

**ABDUH IBN HASAN KHAYR ALLAH, MUHAMMAD** (1849-1905), Egyptian nationalist and theologian **1** 16-17

**ABDUL RAHMAN, TUNKU** (1903-1990), Former prime minister of Malaysia **18** 340-341

**ABDUL-HAMID II** (1842-1918), Ottoman sultan 1876-1909 **1** 17-18

**'ABDULLAH AL-SALIM AL-SABAH, SHAYKH** (1895-1965), Amir of Kuwait (1950-1965) **1** 18-19

**ABDULLAH IBN HUSEIN** (1882-1951), king of Jordan 1949-1951, of Transjordan 1946-49 **1** 19-20

**ABDULLAH IBN YASIN** (died 1059), North African founder of the Almoravid movement **1** 20

**ABE, KOBO** (born Kimifusa Abe; also transliterated as Abe Kobo; 1924-1993), Japanese writer, theater director, photographer **1** 20-22

**ABEL, IORWITH WILBER** (1908-1987), United States labor organizer **1** 22-23

**ABEL, NIELS** (1802-1829), Norwegian mathematician **20** 1-2

**ABELARD, PETER** (1079-1142), French philosopher and theologian **1** 23-25

**ABERCROMBY, RALPH** (1734-1801), British military leader **20** 2-4

**ABERDEEN, 4TH EARL OF** (George Hamilton Gordon; 1784-1860), British statesman, prime minister 1852-55 **1** 25-26

**ABERHART, WILLIAM** (1878-1943), Canadian statesman and educator **1** 26-27

**ABERNATHY, RALPH DAVID** (born 1926), United States minister and civil rights leader **1** 27-28

**ABIOLA, MOSHOOD** (1937-1998), Nigerian politician, philanthropist, and businessman **19** 1-3

**Abolitionists, American**  
African Americans  
Rock, John **21** 370-372

**ABRAHAMS, ISRAEL** (1858-1925), British scholar **1** 29

**ABRAMOVITZ, MAX** (born 1908), American architect **18** 1-3

**ABRAMS, CREIGHTON W.** (1914-1974), United States Army commander in World War II and Vietnam **1** 29-31

**ABRAVANEL, ISAAC BEN JUDAH** (1437-1508), Jewish philosopher and statesman **1** 31

**ABU BAKR** (circa 573-634), Moslem leader, first caliph of Islam **1** 31-32

**ABU MUSA** (born Said Musa Maragha circa 1930), a leader of the Palestinian Liberation Organization **1** 32-33

**ABU NUWAS** (al-Hasan ibn-Hani; circa 756-813), Arab poet **1** 33-34

**ABU-L-ALA AL-MAARRI** (973-1058), Arab poet and philosopher **1** 32

**ABZUG, BELLA STAVISKY** (1920-1998), lawyer, politician, and congresswoman **1** 34-35

**ACHEBE, CHINUA** (born 1930), Nigerian novelist **1** 35-37

**ACHESON, DEAN GOODERHAM** (1893-1971), American statesman **1** 37-38

**Acoustics** (physics)  
Germain, Sophie **21** 157-158

**ACTION, JOHN EMERICH EDWARD DALBERG** (1834-1902), English historian and philosopher **1** 38

**Activists**  
Nigerian  
Fela **21** 127-129

**Activists, American**  
Asian American issues  
Bulosan, Carlos **21** 59-61

children's issues  
 Folks, Homer **21** 137-140  
 civil rights  
 Johnson, Rafer **21** 225-227  
 environmental  
 Julia, Raul **21** 230-232  
 equal opportunity  
 Marble, Alice **21** 271-273  
 Hispanic American issues  
 Julia, Raul **21** 230-232  
 human rights  
 Julia, Raul **21** 230-232  
 mental illness  
 Folks, Homer **21** 137-140  
 Native American rights  
 Captain Jack **21** 72-74  
 peace  
 Johnson, Rafer **21** 225-227  
 social reform  
 Folks, Homer **21** 137-140  
 Goldmark, Peter Carl **21** 170-172  
 Johnson, Rafer **21** 225-227

#### Actors and entertainers, American

animators  
 Hubley, John **21** 208-210  
 filmmakers/directors  
 Canutt, Yakima **21** 71-72  
 Corman, Roger **21** 87-89  
 De Niro, Robert **21** 103-106  
 Hubley, John **21** 208-210  
 Ince, Thomas **21** 213-215  
 Menzies, William Cameron **21** 291-293  
 Peckinpah, Sam **21** 338-340  
 Van Peebles, Melvin **21** 414-416  
 Wilder, Billy **21** 430-432  
 film stars  
 Cagney, James **21** 68-71  
 Coogan, Jackie **21** 83-85  
 Cooper, Gary **21** 85-87  
 De Niro, Robert **21** 103-106  
 Julia, Raul **21** 230-232  
 Van Peebles, Melvin **21** 414-416  
 Weissmuller, Johnny **21** 425-427  
 film writers  
 Peckinpah, Sam **21** 338-340  
 gossip about  
 Parsons, Louella **21** 336-338  
 guitarists  
 Garcia, Jerry **21** 150-152  
 rodeo performers  
 Canutt, Yakima **21** 71-72  
 singers  
 Garcia, Jerry **21** 150-152  
 Nelson, Rick **21** 314-316  
 stage performers  
 Loos, Anita **21** 262-265  
 Merman, Ethel **21** 295-297  
 stuntpeople  
 Canutt, Yakima **21** 71-72  
 television  
 Arnaz, Desi **21** 12-14  
 Nelson, Rick **21** 314-316  
 vaudeville  
 McCay, Winsor **21** 288-291

#### Actors and entertainers, European

- GREAT BRITAIN  
 stage performers  
 Kean, Edmund **21** 237-239
- THE CONTINENT  
 actors

De Sica, Vittorio **21** 106-108  
 von Stroheim, Erich **21** 418-420  
 choreographers  
 Beauchamps, Pierre **21** 27-29  
 Beaujoyeux, Balthasar de **21** 29-30  
 dancers  
 Beauchamps, Pierre **21** 27-29  
 Beaujoyeux, Balthasar de **21** 29-30  
 Mata Hari **21** 279-282  
 filmmakers/directors  
 De Sica, Vittorio **21** 106-108  
 von Stroheim, Erich **21** 418-420

**ADAM, JAMES** (1730-1794), British architect **1** 38-40

**ADAM, ROBERT** (1728-1792), British architect **1** 38-40

**ADAMS, ABIGAIL** (Abigail Smith; 1744-1818), American first lady **18** 3-7

**ADAMS, ANSEL** (1902-1984), landscape photographer and conservationist **1** 40-41

**ADAMS, CHARLES FRANCIS** (1807-1886), American diplomat and politician **1** 41-42

**ADAMS, GERALD** (born 1948), president of the Sinn Féin Irish political party **1** 42-44

**ADAMS, HANK** (born 1944), Native American activist **1** 45

**ADAMS, HENRY BROOKS** (1838-1918), American historian and author **1** 45-47

**ADAMS, HERBERT BAXTER** (1850-1901), American historian and teacher **1** 47

**ADAMS, JAMES LUTHER** (1901-1994), American social ethicist, theologian, and defender of religious and political liberalism **1** 47-48

**ADAMS, JOHN** (1735-1826), American statesman and diplomat, president 1797-1801 **1** 48-51

**ADAMS, JOHN COUCH** (1819-1892), English mathematical astronomer **1** 51-52

**ADAMS, JOHN QUINCY** (1767-1848), American statesman and diplomat, president 1825-29 **1** 52-54

**ADAMS, PETER CHARDON BROOKS** (1848-1927), American historian **1** 54

**ADAMS, SAMUEL** (1722-1803), American colonial leader and propagandist **1** 55-56

**ADAMSON, JOY** (Friederike Victoria Gessner; 1910-1980), Austrian naturalist and painter **18** 7-9

**ADDAMS, JANE** (1860-1935), American social worker, reformer, and pacifist **1** 56-57

**ADDISON, JOSEPH** (1672-1719), English essayist and politician **1** 57-58

**ADDISON, THOMAS** (1793-1860), English physician **1** 58-59

**ADENAUER, KONRAD** (1876-1967), German statesman, chancellor of the Federal Republic 1949-63 **1** 59-61

**ADLER, ALFRED** (1870-1937), Austrian psychiatrist **1** 61-63

**ADLER, FELIX** (1851-1933), American educator and Ethical Culture leader **1** 63-64

**ADONIS** ('Ali Ahmad Said; born 1930), Lebanese poet **1** 64-65

**ADORNO, THEODOR W.** (1903-1969), German philosopher and leader of the Frankfurt School **1** 65-67

**ADRIAN, EDGAR DOUGLAS** (1st Baron Adrian of Cambridge; 1889-1977), English neurophysiologist **1** 67-69

**Adventist movement** (religion; United States)  
 Kellogg, John Harvey **21** 239-242

**Advertising industry**  
 Bass, Saul **21** 25-27  
 Lasker, Albert **21** 251-254  
 Pinkham, Lydia **21** 351-353

**ADZHUBEI, ALEKSEI IVANOVICH** (1924-1993), Russian journalist and editor **18** 9-11

**AELFRIC** (955-circa 1012), Anglo-Saxon monk, scholar, and writer **1** 69-70

**Aeronautics** (science)  
 engineers  
 Lilienthal, Otto **21** 260-262

**AESCHYLUS** (524-456 B.C.), Greek playwright **1** 70-72

**AFFONSO I** (1460?-1545), king of Kongo **1** 72

**AFINOGENOV, ALEKSANDR NIKOLAEVICH** (1904-1941), Russian dramatist **1** 72-73

**'AFLAQ, MICHEL** (born 1910), Syrian founder and spiritual leader of the Ba'ath party **1** 73-74

**Africa** (continent)  
 African empires  
 Amina of Zaria **21** 5-7  
 European exploration  
 John II **21** 223-225

**African American art**  
 see African American history (United States)

**African American history** (United States)  
 • SOCIETY and CULTURE  
 education  
 Barnett, Marguerite Ross **21** 22-24  
 filmmaking

- Van Peebles, Melvin **21** 414-416  
 literature (20th century)  
 Bontemps, Arna **21** 47-50  
 sports  
 Armstrong, Henry **21** 9-11  
 Johnson, Rafer **21** 225-227  
 • **THROUGH CIVIL WAR**  
 abolitionists  
 Rock, John **21** 370-372
- African Americans**  
 see African American history (United States)
- AGA KHAN** (title), chief commander of Moslem Nizari Ismailis **1** 74-76
- AGASSIZ, JEAN LOUIS RODOLPHE** (1807-1873), Swiss-American naturalist and anatomist **1** 76-78
- AGEE, JAMES** (1909-1955), American poet, journalist, novelist, and screenwriter **1** 78-79
- AGESILAUS II** (circa 444-360 B.C.), king of Sparta circa 399-360 B.C. **1** 79-80
- AGHA MOHAMMAD KHAN** (circa 1742-1797), shah of Persia **1** 80-81
- AGIS IV** (circa 262-241 B.C.), king of Sparta **1** 81-82
- AGNELLI, GIOVANNI** (born 1920), Italian industrialist **1** 82-83
- AGNESI, MARIA** (1718-1799), Italian mathematician, physicist, and philosopher **20** 4-5
- AGNEW, SPIRO THEODORE** (1918-1996), Republican United States vice president under Richard Nixon **1** 83-85
- AGNODICE** (born ca. 300 BC), Greek physician **20** 5-5
- AGNON, SHMUEL YOSEPH** (1888-1970), author **1** 85-86
- AGOSTINO** (1557-1602) **1** 86
- AGOSTINO DI DUCCIO** (1418-1481?), Italian sculptor **1** 86
- AGRICOLA, GEORGIUS** (1494-1555), German mineralogist and writer **1** 86-87
- Agriculture** (England)  
 Tull, Jethro **21** 411-413
- Agriculture** (United States)  
 machinery  
 Glidden, Joseph **21** 167-170
- Agriculturists, English**  
 Tull, Jethro **21** 411-413
- AGRIPPINA THE YOUNGER** (Julia Agrippina; 15-59), wife of Claudius I, Emperor of Rome, and mother of Nero **20** 5-8

- AGUINALDO, EMILIO** (1869-1964), Philippine revolutionary leader **1** 88
- AHAD HAAM** (pseudonym of Asher T. Ginsberg, 1856-1927), Russian-born author **1** 88-89
- AHERN, BERTIE** (Bartholomew Ahern; born 1951), Irish Prime Minister **18** 11-13
- AHIDJO, AHMADOU** (1924-1989), first president of the Federal Republic of Cameroon **1** 89-90
- AIDOO, AMA ATA** (Christina Ama Aidoo; born 1942), Ghanaian writer and educator **20** 8-10
- AIKEN, CONRAD** (1889-1973), American poet, essayist, novelist, and critic **1** 90-91
- AIKEN, HOWARD** (1900-1973), American physicist, computer scientist, and inventor **20** 10-12
- AILEY, ALVIN** (1931-1989), African American dancer and choreographer **1** 91-94
- AILLY, PIERRE D'** (1350-1420), French scholar and cardinal **1** 94
- Aircraft**  
 development  
 Lilienthal, Otto **21** 260-262  
 gliders  
 Lilienthal, Otto **21** 260-262  
 military  
 Moffett, William Adger **21** 299-301
- AITKEN, WILLIAM MAXWELL** (Lord Beaverbrook; 1879-1964), Canadian businessman and politician **1** 94-96
- AKBAR, JALAL-UD-DIN MOHAMMED** (1542-1605), Mogul emperor of India 1556-1605 **1** 96
- AKHMATOVA, ANNA** (pseudonym of Anna A. Gorenko, 1889-1966), Russian poet **1** 96-97
- AKIBA BEN JOSEPH** (circa 50-circa 135), Palestinian founder of rabbinic Judaism **1** 97-98
- AKIHITO** (born 1933), 125th emperor of Japan **1** 98-99
- ALAMÁN, LUCAS** (1792-1853), Mexican statesman **1** 99-100
- ALARCÓN, PEDRO ANTONIO DE** (1833-1891), Spanish writer and politician **1** 100-101
- ALARCÓN Y MENDOZA, JUAN RUIZ DE** (1581?-1639), Spanish playwright **1** 101
- ALARIC** (circa 370-410), Visigothic leader **1** 101-102
- ALA-UD-DIN** (died 1316), Khalji sultan of Delhi **1** 102-103

- ALAUNGPAYA** (1715-1760), king of Burma 1752-1760 **1** 103
- ALBA, DUKE OF** (Fernando Álvarez de Toledo; 1507-1582), Spanish general and statesman **1** 103-104
- AL-BANNA, HASSAN** (1906-1949), Egyptian religious leader and founder of the Muslim Brotherhood **1** 104-106
- ALBEE, EDWARD FRANKLIN, III** (born 1928), American playwright **1** 106-108
- ALBÉNIZ, ISAAC** (1860-1909), Spanish composer and pianist **1** 108-109
- ALBERDI, JUAN BAUTISTA** (1810-1884), Argentine political theorist **1** 109-110
- ALBERS, JOSEPH** (1888-1976), American artist and art and design teacher **1** 110
- ALBERT** (1819-1861), Prince Consort of Great Britain **1** 110-112
- ALBERT I** (1875-1934), king of the Belgians 1909-1934 **1** 112
- ALBERT II** (born 1934), sixth king of the Belgians **1** 112-113
- ALBERTI, LEON BATTISTA** (1404-1472), Italian writer, humanist, and architect **1** 113-115
- ALBERTI, RAFAEL** (born 1902), Spanish poet and painter **18** 13-15
- ALBERTUS MAGNUS, ST.** (circa 1193-1280), German philosopher and theologian **1** 115-116
- ALBRIGHT, MADELEINE KORBEL** (born 1937), United States secretary of state **1** 116-118
- ALBRIGHT, WILLIAM** (1891-1971), American archaeologist **21** 1-3
- ALBUQUERQUE, AFONSO DE** (circa 1460-1515), Portuguese viceroy to India **1** 118-119
- ALCIBIADES** (circa 450-404 B.C.), Athenian general and politician **1** 119-120
- ALCORN, JAMES LUSK** (1816-1894), American lawyer and politician **1** 120-121
- ALCOTT, AMOS BRONSON** (1799-1888), American educator **1** 121
- ALCOTT, LOUISA MAY** (1832-1888), American author and reformer **1** 122
- ALCUIN OF YORK** (730?-804), English educator, statesman, and liturgist **1** 122-123
- Aldine Press**  
 Aldus Manutius **21** 3-5
- ALDRICH, NELSON WILMARTH** (1841-1915), American statesman and financier **1** 123-124

**ALDRIN, EDWIN EUGENE, JR.** (Buzz Aldrin; born 1930), American astronaut **18** 15-17

**ALDUS MANUTIUS** (Teobaldo Manuzio; 1450?-1515), Italian scholar and printer **21** 3-5

**ALEICHEM, SHOLOM** (Sholom Rabinowitz; 1859-1916), writer of literature relating to Russian Jews **1** 124-125

**ALEIJADINHO, O** (Antônio Francisco Lisboa; 1738-1814), Brazilian architect and sculptor **1** 125-126

**ALEMÁN, MATEO** (1547-after 1615), Spanish novelist **1** 126

**ALEMÁN VALDÉS, MIGUEL** (1902-1983), Mexican statesman, president 1946-1952 **1** 126-127

**ALEMBERT, JEAN LE ROND D'** (1717-1783), French mathematician and physicist **1** 127-128

**ALESSANDRI PALMA, ARTURO** (1868-1950), Chilean statesman, president 1920-1925 and 1932-1938 **1** 128-129

**ALESSANDRI RODRIGUEZ, JORGE** (born 1896), Chilean statesman, president 1958-1964 **1** 129-130

**ALEXANDER I** (1777-1825), czar of Russia 1801-1825 **1** 130-132

**ALEXANDER II** (1818-1881), czar of Russia 1855-1881 **1** 132-133

**ALEXANDER III** (1845-1894), emperor of Russia 1881-1894 **1** 133-134  
Fabergé, Carl **21** 125-127

**Alexander IV** (Rinaldo Conti; died 1261), pope 1254-1261  
Gregory IX **21** 180-183

**ALEXANDER VI** (Rodrigo Borgia; 1431-1503), pope 1492-1503 **1** 134-135

**ALEXANDER, SAMUEL** (1859-1938), British philosopher **1** 141

**ALEXANDER OF TUNIS, 1ST EARL** (Harold Rupert Leofric George Alexander; born 1891), British field marshal **1** 135-136

**ALEXANDER OF YUGOSLAVIA** (1888-1934), king of the Serbs, Croats, and Slovenes 1921-1929 and of Yugoslavia, 1929-1934 **1** 136-137

**ALEXANDER THE GREAT** (356-323 B.C.), king of Macedon **1** 137-141

**ALEXIE, SHERMAN** (born 1966), Native American writer, poet, and translator **1** 141-142

**ALEXIS MIKHAILOVICH ROMANOV** (1629-1676), czar of Russia 1645-1676 **1** 142-143

**ALEXIUS I** (circa 1048-1118), Byzantine emperor 1081-1118 **1** 143-144

**ALFARO, JOSÉ ELOY** (1842-1912), Ecuadorian revolutionary, president 1895-1901 and 1906-1911 **1** 144-145

**ALFIERI, CONTE VITTORIA** (1749-1803), Italian playwright **1** 145-146

**ALFONSÍN, RAUL RICARDO** (born 1927), politician and president of Argentina (1983-) **1** 146-148

**ALFONSO I** (Henriques; 1109?-1185), king of Portugal 1139-1185 **1** 148

**Alfonso I, king of Naples**  
see Alfonso V, king of Aragon

**Alfonso I, king of Sicily**  
see Alfonso V, king of Aragon

**ALFONSO III** (1210-1279), king of Portugal 1248-1279 **1** 148-149

**Alfonso V** (1385-1458), king of Aragon and of Naples and Sicily  
John II **21** 223-225

**ALFONSO VI** (1040-1109), king of León, 1065-1109, and of Castile, 1072-1109 **1** 149

**ALFONSO X** (1221-1284), king of Castile and León 1252-1284 **1** 150-151

**ALFONSO XIII** (1886-1941), king of Spain 1886-1931 **1** 151

**ALFRED** (849-899), Anglo-Saxon king of Wessex 871-899 **1** 151-153

**ALGER, HORATIO** (1832-1899), American author **1** 153-154

**ALGREN, NELSON** (Abraham; 1909-1981), American author **1** 154-155

**ALI** (circa 600-661), fourth caliph of the Islamic Empire **1** 155-156

**ALI, MUHAMMAD** (Cassius Clay; born 1942), American boxer **1** 156-158

**ALI, SUNNI** (died 1492), king of Gao, founder of the Songhay empire **1** 158-159

**ALIA, RAMIZ** (born 1925), president of Albania (1985-) **1** 159

**ALINSKY, SAUL DAVID** (1909-1972), U.S. organizer of neighborhood citizen reform groups **1** 161-162

**ALLAL AL-FASSI, MOHAMED** (1910-1974), Moroccan nationalist leader **1** 162

**ALLEN, ETHAN** (1738-1789), American Revolutionary War soldier **1** 163-164

**ALLEN, FLORENCE ELLINWOOD** (1884-1966), American lawyer, judge, and women's rights activist **1** 164-165

**ALLEN, PAULA GUNN** (born 1939), Native American writer, poet, literary critic; women's rights, environmental, and antiwar activist **1** 165-167

**ALLEN, RICHARD** (1760-1831), African American bishop **1** 168

**ALLEN, WOODY** (born Allen Stewart Konigsberg; b. 1935), American actor, director, filmmaker, author, comedian **1** 169-171

**ALLENBY, EDMUND HENRY HYNMAN** (1861-1936), English field marshal **1** 171-172

**ALLENDE, ISABEL** (born 1942), Chilean novelist, journalist, dramatist **1** 172-174

**ALLENDE GOSSENS, SALVADOR** (1908-1973), socialist president of Chile (1970-1973) **1** 174-176

**ALLSTON, WASHINGTON** (1779-1843), American painter **1** 176-177

**ALMAGRO, DIEGO DE** (circa 1474-1538), Spanish conquistador and explorer **1** 177-178

**ALP ARSLAN** (1026/32-1072), Seljuk sultan of Persia and Iraq **1** 178-179

**ALTAMIRA Y CREVEA, RAFAEL** (1866-1951), Spanish critic, historian, and jurist **1** 179

**ALTDORFER, ALBRECHT** (circa 1480-1538), German painter, printmaker, and architect **1** 179-180

**ALTGELD, JOHN PETER** (1847-1902), American jurist and politician **1** 180-182

**ALTHUSSER, LOUIS** (1918-1990), French Communist philosopher **1** 182-183

**ALTIZER, THOMAS J. J.** (born 1927), American theologian **1** 183-184

**ALTMAN, ROBERT** (born 1925), American filmmaker **20** 12-14

**ÁLVAREZ, JUAN** (1780-1867), Mexican soldier and statesman, president 1855 **1** 184-185

**ALVAREZ, JULIA** (born 1950), Hispanic American novelist, poet **1** 185-187

**ALVAREZ, LUIS W.** (1911-1988), American physicist **1** 187-189

**AMADO, JORGE** (born 1912), Brazilian novelist **1** 189-190

**AMBEDKAR, BHIMRAO RAMJI** (1891-1956), Indian social reformer and politician **1** 190-191

**AMBLER, ERIC** (born 1909), English novelist **1** 191-192

**AMBROSE, ST.** (339-397), Italian bishop **1** 192-193



**AMENEMHET I** (ruled 1991-1962 B.C.), pharaoh of Egypt **1** 193-194

**AMENHOTEP III** (ruled 1417-1379 B.C.) pharaoh of Egypt **1** 194-195

#### American architecture

- innovations (19th century)  
Jenney, William Le Baron **21** 221-223
- Root, John Wellborn **21** 372-374
- skyscrapers  
Jenney, William Le Baron **21** 221-223
- Root, John Wellborn **21** 372-374

#### American art

- cartoons  
Bray, John Randolph **21** 55-57
- McCay, Winsor **21** 288-291
- Ward, Jay **21** 421-423
- cinematography  
Kalmus, Natalie **21** 233-235
- filmmaking  
Bass, Saul **21** 25-27
- Gibbons, Cedric **21** 158-159
- Menzies, William Cameron **21** 291-293
- Struss, Karl **21** 398-399
- Toland, Gregg **21** 405-407
- Ward, Jay **21** 421-423

**AMERICAN HORSE** (aka Iron Shield; 1840?-1876), Sioux leader **1** 195-198

#### American League (baseball)

- Feller, Bob **21** 129-131
- Johnson, Walter **21** 228-230

#### American literature

- African American poetry  
Bontemps, Arna **21** 47-50
- anthologies  
Bontemps, Arna **21** 47-50
- Asian American  
Bulosan, Carlos **21** 59-61
- autobiography  
Bulosan, Carlos **21** 59-61
- gossip columns  
Parsons, Louella **21** 336-338
- histories  
Lee, Rose **21** 258-260
- humor  
Loos, Anita **21** 262-265
- Native American  
Boudinot, Elias **21** 52-54
- satire  
Loos, Anita **21** 262-265
- science fiction  
Pierce, John Robinson **21** 349-351
- social commentary  
Gillette, King Camp **21** 163-166

#### American Medical Association

- Gross, Samuel David **21** 183-185

#### American music

- 20th century  
latin dance music  
Arnaz, Desi **21** 12-14
- popular and show music  
Arnaz, Desi **21** 12-14
- Bennett, Robert Russell **21** 32-34
- Ebb, Fred **21** 113-115
- Kander, John **21** 235-237

- Merman, Ethel **21** 295-297
- Nelson, Rick **21** 314-316
- rap music  
Van Peebles, Melvin **21** 414-416
- rock and roll  
Garcia, Jerry **21** 150-152

#### American Schools of Oriental Research

- Albright, William **21** 1-3

#### American Sign Language

- Epée, Charles-Michel de l' **21** 120-122

#### American Sociological Association

- Wirth, Louis **21** 434-436

#### American Tobacco Co.

- Lasker, Albert **21** 251-254

**AMES, ADELBERT** (1835-1933),

- American politician **1** 198

**AMES, FISHER** (1758-1808), American

- statesman **1** 199-200

**AMHERST, JEFFERY** (1717-1797), English

- general and statesman **1** 200-201

**AMIET, CUNO** (1868-1961), Swiss

- Postimpressionist painter **1** 201-202

**AMIN DADA, IDI** (born circa 1926),

- president of Uganda (1971-1979) **1** 202-204

**AMINA OF ZARIA** (Amina Sarauniya

- Zazzau; c. 1533-c. 1610), Nigerian monarch and warrior **21** 5-7

**Ammonia** (chemistry)

- Leblanc, Nicolas **21** 256-258

**AMORSOLO, FERNANDO** (1892-1972),

- Philippine painter **1** 204

**AMOS** (flourished 8th century B.C.),

- Biblical prophet **1** 205

**AMPÈRE, ANDRÉ MARIE** (1775-1836),

- French physicist **1** 205-206

**AMUNDSEN, ROALD** (1872-1928),

- Norwegian explorer **1** 206-207

**AN LU-SHAN** (703-757), Chinese rebel

- leader **1** 239-240

**ANAN BEN DAVID** (flourished 8th

- century), Jewish Karaite leader in Babylonia **1** 207-208

**Anatomy** (science)

- pathological  
Gross, Samuel David **21** 183-185

**ANAXAGORAS** (circa 500-circa 428

- B.C.), Greek philosopher **1** 208-209

**ANAXIMANDER** (circa 610-circa 546

- B.C.), Greek philosopher and astronomer **1** 209-210

**ANAXIMENES** (flourished 546 B.C.),

- Greek philosopher **1** 210

**ANCHIETA, JOSÉ DE** (1534-1597),

- Portuguese Jesuit missionary **1** 210-211

**ANDERSEN, DOROTHY** (1901-1963), American physician and pathologist **1** 212

**ANDERSEN, HANS CHRISTIAN** (1805-1875), Danish author **1** 212-214

**ANDERSON, CARL DAVID** (1905-1991), American physicist **1** 214-215

**ANDERSON, JUDITH** (1898-1992), American stage and film actress **1** 215-216

**ANDERSON, JUNE** (born 1953), American opera singer **1** 216-218

**ANDERSON, MARIAN** (1902-1993), African American singer **1** 218-219

**ANDERSON, MAXWELL** (1888-1959), American playwright **1** 219-220

**ANDERSON, SHERWOOD** (1876-1941), American writer **1** 220-221

**ANDO, TADAO** (born 1941), Japanese architect **18** 17-19

**ANDRADA E SILVA, JOSÉ BONIFÁCIO DE** (1763-1838), Brazilian-born statesman and scientist **1** 221-222

**ANDRÁSSY, COUNT JULIUS** (1823-1890), Hungarian statesman, prime minister 1867-1871 **1** 222-223

**ANDREA DEL CASTAGNO** (1421-1457), Italian painter **1** 223-224

**ANDREA DEL SARTO** (1486-1530), Italian painter **1** 224-225

**ANDREA PISANO** (circa 1290/95-1348), Italian sculptor and architect **1** 225-226

**ANDRÉE, SALOMON AUGUST** (1854-1897), Swedish engineer and Arctic balloonist **1** 226

**ANDREESSEN, MARC** (born 1972), American computer programmer who developed Netscape Navigator **19** 3-5

**ANDREOTTI, GIULIO** (born 1919), leader of Italy's Christian Democratic party **1** 226-228

**ANDRETTI, MARIO** (born 1940), Italian/American race car driver **1** 228-230

**ANDREW, JOHN ALBION** (1818-1867), American politician **1** 230-231

**ANDREWS, CHARLES McLEAN** (1863-1943), American historian **1** 231

**ANDREWS, FANNIE FERN PHILLIPS** (1867-1950), American educator, reformer, pacifist **1** 231-232

**ANDREWS, ROY CHAPMAN** (1884-1960), American naturalist and explorer **1** 232-233

**ANDROPOV, IURY VLADIMIROVICH** (1914-1984), head of the Soviet secret

police and ruler of the Soviet Union (1982-1984) **1** 233-234

**ANDROS, SIR EDMUND** (1637-1714), English colonial governor in America **1** 234-235

**ANDRUS, ETHEL** (1884-1976), American educator and founder of the American Association of Retired Persons **19** 5-7

**ANGELICO, FRA** (circa 1400-1455), Italian painter **1** 235-236

**ANGELL, JAMES ROWLAND** (1869-1949), psychologist and leader in higher education **1** 236-237

**ANGELOU, MAYA** (Marguerite Johnson; born 1928), American author, poet, playwright, stage and screen performer, and director **1** 238-239

**Anglo-Boer War**  
see Boer War (1899-1902)

**Anglo-Saxons** (British Saxons)  
see England—5th century-1066 (Anglo-Saxon)

**ANNA IVANOVNA** (1693-1740), empress of Russia 1730-1740 **1** 240-241

**ANNAN, KOFI** (born 1938), Ghanaian secretary-general of the United Nations **18** 19-21

**ANNE** (1665-1714), queen of England 1702-1714 and of Great Britain 1707-1714 **1** 241-242

**ANNING, MARY** (1799-1847), British fossil collector **20** 14-16

**ANOKYE, OKOMFO** (Kwame Frimpon Anokye; flourished late 17th century), Ashanti priest and statesman **1** 242-243

**ANOUILH, JEAN** (1910-1987), French playwright **1** 243-244

**ANSELM OF CANTERBURY, ST.** (1033-1109), Italian archbishop and theologian **1** 244-245

**ANTHONY, ST.** (circa 250-356), Egyptian hermit and monastic founder **1** 246-248

**ANTHONY, SUSAN BROWNELL** (1820-1906), American leader of suffrage movement **1** 246-248  
women's suffrage  
Blackwell, Antoinette Brown **21** 41-43

**ANTHONY OF PADUA, SAINT** (Fernando de Boullion; 1195-1231), Portuguese theologian and priest **21** 7-9

**ANTIGONUS I** (382-301 B.C.), king of Macedon 306-301 B.C. **1** 248-249

**ANTIOCHUS III** (241-187 B.C.), king of Syria 223-187 B.C. **1** 249-250

**ANTIOCHUS IV** (circa 215-163 B.C.), king of Syria 175-163 B.C. **1** 250

**ANTISTHENES** (circa 450-360 B.C.), Greek philosopher **1** 250-251

**ANTONELLO DA MESSINA** (circa 1430-1479), Italian painter **1** 251-252

**ANTONIONI, MICHELANGELO** (born 1912), Italian film director **1** 252-253

**ANTONY, MARK** (circa 82-30 B.C.), Roman politician and general **1** 253-254

**ANZA, JUAN BAUTISTA DE** (1735-1788), Spanish explorer **1** 254-255

**AOUN, MICHEL** (born 1935), Christian Lebanese military leader and prime minister **1** 255-257

**APELLES** (flourished after 350 B.C.), Greek painter **1** 257

**APESS, WILLIAM** (1798-1839), Native American religious leader, author, and activist **20** 16-18

**APGAR, VIRGINIA** (1909-1974), American medical educator, researcher **1** 257-259

**APITHY, SOUROU MIGAN** (1913-1989), Dahomean political leader **1** 259-260

**APOLLINAIRE, GUILLAUME** (1880-1918), French lyric poet **1** 260

**APOLLODORUS** (flourished circa 408 B.C.), Greek painter **1** 261

**APOLLONIUS OF PERGA** (flourished 210 B.C.), Greek mathematician **1** 261-262

**Apostles**  
see Bible—New Testament

**APPELFELD, AHARON** (born 1932), Israeli who wrote about anti-Semitism and the Holocaust **1** 262-263

**APPERT, NICOLAS** (1749-1941), French chef and inventor of canning of foods **20** 18-19

**APPIA, ADOLPHE** (1862-1928), Swiss stage director **1** 263-264

**APPLEGATE, JESSE** (1811-1888), American surveyor, pioneer, and rancher **1** 264-265

**APPLETON, SIR EDWARD VICTOR** (1892-1965), British pioneer in radio physics **1** 265-266

**APPLETON, NATHAN** (1779-1861), American merchant and manufacturer **1** 266-267

**APULEIUS, LUCIUS** (c. 124-170), Roman author, philosopher, and orator **20** 19-21

**AQUINO, BENIGNO** ("Nino"; 1933-1983), Filipino activist murdered upon his return from exile **1** 267-268

**AQUINO, CORAZON COJOANGCO** (born 1933), first woman president of the Republic of the Philippines **1** 268-270

**ARAFAT, YASSER** (also spelled Yasir; born 1929), chairman of the Palestinian Liberation Organization **1** 270-271

**ARAGON, LOUIS** (1897-1982), French surrealist author **1** 271-272

**ARANHA, OSVALDO** (1894-1960), Brazilian political leader **1** 272-273

**ARATUS** (271-213 B.C.), Greek statesman and general **1** 273-274

**ARBENZ GUZMÁN, JACOBO** (1913-1971), president of Guatemala (1951-1954) **1** 274-276

**ARBUS, DIANE NEMEROV** (1923-1971), American photographer **1** 276-277

**Archaeology**  
see Archeology

**Archeology**  
Near East  
Albright, William **21** 1-3

**ARCHIMEDES** (circa 287-212 B.C.), Greek mathematician **1** 277-280

**ARCHIPENKO, ALEXANDER** (1887-1964), Russian-American sculptor and teacher **1** 280-281

**Architecture**  
Root, John Wellborn **21** 372-374  
William of Sens **21** 432-434

**ARDEN, ELIZABETH** (Florence Nightingale Graham; 1878?-1966), American businesswoman **1** 281-282

**ARENDT, HANNAH** (1906-1975), Jewish philosopher **1** 282-284

**ARENS, MOSHE** (born 1925), aeronautical engineer who became a leading Israeli statesman **1** 284-285

**ARÉVALO, JUAN JOSÉ** (1904-1951), Guatemalan statesman, president 1944-1951 **1** 285-286

**ARIAS, ARNULFO** (1901-1988), thrice elected president of Panama **1** 286-287

**ARIAS SANCHEZ, OSCAR** (born 1941), Costa Rican politician, social activist, president, and Nobel Peace Laureate (1987) **1** 287-289

**ARIOSTO, LUDOVICO** (1474-1533), Italian poet and playwright **1** 289-290  
Harington, John **21** 193-195

**ARISTARCHUS OF SAMOS** (circa 310-230 B.C.), Greek astronomer **1** 290-291

**ARISTIDE, JEAN-BERTRAND** (born 1953), president of Haiti (1990-91 and 1994-95); deposed by a military coup in 1991; restored to power in 1994 **1** 291-293

**ARISTOPHANES** (450/445-after 385 B.C.), Greek playwright **1** 293-294

**ARISTOTLE** (384-322 B.C.), Greek philosopher and scientist **1** 295-296

**ARIUS** (died circa 336), Libyan theologian and heresiarch **1** 297-298

**ARKWRIGHT, SIR RICHARD** (1732-1792), English inventor and industrialist **1** 298

**ARLEN, HAROLD** (born Hyman Arluck; 1905-1986), American jazz pianist, composer, and arranger **19** 7-9

**ARMANI, GIORGIO** (1935-1997), Italian fashion designer **1** 299-301

**ARMINIUS, JACOBUS** (1560-1609), Dutch theologian **1** 301-302

**ARMOUR, PHILIP DANFORTH** (1832-1901), American industrialist **1** 302

**ARMSTRONG, EDWIN HOWARD** (1890-1954), American electrical engineer and radio inventor **1** 302-303

**ARMSTRONG, HENRY** (Henry Jackson, Jr.; 1912-1988), American boxer and minister **21** 9-11

**ARMSTRONG, LOUIS DANIEL** (1900-1971), African American jazz musician **1** 303-304

**ARMSTRONG, NEIL ALDEN** (born 1930), American astronaut **1** 304-306

**ARMSTRONG, SAMUEL CHAPMAN** (1839-1893), American educator **1** 306-307

**Army Air Corps**  
see United States Air Force

**Army, United States**  
see United States Army

**ARNAZ, DESI** (Desiderio Alberto Arnaz y De Acha; 1917-1986), American musician and actor **21** 12-14

**ARNE, THOMAS AUGUSTINE** (1710-1778), English composer **1** 307-308

**ARNIM, ACHIM VON** (Ludwig Joachim von Achim; 1781-1831), German writer **1** 308-309

**ARNOLD, GEN. BENEDICT** (1741-1801), American general and traitor **1** 309-310

**ARNOLD, HENRY HARLEY** (Hap; 1886-1950), American general **1** 310-311

**ARNOLD, MATTHEW** (1822-1888), English poet and critic **1** 311-313

**ARNOLD, THOMAS** (1795-1842), English educator **1** 313-314

**ARNOLD, THURMAN WESLEY** (1891-1969), American statesman **1** 314

**ARNOLD OF BRESCIA** (circa 1100-1155), Italian religious reformer **1** 314-315

**ARNOLFO DI CAMBIO** (1245?-1302), Italian sculptor and architect **1** 315-316

**ARON, RAYMOND** (1905-1983), academic scholar, teacher, and journalist **1** 316-317

**Around the World in 80 Days** (film)  
Todd, Mike **21** 402-404

**ARP, JEAN** (Hans Arp; 1887-1966), French sculptor and painter **1** 317-318

**ARRHENIUS, SVANTE AUGUST** (1859-1927), Swedish chemist and physicist **1** 318-320

**Art**  
collections  
Gardner, Isabella Stewart **21** 152-155

**Art of Cookery Made Plain and Easy** (cookbook)  
Glasse, Hannah **21** 166-167

**ARTAUD, ANTONIN** (1896-1948), developed the theory of the Theater of Cruelty **1** 320-321

**ARTHUR, CHESTER ALAN** (1830-1886), American statesman, president 1881-1885 **1** 321-323

**ARTIGAS, JOSÉ GERVASIO** (1764-1850), Uruguayan patriot **1** 323

**Artists, American**  
animators  
Bray, John Randolph **21** 55-57  
Hubley, John **21** 208-210  
McCay, Winsor **21** 288-291  
Ward, Jay **21** 421-423  
architects (19th century)  
Jenney, William Le Baron **21** 221-223  
Root, John Wellborn **21** 372-374  
cartoonists  
Bray, John Randolph **21** 55-57  
Hubley, John **21** 208-210  
McCay, Winsor **21** 288-291  
Ward, Jay **21** 421-423  
film art directors  
Gibbons, Cedric **21** 158-159  
Kalmus, Natalie **21** 233-235  
Menziess, William Cameron **21** 291-293

filmmakers  
Bass, Saul **21** 25-27  
Hubley, John **21** 208-210  
photographers  
Struss, Karl **21** 398-399

**Artists, English**  
fashion designers  
Worth, Charles Frederick **21** 436-438  
photographers  
Muybridge, Eadweard **21** 305-308

**Artists, French**  
architects (12th century)  
William of Sens **21** 432-434  
fashion designers  
Worth, Charles Frederick **21** 436-438  
painters (19th century)  
Morisot, Berthe **21** 303-305

**Artists, Russian**  
jewelers  
Fabergé, Carl **21** 125-127

**ASAM, COSMAS DAMIAN** (1686-1739), German artist **1** 323-324

**ASAM, EGID QUIRIN** (1692-1750), German artist **1** 323-324

**ASBURY, FRANCIS** (1745-1816), English-born American Methodist bishop **1** 324-325

**ASCH, SHALOM** (1880-1957), Polish-born playwright and novelist **1** 325-326

**ASH, MARY KAY WAGNER** (born circa 1916), cosmetics tycoon **1** 326-327

**ASHARI, ABU AL- HASAN ALI AL-** (873/883-935), Moslem theologian **1** 327-328

**ASHE, ARTHUR ROBERT, JR.** (1943-1993), world champion athlete, social activist, teacher, and charity worker **1** 328-330

**ASHIKAGA TAKAUJI** (1305-1358), Japanese shogun **1** 330-332

**ASHLEY, LAURA** (Mountney; 1925-1985), British designer of women's clothes and home furnishings **1** 332-333

**ASHLEY, WILLIAM HENRY** (circa 1778-1838), American businessman, fur trader, and explorer **1** 333-334

**ASHMORE, HARRY SCOTT** (1916-1998), American journalist **1** 334-335

**ASHMUN, JEHUDI** (1794-1828), American governor of Liberia Colony **1** 335-336

**ASHRAWI, HANAN MIKHAIL** (born 1946), Palestinian spokesperson **1** 336-338

**ASHURBANIPAL** (died circa 630 B.C.), Assyrian king 669-ca. 630 **1** 338

**ASIMOV, ISAAC** (1920-1992), American author **1** 338-341

**ASOKA** (ruled circa 273-232 B.C.), Indian emperor of the Maurya dynasty **1** 341-342

**ASPIN, LES** (1938-1995), United States congressman and secretary of defense **1** 342-344

**ASPLUND, ERIC GUNNAR** (1885-1945), Swedish architect **1** 344

**ASQUITH, HERBERT HENRY** (1st Earl of Oxford and Asquith; 1852-1928), English statesman, prime minister 1908-1916 **1** 344-346

**ASSAD, HAFIZ** (born 1930), president of Syria **1** 346-348

#### Assassinations

Serbia

Princip, Gavrilo **21** 353-355

United States

Oswald, Lee Harvey **21** 328-330

**ASTAIRE, FRED** (Frederick Austerlitz; 1899-1987), dancer and choreographer **1** 348-350

**ASTON, FRANCIS WILLIAM** (1877-1945), English chemist and physicist **1** 350-351

**ASTOR, JOHN JACOB** (1763-1848), American fur trader, merchant, and capitalist **1** 351-352

**ASTOR, NANCY LANGHORNE** (1879-1964), first woman to serve as a member of the British Parliament (1919-1945) **1** 352-354

#### Astronomy (science)

observatories

Peirce, Benjamin **21** 340-342

radio

Reber, Grote **21** 364-366

**ASTURIAS, MIGUEL ANGEL** (born 1899), Guatemalan novelist and poet **1** 354-355

**ATAHUALPA** (circa 1502-1533), Inca emperor of Peru 1532-1533 **1** 355-356

**ATANASOFF, JOHN** (1903-1995), American physicist **20** 21-22

**ATATÜRK, GHAZI MUSTAPHA KEMAL** (1881-1938), Turkish nationalist, president 1923-1938 **1** 356-357

**ATCHISON, DAVID RICE** (1807-1886), American lawyer and politician **1** 357-358

**ATHANASIUS, ST.** (circa 296-373), Christian theologian, bishop of Alexandria **1** 358-359

#### Athletes

Canadian

Nagurski, Bronko **21** 309-311

English

Bannister, Roger **21** 18-20

Mallory, George **21** 268-271

#### Athletes, American

baseball players

Cartwright, Alexander **21** 74-77

Feller, Bob **21** 129-131

Gibson, Bob **21** 159-162

Hornsby, Rogers **21** 204-206

Johnson, Walter **21** 228-230

Mathewson, Christy **21** 282-284

Rose, Pete **21** 374-376

basketball coaches

Cousy, Bob **21** 92-94

West, Jerry Alan **21** 428-430

basketball players

Cousy, Bob **21** 92-94

Mikan, George **21** 297-299

West, Jerry Alan **21** 428-430

body builders

Atlas, Charles **21** 14-15

boxers

Armstrong, Henry **21** 9-11

Pep, Willie **21** 342-344

decathletes

Johnson, Rafer **21** 225-227

football coaches

Graham, Otto **21** 174-176

football players

Blanchard, Felix **21** 43-45

Davis, Glenn **21** 101-103

Graham, Otto **21** 174-176

Sayers, Gale **21** 377-379

golfers

Hagen, Walter **21** 188-190

Snead, Sam **21** 388-390

jockeys

Shoemaker, Willie **21** 381-383

swimmers

Weissmuller, Johnny **21** 425-427

tennis players

Budge, Don **21** 57-59

Marble, Alice **21** 271-273

track coaches

Warmerdam, Dutch **21** 423-425

track and field athletes

Cunningham, Glenn **21** 96-99

Jenner, Bruce **21** 218-221

Johnson, Rafer **21** 225-227

Mathias, Bob **21** 284-286

Oerter, Al **21** 326-328

Warmerdam, Dutch **21** 423-425

**ATLAS, CHARLES** (Angelo Siciliano; 1893-1972), American body builder **21** 14-15

**ATTAR, FARID ED-DIN** (circa 1140-circa 1234), Persian poet **1** 359-360

**ATTENBOROUGH, RICHARD SAMUEL** (born 1923), English actor and filmmaker **18** 21-23

**ATTILA** (died 453), Hun chieftain **1** 360

**ATTLEE, CLEMENT RICHARD** (1st Earl Attlee; 1883-1967), English statesman, prime minister 1945-1951 **1** 361-362

#### Attorneys general

see statesmen, American

**ATWOOD, MARGARET ELEANOR** (born 1939), Canadian novelist, poet, critic,

and politically committed cultural activist **1** 362-364

**AUBERT DE GASPÉ, PHILIPPE** (1786-1871), French-Canadian author **1** 364

**AUDEN, WYSTAN HUGH** (1907-1973), English-born American poet **1** 364-366

**AUDUBON, JOHN JAMES** (1785-1851), American artist and ornithologist **1** 366-367

**AUER, LEOPOLD** (1845-1930), Hungarian violinist and conductor **20** 22-24

**AUGUSTINE, ST.** (354-430), Christian philosopher and theologian **1** 367-370

**AUGUSTINE OF CANTERBURY, ST.** (died circa 606), Roman monk, archbishop of Canterbury **1** 370-371

**AUGUSTUS** (Octavian; 63 B.C.-A.D. 14), Roman emperor 27 B.C.-A.D. 14 **1** 371-373

**AUGUSTUS II** (1670-1733), king of Poland and elector of Saxony **1** 373-374

**AULARD, ALPHONSE FRANÇOIS VICTOR ALPHONSE** (1849-1928), French historian **1** 374

**AUNG SAN** (1915-1947), Burmese politician **1** 374-375

**AUNG SAN SUU KYI** (born 1945), leader of movement toward democracy in Burma (Myanmar) and Nobel Peace Prize winner **1** 375-376

**AURANGZEB** (1618-1707), Mogul emperor of India 1658-1707 **1** 377

**AUSTEN, JANE** (1775-1817), English novelist **1** 377-379

**AUSTIN, JOHN LANGSHAW** (1911-1960), English philosopher **1** 379-380

**AUSTIN, STEPHEN FULLER** (1793-1836), American pioneer **1** 380-381

**Australia, Commonwealth of** (island continent)  
British colonization of  
Hill, Rowland **21** 202-204

#### Authors, American

autobiographies

Bulosan, Carlos **21** 59-61

columnists

Drucker, Peter **21** 110-112

Parsons, Louella **21** 336-338

librettists

Ebb, Fred **21** 113-115

nonfiction writers

Drucker, Peter **21** 110-112

Gross, Samuel David **21** 183-185

Lee, Rose **21** 258-260

playwrights (20th century)

Loos, Anita **21** 262-265

poets (20th century)

Bontemps, Arna **21** 47-50

Bulosan, Carlos **21** 59-61  
 scriptwriters (20th century)  
 Loos, Anita **21** 262-265  
 Peckinpah, Sam **21** 338-340  
 Trumbo, Dalton **21** 409-411  
 Van Peebles, Melvin **21** 414-416  
 Wilder, Billy **21** 430-432  
 short-story writers (20th century)  
 Loos, Anita **21** 262-265  
 Pierce, John Robinson **21** 349-351  
 Trumbo, Dalton **21** 409-411

#### Authors, English

cookbook writers  
 Glasse, Hannah **21** 166-167  
 rules on games  
 Hoyle, Edmond **21** 206-208  
 satirists  
 Harington, John **21** 193-195  
 translators  
 Harington, John **21** 193-195

#### Authors, Italian

poets (16th century)  
 Fracastoro, Girolamo **21** 144-147

**AVEDON, RICHARD** (born 1923),  
 American fashion photographer **1**  
 381-382

**AVERROËS** (1126-1198), Spanish-Arabian  
 philosopher **1** 382-383

**AVERY, OSWALD THEODORE** (1877-  
 1955), Canadian/American biologist  
 and bacteriologist **1** 384-386

#### Aviation (science)

Lilienthal, Otto **21** 260-262

#### Aviation industry

Guggenheim, Daniel **21** 185-187

**AVICENNA** (circa 980-1037), Arabian  
 physician and philosopher **1** 386-387

**ÁVILA CAMACHO, GEN. MANUEL**  
 (1897-1955), Mexican president 1940-  
 1946 **1** 387-388

#### AVOGADRO, LORENZO ROMANO

**AMEDO CARLO** (Conte di Quaregna e  
 di Cerreto; 1776-1865), Italian  
 physicist and chemist **1** 388-389

**AWOLOWO, CHIEF OBAFEMI** (born  
 1909), Nigerian nationalist and  
 politician **1** 389-390

**AX, EMANUEL** (born 1949), American  
 pianist **1** 391

**AYCKBOURN, ALAN** (born 1939), British  
 playwright **18** 23-25

**AYER, ALFRED JULES** (1910-1989),  
 English philosopher **1** 391-393

**AYLWIN AZÓCAR, PATRICIO** (born  
 1918), leader of the Chilean Christian  
 Democratic party and president of  
 Chile **1** 393-395

**AYUB KHAN, MOHAMMED** (1907-  
 1989), Pakistani statesman **1** 395-396

**AZAÑA DIAZ, MANUEL** (1880-1940),  
 Spanish statesman, president 1936-  
 1939 **1** 396-397

**AZARA, FÉLIX DE** (1746-1821), Spanish  
 explorer and naturalist **1** 397-398

**AZCONA HOYO, JOSÉ** (born 1927),  
 president of Honduras (1986-1990) **1**  
 398-399

**AZHARI, SAYYID ISMAIL AL-** (1898-  
 1969), Sudanese president 1965-1968  
**1** 399-401

**AZIKIWE, NNAMDI** (born 1904),  
 Nigerian nationalist, president 1963-  
 1966 **1** 401-402

**AZUELA, MARIANO** (1873-1952),  
 Mexican novelist **1** 402

## B

**BA MAW** (1893-1977), Burmese  
 statesman **1** 480-481

**BAADER and MEINHOF** (1967-1976),  
 founders of the West German "Red  
 Army Faction" **1** 403-404

**BAAL SHEM TOV** (circa 1700-circa  
 1760), founder of modern Hasidism **1**  
 404-405

**BABAR THE CONQUEROR** (aka Zahir-  
 ud-din Muhammad Babur; 1483-  
 1530), Mogul emperor of India 1526-  
 1530 **1** 405-407

**BABBAGE, CHARLES** (1791-1871),  
 English inventor and mathematician **1**  
 407-408

**BABBITT, BRUCE EDWARD** (born 1938),  
 governor of Arizona (1978-1987) and  
 United States secretary of the interior **1**  
 408-410

**BABBITT, MILTON** (born 1916),  
 American composer **1** 410

**BABCOCK, STEPHEN MOULTON** (1843-  
 1931), American agricultural chemist **1**  
 410-411

**BABEL, ISAAC EMMANUELOVICH**  
 (1894-1941), Russian writer **1** 411-412

**BABEUF, FRANÇOIS NOEL** ("Caius  
 Gracchus"; 1760-1797), French  
 revolutionist and writer **1** 412

**BACA-BARRAGÁN, POLLY** (born 1943),  
 Hispanic American politician **1**  
 412-414

**BACH, CARL PHILIPP EMANUEL** (1714-  
 1788), German composer **1** 414-415

**BACH, JOHANN CHRISTIAN** (1735-  
 1782), German composer **1** 415-416

**BACH, JOHANN SEBASTIAN** (1685-  
 1750), German composer and organist  
**1** 416-419

**BACHE, ALEXANDER DALLAS** (1806-  
 1867), American educator and scientist  
**1** 420

**BACKUS, ISAAC** (1724-1806), American  
 Baptist leader **1** 420-421

**BACON, SIR FRANCIS** (1561-1626),  
 English philosopher, statesman, and  
 author **1** 422-424

**BACON, FRANCIS** (1909-1992), English  
 artist **1** 421-422

**BACON, NATHANIEL** (1647-1676),  
 American colonial leader **1** 424-425

**BACON, ROGER** (circa 1214-1294),  
 English philosopher **1** 425-427

**BAD HEART BULL, AMOS** (1869-1913),  
 Oglala Lakota Sioux tribal historian  
 and artist **1** 427-428

**BADEN-POWELL, ROBERT** (1857-1941),  
 English military officer and founder of  
 the Boy Scout Association **21** 16-18

**BADOGLIO, PIETRO** (1871-1956),  
 Italian general and statesman **1**  
 428-429

**BAECK, LEO** (1873-1956), rabbi, teacher,  
 hero of the concentration camps, and  
 Jewish leader **1** 429-430

**BAEKELAND, LEO HENDRIK** (1863-  
 1944), American chemist **1** 430-431

**BAER, KARL ERNST VON** (1792-1876),  
 Estonian anatomist and embryologist **1**  
 431-432

**BAEZ, BUENAVENTURA** (1812-1884),  
 Dominican statesman, five time  
 president **1** 432-433

**BAEZ, JOAN** (born 1941), American folk  
 singer and human rights activist **1**  
 433-435

**BAFFIN, WILLIAM** (circa 1584-1622),  
 English navigator and explorer **1**  
 435-436

**BAGEHOT, WALTER** (1826-1877),  
 English economist **1** 436-437

**BAGLEY, WILLIAM CHANDLER** (1874-  
 1946), educator and theorist of  
 educational "essentialism" **1** 437-438

**BAHR, EGON** (born 1922), West  
 German politician **1** 438-440

**BAIKIE, WILLIAM BALFOUR** (1825-  
 1864), Scottish explorer and scientist **1**  
 440

**BAILEY, F. LEE** (born 1933), American  
 defense attorney and author **1** 441-443

**BAILEY, FLORENCE MERRIAM** (1863-  
 1948), American ornithologist and  
 author **1** 443-444

**BAILEY, GAMALIEL** (1807-1859), American editor and politician **1** 444-445

**BAILLIE, D(ONALD) M(AC)PHERSON** (1887-1954), Scottish theologian **1** 445

**BAILLIE, JOHN** (1886-1960), Scottish theologian and ecumenical churchman **1** 445-447

**BAKER, ELLA JOSEPHINE** (1903-1986), African American human and civil rights activist **18** 26-28

**BAKER, HOWARD HENRY, JR.** (born 1925), U.S. senator and White House chief of staff **18** 28-30

**BAKER, JAMES ADDISON III** (born 1930), Republican party campaign leader **1** 447-448

**BAKER, JOSEPHINE** (1906-1975) Parisian dancer and singer from America **1** 448-451

**BAKER, NEWTON DIEHL** (1871-1937), American statesman **1** 451

**BAKER, RAY STANNARD** (1870-1946), American author **1** 451-452

**BAKER, RUSSELL** (born 1925), American writer of personal-political essays **1** 452-454

**BAKER, SIR SAMUEL WHITE** (1821-1893), English explorer and administrator **1** 454-455

**BAKER, SARA JOSEPHINE** (1873-1945), American physician **1** 455-456

**BAKHTIN, MIKHAIL MIKHAILOVICH** (1895-1975), Russian philosopher and literary critic **1** 456-458

**BAKUNIN, MIKHAIL ALEKSANDROVICH** (1814-1876), Russian anarchist **1** 458-460

**BALAGUER Y RICARDO, JOAQUÍN** (born 1907), Dominican statesman **1** 460-461

**BALANCHINE, GEORGE** (1904-1983), Russian-born American choreographer **1** 461-462

**BALBOA, VASCO NÚÑEZ DE** (circa 1475-1519), Spanish explorer **1** 462-463

**BALBULUS, NOTKER** (circa 840-912), Swiss poet-musician and monk **11** 434-435

**BALCH, EMILY GREENE** (1867-1961), American pacifist and social reformer **1** 463-464

**BALDWIN I** (1058-1118), Norman king of Jerusalem 1100-1118 **1** 464-465

**BALDWIN, JAMES ARTHUR** (1924-1987), African American author, poet, and dramatist **1** 465-466

**BALDWIN, ROBERT** (1804-1858), Canadian politician **1** 466-468

**BALDWIN, STANLEY** (1st Earl Baldwin of Bewdley; 1867-1947), English statesman, three times prime minister **1** 468-469

**BALFOUR, ARTHUR JAMES** (1st Earl of Balfour; 1848-1930), British statesman and philosopher **1** 469-470

**BALL, GEORGE** (1909-1994), American politician and supporter of an economically united Europe **1** 470-471

**BALL, LUCILLE** (Lucille Desiree Hunt; 1911-1989), American comedienne **1** 472-473  
Arnaz, Desi **21** 12-14

**BALLA, GIACOMO** (1871-1958), Italian painter **1** 473-474

**BALLADUR, EDOUARD** (born 1929), premier of the French Government **1** 474-475

**BALLARD, ROBERT** (born 1942), American oceanographer **19** 10-12

**Ballet** (dance)  
Beauchamps, Pierre **21** 27-29  
Beaujoyeux, Balthasar de **21** 29-30

**BALLIVIÁN, JOSÉ** (1805-1852), Bolivian president 1841-1847 **1** 475

**BALMACEDA FERNÁNDEZ, JOSÉ MANUEL** (1840-1891), Chilean president 1886-1891 **1** 475-476

**BALTHUS** (Balthasar Klossowski; born 1908), European painter and stage designer **1** 476-477

**BALTIMORE, DAVID** (born 1938), American virologist **1** 477-478

**Baltimore and Ohio Railroad** (United States)  
Fink, Albert **21** 133-135

**BALZAC, HONORÉ DE** (1799-1850), French novelist **1** 478-480

**BAMBA, AMADOU** (1850-1927), Senegalese religious leader **1** 481-482

**BAMBARA, TONI CADE** (1939-1995), African American writer and editor **1** 482-483

**BANCROFT, GEORGE** (1800-1891), American historian and statesman **1** 483-484

**BANCROFT, HUBERT HOWE** (1832-1918), American historian **1** 484-485

**BANDA, HASTINGS KAMUZU** (1905-1997), Malawi statesman **1** 485-486

**BANDARANAIKE, SIRIMAVO (also Sirima) RATWATTE DIAS** (born 1916), first woman prime minister in the world as head of the Sri Lankan Freedom party government (1960-1965, 1970-1976) **1** 486-488

**BANERJEE, SURENDRANATH** (1848-1925), Indian nationalist **1** 488

**Banking, English**  
Baring, Francis **21** 20-22

**Banking, German**  
Fugger, Jakob **21** 147-149

**BANKS, DENNIS J.** (born 1932), Native American leader, teacher, activist, and author **1** 488-489

**BANKS, SIR JOSEPH** (1743-1820), English naturalist **1** 489-490

**BANNEKER, BENJAMIN** (1731-1806), African American mathematician **1** 490-491

**BANNISTER, EDWARD MITCHELL** (1828-1901), African American landscape painter **1** 491-493

**BANNISTER, ROGER** (born 1929), English runner **21** 18-20

**BANTING, FREDERICK GRANT** (1891-1941), Canadian physiologist **1** 493-494

**BANZER SUÁREZ, HUGO** (born 1926), Bolivian president (1971-1979) **1** 494-496

**BAO DAI** (born 1913), emperor of Vietnam 1932-1945 and 1949-1955 **1** 496-497

**BAR KOCHBA, SIMEON** (died 135), Jewish commander of revolt against Romans **2** 5

**BARAK, EHUD** (born 1942), Israeli prime minister **1** 497-498

**BARAKA, IMAMU AMIRI** (Everett LeRoi Jones; born 1934), African American poet and playwright **1** 498-499

**BARANOV, ALEKSANDR ANDREIEVICH** (1747-1819), Russian explorer **1** 499-500

**Barbed wire fencing**  
Glidden, Joseph **21** 167-170

**BARBER, SAMUEL** (1910-1981), American composer **1** 500-501

**BARBIE, KLAUS** (Klaus Altmann; 1913-1991), Nazi leader in Vichy France **1** 501-503

**BARBONCITO** (1820-1871), Native American leader of the Navajos **20** 25-27

**BARBOSA, RUY** (1849-1923), Brazilian journalist and politician **1** 503-504

**BARDEEN, JOHN** (1908-1991), American Nobel physicist **2** 1-3

**BARENBOIM, DANIEL** (born 1942), Israeli pianist and conductor **2** 3-4

**BARENTS, WILLEM** (died 1597), Dutch navigator and explorer **2** 4-5

**BARING, FRANCIS** (1740-1810), English banker **21** 20-22

**BARLACH, ERNST** (1870-1938), German sculptor **2** 5-6

**BARLOW, JOEL** (1754-1812), American poet **2** 6-7

**BARNARD, CHRISTIAAN N.** (born 1922), South African heart transplant surgeon **2** 7-8

**BARNARD, EDWARD EMERSON** (1857-1923), American astronomer **2** 8-9

**BARNARD, FREDERICK AUGUSTUS PORTER** (1809-1889), American educator and mathematician **2** 9-10

**BARNARD, HENRY** (1811-1900), American educator **2** 10

**BARNES, DJUNA** (a.k.a. Lydia Steptoe; 1892-1982), American author **2** 11-13

**BARNETT, MARGUERITE ROSS** (1942-1992), American educator **21** 22-24

**BARNUM, PHINEAS TAYLOR** (1810-1891), American showman **2** 13-15

**BAROJA Y NESSI, PÍO** (1872-1956), Spanish novelist **2** 15-16

**BARON, SALO WITTMAYER** (1895-1989), Austrian-American educator and Jewish historian **2** 16-17

**BARRAGÁN, LUIS** (1902-1988), Mexican architect and landscape architect **2** 17-19

**BARRAS, VICOMTE DE** (Paul François Jean Nicolas; 1755-1829), French statesman and revolutionist **2** 19

**BARRE, RAYMOND** (1924-1981), prime minister of France (1976-1981) **2** 19-20

**BARRÈS, AUGUSTE MAURICE** (1862-1923), French writer and politician **2** 20-21

**BARRIE, SIR JAMES MATTHEW** (1860-1937), British dramatist and novelist **2** 21-22

**BARRIENTOS ORTUÑO, RENÉ** (1919-1969), populist Bolivian president (1966-1969) **2** 22-23

**BARRIOS, JUSTO RUFINO** (1835-1885), Guatemalan general, president 1873-1885 **2** 23-24

**Barristers**  
see Jurists, English

**BARRY, JOHN** (1745-1803), American naval officer **2** 24-25

**BARRY, MARION SHEPILOV, JR.** (born 1936), African American mayor and civil rights activist **2** 25-28

**BARRYMORES**, American theatrical dynasty **2** 28-30

**BARTH, HEINRICH** (1821-1865), German explorer **2** 30-31

**BARTH, KARL** (1886-1968), Swiss Protestant theologian **2** 31-32

**BARTHÉ, RICHMOND** (1901-1989), African American sculptor **2** 33-34

**BARTHOLOMAEUS ANGLICUS** (Bartholomew the Englishman; Bartholomew de Glanville; flourished 1220-1240), English theologian and encyclopedist **21** 24-25

**BARTLETT, SIR FREDERIC CHARLES** (1886-1969), British psychologist **2** 34-35

**BARTÓK, BÉLA** (1881-1945), Hungarian composer and pianist **2** 35-36

**BARTON, BRUCE** (1886-1967), American advertising business executive and congressman **2** 36-37

**BARTON, CLARA** (1821-1912), American humanitarian **2** 37-39

**BARTON, SIR EDMUND** (1849-1920), Australian statesman and jurist **2** 39-40

**BARTRAM, JOHN** (1699-1777), American botanist **2** 40-41

**BARTRAM, WILLIAM** (1739-1823), American naturalist **2** 41-42

**BARUCH, BERNARD MANNES** (1870-1965), American statesman and financier **2** 42-43

**BARYSHNIKOV, MIKHAIL** (born 1948), ballet dancer **2** 43-44

**Baseball Hall of Fame** (Cooperstown, New York State)  
Cartwright, Alexander **21** 74-77  
Feller, Bob **21** 129-131  
Gibson, Bob **21** 159-162  
Hornsby, Rogers **21** 204-206  
Johnson, Walter **21** 228-230  
Mathewson, Christy **21** 282-284

**Baseball players**  
see Athletes

**BASEDOW, JOHANN BERNHARD** (1724-1790), German educator and reformer **2** 44-45

**BASHO, MATSUO** (1644-1694), Japanese poet **2** 45-48

**BASIE, COUNT** (William Basie; 1904-1984), pianist and jazz band leader **2** 48-49

**BASIL I** (circa 812-886), Byzantine emperor 867-886 **2** 49-50

**BASIL II** (circa 958-1025), Byzantine emperor 963-1025 **2** 50-51

**BASIL THE GREAT, ST.** (329-379), theologian and bishop of Caesarea **2** 51-52

**Basketball** (sport)  
Naismith, James **21** 311-313

**Basketball** (United States)  
see Athletes

**Basketball Hall of Fame**  
Mikan, George **21** 297-299  
West, Jerry Alan **21** 428-430

**BASS, SAUL** (1920-1996), American designer of film advertising **21** 25-27

**BASSI, LAURA** (1711-1778), Italian physicist **20** 27-29

**BATES, DAISY MAE** (née O'Dwyer; 1861-1951), Irish-born Australian social worker **2** 52-53

**BATES, HENRY WALTER** (1825-1892), English explorer and naturalist **2** 53-54

**BATES, KATHARINE LEE** (1859-1929), American poet and educator **2** 54-55

**BATESON, WILLIAM** (1861-1926), English biologist concerned with evolution **2** 55-57

**BATISTA Y ZALDÍVAR, FULGENCIO** (1901-1973), Cuban political and military leader **2** 57-58

**BATLLE Y ORDÓÑEZ, JOSÉ** (1856-1929), Uruguayan statesman and journalist **2** 58-59

**BATTLE, KATHLEEN** (born 1948), American opera and concert singer **2** 59-60

**BATU KHAN** (died 1255), Mongol leader **2** 60-61

**BAUDELAIRE, CHARLES PIERRE** (1821-1867), French poet and art critic **2** 61-63

**BAUER, EDDIE** (1899-1986), American businessman **19** 13-14

**BAULIEU, ÉTIENNE-ÉMILE** (Étienne Blum; born 1926), French physician and biochemist who developed RU 486 **2** 63-66

**BAUM, HERBERT** (1912-1942), German human/civil rights activist **2** 66-73

**BAUM, L. FRANK** (1856-1919), author of the Wizard of Oz books **2** 73-74

**BAUR, FERDINAND CHRISTIAN** (1792-1860), German theologian **2** 74-75

- BAUSCH, PINA** (born 1940), a controversial German dancer/choreographer **2** 75-76
- BAXTER, RICHARD** (1615-1691), English theologian **2** 76-77
- BAYLE, PIERRE** (1647-1706), French philosopher **2** 77-78
- BEA, AUGUSTINUS** (1881-1968), German cardinal **2** 79
- BEACH, MOSES YALE** (1800-1868), American inventor and newspaperman **2** 79-80
- BEADLE, GEORGE WELLS** (1903-1989), American scientist, educator, and administrator **2** 80-81
- BEALE, DOROTHEA** (1831-1906), British educator **2** 81-83
- Bean, Leon Leonwood** (L.L. Bean; 1872-1967), American businessman **19** 14-16
- BEARD, CHARLES AUSTIN** (1874-1948), American historian **2** 84
- BEARD, MARY RITTER** (1876-1958), American author and activist **2** 85-86
- BEARDEN, ROMARE HOWARD** (1914-1988), African American painter-collagist **2** 86-88
- BEARDSLEY, AUBREY VINCENT** (1872-1898), English illustrator **2** 88-89
- BEATLES, THE** (1957-1971), British rock and roll band **2** 89-92
- BEATRIX, WILHELMINA VON AMSBERG, QUEEN** (born 1938), queen of Netherlands (1980-) **2** 92-93
- BEAUCHAMPS, PIERRE** (1636-1705), French dancer and choreographer **21** 27-29
- BEAUFORT, MARGARET** (1443-1509), queen dowager of England **20** 29-31
- BEAUJOYEULX, BALTHASAR DE** (Balthasar de Beaujoyeux; Baldassare de Belgiojoso; 1535-1587), Italian choreographer and composer **21** 29-30
- BEAUMARCHAIS, PIERRE AUGUST CARON DE** (1732-1799), French playwright **2** 93-94
- BEAUMONT, FRANCIS** (1584/1585-1616), English playwright **2** 95
- BEAUMONT, WILLIAM** (1785-1853), American surgeon **2** 95-96
- BEAUREGARD, PIERRE GUSTAVE TOUTANT** (1818-1893), Confederate general **2** 96-97
- BECARRIA, MARCHESE DI** (1738-1794), Italian jurist and economist **2** 97-98
- BECHTEL, STEPHEN DAVISON** (1900-1989), American construction engineer and business executive **2** 98-99
- BECK, LUDWIG AUGUST THEODOR** (1880-1944), German general **2** 99-100
- BECKER, CARL LOTUS** (1873-1945), American historian **2** 100-101
- BECKET, ST. THOMAS** (1128?-1170), English prelate **2** 101-102
- BECKETT, SAMUEL** (1906-1989), Irish novelist, playwright, and poet **2** 102-104
- BECKMANN, MAX** (1884-1950), German painter **2** 104-105
- BECKNELL, WILLIAM** (circa 1797-1865), American soldier and politician **2** 105-106
- BECKWOURTH, JIM** (James P. Beckwourth; c. 1800-1866), African American fur trapper and explorer **2** 106-107
- BÉCQUER, GUSTAVO ADOLFO DOMINGUEZ** (1836-1870), Spanish lyric poet **2** 107-108
- BECQUEREL, ANTOINE HENRI** (1852-1908), French physicist **2** 108-109
- BEDE, ST.** (672/673-735), English theologian **2** 109-110
- BEDELL SMITH, WALTER** (1895-1961), U.S. Army general, ambassador, and CIA director **18** 30-33
- BEECHER, CATHARINE** (1800-1878), American author and educator **2** 110-112
- BEECHER, HENRY WARD** (1813-1887), American Congregationalist clergyman **2** 112-113
- BEECHER, LYMAN** (1775-1863), Presbyterian clergyman **2** 113
- BEERBOHM, MAX** (Henry Maximilian Beerbohm; 1872-1956), English author and critic **19** 16-18
- BEETHOVEN, LUDWIG VAN** (1770-1827), German composer **2** 114-117
- BEGAY, HARRISON** (born 1917), Native American artist **2** 117-118
- BEGIN, MENACHEM** (1913-1992), Israel's first non-Socialist prime minister (1977-1983) **2** 118-120
- BEHAIM, MARTIN** (Martinus de Bohemia; 1459?-1507), German cartographer **21** 30-32
- BEHN, APHRA** (1640?-1689), British author **18** 33-34
- BEHRENS, HILDEGARD** (born 1937), German soprano **2** 120-121
- BEHRENS, PETER** (1868-1940), German architect, painter, and designer **2** 121-122
- BEHRING, EMIL ADOLPH VON** (1854-1917), German hygienist and physician **2** 122-123
- BEHZAD** (died circa 1530), Persian painter **2** 123
- BEISSEL, JOHANN CONRAD** (1690-1768), German-American pietist **2** 123-124
- BELAFONTE, HARRY** (Harold George Belafonte, Jr.; born 1927), African American singer and actor **20** 31-32
- BELASCO, DAVID** (1853-1931), American playwright and director-producer **2** 124-125
- BELAÚNDE TERRY, FERNANDO** (born 1912), president of Peru (1963-1968, 1980-1985) **2** 125-126
- BELGRANO, MANUEL** (1770-1820), Argentine general and politician **2** 126-127
- BELINSKY, GRIGORIEVICH** (1811-1848), Russian literary critic **2** 128
- BELISARIUS** (circa 506-565), Byzantine general **2** 128-129
- BELL, ALEXANDER GRAHAM** (1847-1922), Scottish-born American inventor **2** 129-131
- BELL, ANDREW** (1753-1832), Scottish educator **2** 131-132
- BELL, DANIEL** (Bolotsky; born 1919), American sociologist **2** 132-133
- BELL BURNELL, SUSAN JOCELYN** (born 1943), English radio astronomer **2** 133-134
- Bell Telephone Laboratories** (research organization)  
Pierce, John Robinson **21** 349-351
- BELLAMY, EDWARD** (1850-1898), American novelist, propagandist, and reformer **2** 134-135
- BELLARMINE, ST. ROBERT** (1542-1621), Italian theologian and cardinal **2** 135-136
- BELLE COURT, CLYDE** (born 1939), Native American activist **2** 136-137
- BELLINI, GIOVANNI** (circa 1435-1516), Italian painter **2** 137-138
- BELLINI, VINCENZO** (1801-1835), Italian composer **2** 138-139
- BELLO, ALHAJI SIR AHMADU** (1909-1966), Nigerian politician **2** 139-140
- BELLO Y LÓPEZ, ANDRÉS** (1781-1865), Venezuelan humanist **2** 140-141



**BELLOC, JOSEPH HILAIRE PIERRE** (1870-1953), French-born English author and historian **2** 141

**BELLOW, SAUL** (born 1915), American novelist and Nobel Prize winner **2** 141-143

**BELLOWS, GEORGE WESLEY** (1882-1925), American painter **2** 143

**BELLOWS, HENRY WHITNEY** (1814-1882), American Unitarian minister **2** 143-144

**BEMBO, PIETRO** (1470-1547), Italian humanist, poet, and historian **2** 144-145

**BEN AND JERRY** ice cream company founders **18** 35-37

**BEN BADIS, ABD AL-HAMID** (1889-1940), leader of the Islamic Reform Movement in Algeria between the two world wars **2** 147-148

**BEN BELLA, AHMED** (born 1918), first president of the Algerian Republic **2** 148-149

**Ben Hur** (film)  
Canutt, Yakima **21** 71-72  
Gibbons, Cedric **21** 158-159  
Struss, Karl **21** 398-399

**BENDIX, VINCENT** (1881-1945), American inventor, engineer, and industrialist **19** 18-20

**BEN-GURION, DAVID** (born 1886), Russian-born Israeli statesman **2** 160-161

**BEN-HAIM, PAUL** (Frankenburger; 1897-1984), Israeli composer **2** 161-162

**BEN YEHUDA, ELIEZER** (1858-1922), Hebrew lexicographer and editor **2** 181-182

**BENALCÁZAR, SEBASTIÁN DE** (died 1551), Spanish conquistador **2** 145-146

**BENAVENTE Y MARTINEZ, JACINTO** (1866-1954), Spanish dramatist **2** 146-147

**BENCHLEY, ROBERT** (1889-1945), American humorist **2** 150-151

**BENDA, JULIEN** (1867-1956), French cultural critic and novelist **2** 151-152

**BENEDICT XV** (Giacomo della Chiesa; 1854-1922), pope, 1914-1922 **2** 153-154

**BENEDICT, RUTH FULTON** (1887-1948), American cultural anthropologist **2** 154-155

**BENEDICT, ST.** (circa 480-547), Italian founder of the Benedictines **2** 154-155

**BENEŠ, EDWARD** (1884-1948), Czechoslovak president 1935-1938 and 1940-1948 **2** 155-157

**BENÉ, STEPHEN VINCENT** (1898-1943), American poet and novelist **2** 157-158

**BENETTON**, Italian family (Luciano, Giuliana, Gilberto, Carlo and Mauro) who organized a world-wide chain of colorful knitwear stores **2** 158-159

**BENEZET, ANTHONY** (1713-1784), American philanthropist and educator **2** 159-160

**BENJAMIN, ASHER** (1773-1845), American architect **2** 162-163

**BENJAMIN, JUDAH PHILIP** (1811-1884), American statesman **2** 163-164

**BENJAMIN, WALTER** (1892-1940), German philosopher and literary critic **20** 32-34

**BENN, GOTTFRIED** (1886-1956), German author **2** 164

**BENN, TONY** (Anthony Neil Wedgewood Benn; born 1925), British Labour party politician **2** 164-166

**BENNETT, ALAN** (born 1934), British playwright **2** 166-167

**BENNETT, ENOCH ARNOLD** (1867-1931), English novelist and dramatist **2** 167-168

**BENNETT, JAMES GORDON** (1795-1872), Scottish-born American journalist and publisher **2** 168-169

**BENNETT, JAMES GORDON, JR.** (1841-1918), American newspaper owner and editor **2** 169-170

**BENNETT, JOHN COLEMAN** (1902-1995), American theologian **2** 170-171

**BENNETT, RICHARD BEDFORD** (1870-1947), Canadian statesman, prime minister 1930-1935 **2** 171-172

**BENNETT, RICHARD RODNEY** (born 1936), English composer **2** 172

**BENNETT, ROBERT RUSSELL** (1894-1981), American arranger, composer, and conductor **21** 32-34

**BENNETT, WILLIAM JOHN** (born 1943), American teacher and scholar and secretary of the Department of Education (1985-1988) **2** 172-174

**BENNY, JACK** (Benjamin Kubelsky; 1894-1974), American comedian and a star of radio, television, and stage **2** 174-176

**BENTHAM, JEREMY** (1748-1832), English philosopher, political theorist, and jurist **2** 176-178

**BENTLEY, ARTHUR F.** (1870-1957), American philosopher and political scientist **2** 178

**BENTON, SEN. THOMAS HART** (1782-1858), American statesman **2** 178-179

**BENTON, THOMAS HART** (1889-1975), American regionalist painter **2** 178-179

**BENTSEN, LLOYD MILLARD** (born 1921), senior United States senator from Texas and Democratic vice-presidential candidate in 1988 **2** 180-181

**BENZ, CARL** (1844-1929), German inventor **2** 182-183

**BERCHTOLD, COUNT LEOPOLD VON** (1863-1942), Austro-Hungarian statesman **2** 183-184

**BERDYAEV, NICHOLAS ALEXANDROVICH** (1874-1948), Russian philosopher **2** 184-185

**BERELSON, BERNARD** (1912-1979), American behavioral scientist **2** 185-186

**BERENSON, BERNARD** (1865-1959), American art critic and historian **20** 34-35

**BERG, ALBAN** (1885-1935), Austrian composer **2** 186-187

**BERG, PAUL** (born 1926), American chemist **2** 187-189

**BERGER, VICTOR LOUIS** (1860-1929), American politician **2** 189-190

**BERGMAN, (ERNST) INGMAR** (born 1918); Swedish film and stage director **2** 190-191

**BERGMAN, INGRID** (1917-1982), Swedish actress **20** 35-37

**BERGSON, HENRI** (1859-1941), French philosopher **2** 191-192

**BERIA, LAVRENTY PAVLOVICH** (1899-1953), Soviet secret-police chief and politician **2** 192-193

**BERING, VITUS** (1681-1741), Danish navigator in Russian employ **2** 193-194

**BERIO, LUCIANO** (born 1925), Italian composer **2** 194-195

**BERISHA, SALI** (born 1944), president of the Republic of Albania (1992-) **2** 195-197

**BERKELEY, BUSBY** (William Berkeley Enos; 1895-1976), American filmmaker **20** 38-39

**BERKELEY, GEORGE** (1685-1753), Anglo-Irish philosopher and Anglican bishop **2** 197-198

**BERKELEY, SIR WILLIAM** (1606-1677), English royal governor of Virginia **2** 198-199

**BERLE, ADOLF AUGUSTUS, JR.** (1895-1971), American educator **2** 199-200

**BERLE, MILTON** (born 1908), American entertainer and actor **18** 37-39

**BERLIN, IRVING** (1888-1989), American composer **2** 200-201  
Merman, Ethel **21** 295-297

**BERLIN, ISAIAH** (1909-1997), British philosopher **2** 201-203

**BERLINER, ÉMILE** (1851-1929), American inventor **20** 39-41

**BERLIOZ, LOUIS HECTOR** (1803-1869), French composer, conductor, and critic **2** 203-205

**BERMEJO, BARTOLOMÉ** (Bartolomé de Cárdenas; flourished 1474-1498), Spanish painter **2** 205

**BERNADETTE OF LOURDES, SAINT** (Marie Bernarde Soubirous; 1844-1879), French nun and Roman Catholic saint **21** 34-36

**BERNANOS, GEORGES** (1888-1948), French novelist and essayist **2** 206-207

**BERNARD, CLAUDE** (1813-1878), French physiologist **2** 208-210

**BERNARD OF CLAIRVAUX, ST.** (1090-1153), French theologian, Doctor of the Church **2** 207-208

**BERNARDIN, CARDINAL JOSEPH** (1928-1996), Roman Catholic Cardinal and American activist **2** 210-211

**BERNAYS, EDWARD L.** (1891-1995), American public relations consultant **2** 211-212

**BERNBACH, WILLIAM** (1911-1982), American advertising executive **19** 20-22

**BERNERS-LEE, TIM** (born 1955), English computer scientist and creator of the World Wide Web **20** 41-43

**BERNHARDT, SARAH** (Henriette-Rosine Bernard; 1844-1923), French actress **2** 212-214

**BERNINI, GIAN LORENZO** (1598-1680), Italian artist **2** 214-216

**BERNOULLI, DANIEL** (1700-1782), Swiss mathematician and physicist **2** 216

**BERNSTEIN, DOROTHY LEWIS** (born 1914), American mathematician **2** 217

**BERNSTEIN, EDUARD** (1850-1932), German socialist **2** 218

**BERNSTEIN, LEONARD** (1918-1990), American composer, conductor, and pianist **2** 218-219

**BERRI, NABIH** (born 1939), leader of the Shi'ite Muslims in Lebanon **2** 220-222

**BERRIGAN, DANIEL J.** (born 1921), activist American Catholic priest **2** 222-223

**BERRUGUETE, ALONSO** (1486/90-1561), Spanish sculptor **2** 223-224

**BERRY, CHUCK** (born 1926), African American performer **2** 224-226

**BERRY, MARY FRANCES** (born 1938), African American human/civil rights activist and official **2** 226-229

**BERRYMAN, JOHN** (John Allyn Smith, Jr.; 1914-1972), American poet and biographer **19** 22-25

**BERTHIER, LOUIS ALEXANDRE** (1753-1815), French soldier and cartographer **20** 43-44

**BERTHOLLET, CLAUDE LOUIS** (1748-1822), French chemist **2** 229-230

**BERTILLON, ALPHONSE** (1853-1914), French criminologist **2** 230-231

**BERTOLUCCI, BERNARDO** (born 1940), Italian film director **18** 39-41

**BERZELIUS, JÖNS JACOB** (1779-1848), Swedish chemist **2** 231-233

**BESANT, ANNIE WOOD** (1847-1933), British social reformer and theosophist **2** 233-234

**BESSEL, FRIEDRICH WILHELM** (1784-1846), German astronomer **2** 234-235

**BESSEMER, SIR HENRY** (1813-1898), English inventor **2** 235-236

**BEST, CHARLES HERBERT** (1899-1978), Canadian physiologist **2** 236-237

**BETANCOURT, RÓMULO** (1908-1990), Venezuelan statesman **2** 237-238

**BETHE, HANS ALBRECHT** (born 1906), Alsatian-American physicist **2** 238-239

**BETHMANN HOLLWEG, THEOBALD VON** (1856-1921), German statesman **2** 239-240

**BETHUNE, HENRY NORMAN** (1890-1939), Canadian humanitarian physician **2** 240-241

**BETHUNE, MARY MCLEOD** (1875-1955), African American educator **2** 241-242

**BETI, MONGO** (Alexandre Biyidi; born 1932), Cameroonian novelist **2** 242-243

**BETJEMAN, JOHN** (1906-1984), Poet Laureate of Britain 1972-1984 **2** 243-245

**BETTELHEIM, BRUNO** (1903-1990), Austrian-born American psychoanalyst and educational psychologist **2** 245-246

**BETTI, UGO** (1892-1953), Italian playwright **2** 246

**BEUYS, JOSEPH** (1921-1986), German artist and sculptor **2** 246-248

**BEVAN, ANEURIN** (1897-1960), Labour minister responsible for the creation of the British National Health Service **2** 248-249

**BEVEL, JAMES LUTHER** (born 1936), American civil rights activist of the 1960s **2** 250-251

**BEVERIDGE, WILLIAM HENRY** (1st Baron Beveridge of Tuccal; 1879-1963), English economist and social reformer **2** 251-252

**BEVERLEY, ROBERT** (circa 1673-1722), colonial American historian **2** 252

**BEVIN, ERNEST** (1881-1951), English trade union leader and politician **2** 252-253

**BHABHA, HOMI JEHangIR** (1909-1966), Indian atomic physicist **2** 253-254

**BHAKTIVEDANTA PRABHUPADA** (Abhay Charan De; 1896-1977), Hindu religious teacher who founded the International Society for Krishna Consciousness **2** 254-255

**BHASHANI, MAULANA ABDUL HAMID KHAN** (1880-1976), Muslim leader who promoted nationalism in Assam, Bengal, and Bangladesh **2** 255-257

**BHAVE, VINOBA** (born 1895), Indian nationalist and social reformer **2** 257-258

**BHUMIBOL ADULYADEJ** (born 1927), king of Thailand (1946-) representing the Chakri Dynasty **2** 258-259

**BHUTTO, BENAZIR** (born 1953), prime minister of Pakistan (1988-1990) **2** 259-261

**BHUTTO, ZULFIKAR ALI** (1928-1979), Pakistan's president and later prime minister (1971-1979) **2** 261-262

**BIALIK, HAYYIM NAHMAN** (1873-1934), Russian-born Hebrew poet **2** 262-263

**Bible** (book)

- **BIBLICAL STUDIES** translations  
Martin, Gregory **21** 277-279  
versions  
Langton, Stephen **21** 249-251

- NEW TESTAMENT translations  
Martin, Gregory **21** 277-279
  - OLD TESTAMENT archeological support for Albright, William **21** 1-3  
translations  
Martin, Gregory **21** 277-279
- Biblical studies**  
see Bible
- BICHAT, MARIE FRANÇOIS XAVIER** (1771-1802), French anatomist, pathologist, and physiologist **2** 263-264
- Bicycle**  
Starley, James **21** 392-393
- BIDDLE, NICHOLAS** (1786-1844), American financier **2** 264-265
- BIDWELL, JOHN** (1819-1900), American pioneer and agriculturist **2** 265
- BIEBER, OWEN** (born 1929), American union executive **2** 266-268
- BIENVILLE, SIEUR DE** (Jean Baptiste Le Moyne; 1680-1768), French colonizer and administrator **2** 268-269
- BIERCE, AMBROSE GWINETT** (1842-1914?), American journalist and author **2** 269-270
- BIERSTADT, ALBERT** (1830-1902), American painter **2** 270-271
- BIGELOW, JOHN** (1817-1911), American journalist, editor, and diplomat **2** 271-272
- BIGGE, JOHN THOMAS** (1780-1843), English judge and royal commissioner **2** 272
- BIGGS, HERMANN MICHAEL** (1859-1923), American physician **2** 272-273
- BIKILA, ABEBE** (1932-1973), Ethiopian marathon runner **20** 44-46
- BIKO, STEVE** (Stephen Bantu Biko; 1946-1977), political activist and writer and father of the Black Consciousness movement in the Union of South Africa **2** 273-274
- BILLINGS, WILLIAM** (1746-1800), American composer **2** 274-275
- BILLINGTON, JAMES HADLEY** (born 1929), American scholar and author **2** 275-276
- BILLY THE KID** (W.H. Bonney; 1859-1881), American frontiersman and outlaw **2** 277
- BINET, ALFRED** (1857-1911), French psychologist **2** 277-278
- BINGHAM, GEORGE CALEB** (1811-1879), American painter **2** 278-279
- BINGHAM, HIRAM** (1875-1956), American explorer **20** 46-48
- Biograph Co.** (films)  
O'Brien, Willis **21** 324-326
- BIRD, LARRY** (born 1956), American basketball player **2** 279-281
- BIRD, ROBERT MONTGOMERY** (1806-1854), American dramatist and novelist **2** 281-282
- BIRDSEYE, CLARENCE** (1886-1956), American naturalist, inventor, and businessman **19** 25-27
- BIRENDRA** (Bir Bikram Shah Dev; born 1945), King of Nepal (1972-) **2** 282-283
- BIRINGUCCIO, VANNOCCIO** (1480-1539), Italian mining engineer and metallurgist **2** 283
- BIRNEY, JAMES GILLESPIE** (1792-1857), American lawyer and abolitionist **2** 283-284
- BIRUNI, ABU RAYHAN AL-** (973-circa 1050), Arabian scientist and historian **2** 284-285
- BIRYUKOVA, ALEKSANDRA PAVLOVNA** (1929-1990), a secretary of the Central Committee of the Communist party of the Soviet Union and a deputy prime minister (1986-1990) **2** 285-287
- BISHARA, ABDULLAH YACCOUB** (born 1936), Kuwaiti statesman and first secretary-general of the Gulf Cooperative Council **2** 287-288
- BISHOP, BRIDGET** (died 1692), Salem, Massachusetts, witch trial defendant **2** 288-290
- BISHOP, ELIZABETH** (1911-1979), American poet **2** 290-292
- BISHOP, MAURICE** (1944-1983), leader of the New Jewel Movement and prime minister of Grenada (1979-1983) **2** 292-293
- BISMARCK, OTTO EDUARD LEOPOLD VON** (1815-1898), German statesman **2** 294-296
- BITRUJI, NUR AL-DIN ABU ISHAQ AL** (circa 1150-1200), Spanish Moslem astronomer **2** 296
- BITZER, BILLY** (George William Bitzer; 1872-1944), American cinematographer **21** 36-38
- BIYA, PAUL** (born 1933), president of Cameroon **18** 41-43
- BIZET, GEORGES** (1838-1875), French composer **2** 296-297
- BJELKE-PETERSEN, JOHANNES** ("Joh;" born 1911), Australian politician **2** 297-299
- BJERKNES, VILHELM** (1862-1951), Norwegian meteorologist **20** 48-50
- BJØRNSON, BJØRNSTJERNE** (1832-1910), Norwegian author **2** 299-300
- BLACK, CONRAD MOFFAT** (born 1944), Canadian-born international press baron **2** 300-301
- BLACK, HUGO LAFAYETTE** (1886-1971), American jurist **2** 301-303
- BLACK, JOSEPH** (1728-1799), British chemist **2** 303
- BLACK, SHIRLEY TEMPLE** (born 1928), American actress and public servant **2** 303-305
- BLACK ELK, NICHOLAS** (1863-1950), Oglala Sioux medicine man **2** 305-306
- BLACK HAWK** (1767-1838), Native American war chief **2** 308
- Black Panther Party** (United States; established 1966)  
Van Peebles, Melvin **21** 414-416
- BLACKBEARD** (Edward Teach; 1680-1718), English pirate **21** 38-41
- BLACKBURN, ELIZABETH HELEN** (born 1948), Australian biologist **18** 43-45
- BLACKETT, PATRICK M.S.** (1897-1974), British physicist **2** 306-307
- Blacklist** (anti-Communist measure; United States; 1950s)  
Trumbo, Dalton **21** 409-411
- BLACKMUN, HARRY** (1908-1999), United States Supreme Court justice **2** 309-310
- Blacks**  
see African American history (United States); Africa
- BLACKSTONE, SIR WILLIAM** (1723-1780), English jurist **2** 310-311
- BLACKWELL, ANTOINETTE BROWN** (1825-1921), American minister and suffragette **21** 41-43
- BLACKWELL, ELIZABETH** (1821-1910), American physician **2** 311-312
- BLACKWELL, EMILY** (1826-1910), American physician and educator **19** 27-29
- BLAINE, JAMES GILLESPIE** (1830-1893), American statesman **2** 312-313
- BLAIR, FRANCIS PRESTON** (1791-1876), American journalist and politician **2** 313-315

**BLAIR, JAMES** (1655-1743), British educator and Anglican missionary **2** 315-316

**BLAIR, TONY** (born 1953), British prime minister **18** 45-47

**BLAKE, WILLIAM** (1757-1827), English poet, engraver, and painter **2** 316-318

**BLAKELOCK, RALPH ALBERT** (1847-1919), American painter **2** 318

**BLANC, LOUIS** (1811-1882), French journalist, historian, and politician **2** 318-319

**BLANC, MEL** (1908-1989), American creator of and voice of cartoon characters **2** 319-320

**BLANCHARD, FELIX** ("Doc" Blanchard; born 1924), American football player and military pilot **21** 43-45

**BLANCHE OF CASTILE** (1188-1252), French queen **21** 45-47

**BLANCO, ANTONIO GUZMÁN** (1829-1899), Venezuelan politician, three-times president **2** 320-321

**BLANDIANA, ANA** (born Otilia-Valeria Coman, 1942), Romanian poet **2** 321-322

**BLANDING, SARAH GIBSON** (1898-1985), American educator **2** 322-323

**BLANKERS-KOEN, FANNY** (Francina Elsia Blankers-Koen; born 1918), Dutch track and field athlete **20** 50-52

**BLANQUI, LOUIS AUGUSTE** (1805-1881), French revolutionary **2** 323-324

**BLEDSE, ALBERT TAYLOR** (1809-1877), American lawyer, educator, and Confederate apologist **2** 324-325

**BLEULER, EUGEN** (1857-1939), Swiss psychiatrist **2** 325

**BLIGH, WILLIAM** (1754-1817), English naval officer and colonial governor **2** 325-326

**BLOCH, ERNEST** (1880-1959), Swiss-born American composer and teacher **2** 326-327

**BLOCH, ERNST** (1885-1977), German humanistic interpreter of Marxist thought **2** 327-328

**BLOCH, FELIX** (1905-1983), Swiss/American physicist **2** 328-330

**BLOCH, KONRAD** (born 1912), American biochemist **2** 330-332

**BLOCH, MARC** (1886-1944), French historian **2** 332-333

**BLOCK, HERBERT** (Herblock; born 1909), American newspaper cartoonist **2** 333-334

**BLOK, ALEKSANDR ALEKSANDROVICH** (1880-1921), Russian poet **2** 335

**BLOOM, ALLAN DAVID** (1930-1992), American political philosopher, professor, and author **2** 335-337

**BLOOMER, AMELIA JENKS** (1818-1894), American reformer and suffrage advocate **2** 337

**BLOOMFIELD, LEONARD** (1887-1949), American linguist **2** 338

**BLOOR, ELLA REEVE** ("Mother Bloor"; 1862-1951), American labor organizer and social activist **2** 338-340

**BLÜCHER, GEBHARD LEBERECHT VON** (Prince of Wahlstatt; 1742-1819), Prussian field marshal **2** 340-341

**BLUFORD, GUION STEWART, JR.** (born 1942), African American aerospace engineer, pilot, and astronaut **2** 341-343

**BLUM, LÉON** (1872-1950), French statesman **2** 343-344

**BLUME, JUDY** (born Judy Sussman; b. 1938), American fiction author **2** 344-345

**BLUMENTHAL, WERNER MICHAEL** (born 1926), American businessman and treasury secretary **2** 345-346

**BLY, NELLIE** (born Elizabeth Cochrane Seaman; 1864-1922), American journalist and reformer **2** 346-348

**BLYDEN, EDWARD WILMOT** (1832-1912), Liberian statesman **2** 348-349

**BOAS, FRANZ** (1858-1942), German-born American anthropologist **2** 349-351

**BOCCACCIO, GIOVANNI** (1313-1375), Italian author **2** 351-353

**BOCCIONI, UMBERTO** (1882-1916), Italian artist **2** 353-354

**BÖCKLIN, ARNOLD** (1827-1901), Swiss painter **2** 354-355

**BODE, BOYD HENRY** (1873-1953), American philosopher and educator **2** 355-356

**BODIN, JEAN** (1529/30-1596), French political philosopher **2** 356-357

**BOEHME, JACOB** (1575-1624), German mystic **2** 357

**BOEING, WILLIAM EDWARD** (1881-1956), American businessman **2** 357-358

**Boer War** (1899-1902)  
British army  
Baden-Powell, Robert **21** 16-18

**BOERHAAVE, HERMANN** (1668-1738), Dutch physician and chemist **2** 358-359

**BOESAK, ALLAN AUBREY** (born 1945), opponent of apartheid in South Africa and founder of the United Democratic Front **2** 359-360

**BOETHIUS, ANICIUS MANLIUS SEVERINUS** (480?-524/525), Roman logician and theologian **2** 360-361

**BOFFRAND, GABRIEL GERMAIN** (1667-1754), French architect and decorator **2** 361

**BOFILL, RICARDO** (born 1939), post-modern Spanish architect **2** 362-363

**BOGART, HUMPHREY** (1899-1957), American stage and screen actor **2** 363-364

**BOHEMUND I** (of Tarantò; circa 1055-1111), Norman Crusader **2** 364

**BOHLEN, CHARLES (CHIP) EUSTIS** (1904-1973), United States ambassador to the Soviet Union, interpreter, and presidential adviser **2** 364-366

**BÖHM-BAWERK, EUGEN VON** (1851-1914), Austrian economist **2** 366

**BOHR, NIELS HENRIK DAVID** (1885-1962), Danish physicist **2** 366-368

**BOIARDO, MATTEO MARIA** (Conte di Scandiano; 1440/41-1494), Italian poet **2** 369

**BOILEAU-DESPRÉAUX, NICHOLAS** (1636?-1711), French critic and writer **2** 369-371

**BOK, DEREK CURTIS** (born 1930), dean of the Harvard Law School and president of Harvard University **2** 371-372

**BOK, SISSELA ANN** (born 1934), American moral philosopher **2** 372-374

**BOLEYN, ANNE** (1504?-1536), second wife of Henry VIII **18** 47-49

**BOLINGBROKE, VISCOUNT** (Henry St. John; 1678-1751), English statesman **2** 374-375

**BOLÍVAR, SIMÓN** (1783-1830), South American general and statesman **2** 375-377

**BOLKIAH, HASSANAL** (Muda Hassanal Bolkiah Mu'izzaddin Waddaulah; born 1946), Sultan of Brunei **18** 49-51

**BÖLL, HEINRICH** (1917-1985), German writer and translator **2** 377-378

**BOLTWOOD, BERTRAM BORDEN** (1870-1927), American radiochemist **2** 378-379

**BOLTZMANN, LUDWIG** (1844-1906), Austrian physicist **2** 379-380

**BOMBAL, MARÍA LUISA** (1910-1980), Chilean novelist and story writer **2** 380-381

**BONAPARTE, JOSEPH** (1768-1844), French statesman, king of Naples 1806-1808 and of Spain 1808-1813 **2** 381-382

**BONAPARTE, LOUIS** (1778-1846), French statesman, king of Holland 1806-1810 **2** 382-383

**BONAVENTURE, ST.** (1217-1274), Italian theologian and philosopher **2** 383-384

**BOND, HORACE MANN** (1904-1972), African American educator **2** 384-386

**BOND, JULIAN** (born 1940), civil rights leader elected to the Georgia House of Representatives **2** 386-387

**BONDFIELD, MARGARET GRACE** (1873-1953), British union official and political leader **2** 388-389

**BONDI, HERMANN** (born 1919), English mathematician and cosmologist **18** 51-52

**BONHOEFFER, DIETRICH** (1906-1945), German theologian **2** 389-391

**BONHEUR, ROSA** (Marie Rosalie Bonheur; 1822-1899), French artist **19** 29-31

**BONIFACE, ST.** (circa 672-754), English monk **2** 391

**BONIFACE VIII** (Benedetto Caetani; 1235?-1303), pope 1294-1303 **2** 392-393

**BONIFACIO, ANDRES** (1863-1897), Filipino revolutionary hero **2** 393-394

**BONINGTON, RICHARD PARKES** (1802-1828), English painter **2** 394-395

**BONNARD, PIERRE** (1867-1947), French painter **2** 395-396

**BONNIN, GERTRUDE SIMMONS** (Zitkala-Sa; Red Bird; 1876-1938), Native American author and activist **18** 52-54

**BONO, SONNY** (Salvatore Bono; 1935-1998), American entertainer and U.S. Congressman **18** 54-56

**BONTEMPS, ARNA** (Arnaud Wendell Bontemps; 1902-1973), American author and educator **21** 47-50

**BONVALOT, PIERRE GABRIEL ÉDOUARD** (1853-1933), French explorer and author **2** 396

**BOOLE, GEORGE** (1815-1864), English mathematician **2** 396-397

**BOONE, DANIEL** (1734-1820), American frontiersman and explorer **2** 397-398

**BOORSTIN, DANIEL J.** (born 1914), American historian **2** 398-400

**BOOTH, CHARLES** (1840-1916), English social scientist **2** 400-401

**BOOTH, EDWIN** (1833-1893), American actor **2** 401-402

**BOOTH, EVANGELINE CORY** (1865-1950), British/American humanist **2** 402-403

**BOOTH, HUBERT CECIL** (1871-1955), English inventor of the vacuum cleaner **21** 50-52

**BOOTH, JOHN WILKES** (1838-1865), American actor **2** 404

**BOOTH, JOSEPH** (1851-1932), English missionary in Africa **2** 404-405

**BOOTH, WILLIAM** (1829-1912), English evangelist, Salvation Army founder **2** 405-406

**BOOTHROYD, BETTY** (born 1929), first woman speaker in Great Britain's House of Commons **2** 406-407

**BORAH, WILLIAM EDGAR** (1865-1940), American statesman **2** 408

**BORDEN, GAIL** (1801-1874), American pioneer and inventor of food-processing techniques **2** 409

**BORDEN, SIR ROBERT LAIRD** (1854-1937), Canadian prime minister, 1911-1920 **2** 409-411

**BORGES, JORGE LUIS** (1899-1986), Argentine author and critic **2** 411-412

**BORGIA, CESARE** (1475-1507), Italian cardinal, general, and administrator **2** 412-413

**BORGIA, LUCREZIA** (1480-1519), Italian duchess of Ferrara **2** 413-416

**BORGLUM, JOHN GUTZON DE LA MOTHE** (1867-1941), American sculptor and engineer **2** 416-417

**BORJA CEVALLOS, RODRIGO** (born 1935), a founder of Ecuador's Democratic Left (Izquierda Democrática) party and president of Ecuador (1988-) **2** 417-418

**BORLAUG, NORMAN ERNEST** (born 1914), American biochemist who developed high yield cereal grains **2** 418-420

**BORN, MAX** (1882-1970), German physicist **2** 420-421

**BOROCHOV, DOV BER** (1881-1917), early Zionist thinker who reconciled Judaism and Marxism **2** 421-422

**BORODIN, ALEKSANDR PROFIREVICH** (1833-1887), Russian composer **2** 422-423

**BORROMEO, ST. CHARLES** (1538-1584), Italian cardinal and reformer **2** 423-424

**BORROMINI, FRANCESCO** (1599-1667), Italian architect **2** 424-425

**BOSANQUET, BERNARD** (1848-1923), English philosopher **2** 425-426

**BOSCH, HIERONYMUS** (1453-1516), Netherlandish painter **2** 426-428

**BOSCH, JUAN** (born 1909), Dominican writer, president, 1963 **2** 428-429

**BOSE, SATYENDRANATH** (1894-1974), Indian physicist **20** 52-54

**BOSE, SIR JAGADIS CHANDRA** (1858-1937), Indian physicist and plant physiologist **2** 430-431

**BOSE, SUBHAS CHANDRA** (1897-1945), Indian nationalist **2** 430-431

**BOSOMWORTH, MARY MUSGROVE** (Cousaponokeesa; 1700-1765), Native American/American interpreter, diplomat, and businessperson **20** 54-56

**BOSSUET, JACQUES BÉNIGNE** (1627-1704), French bishop and author **2** 431-432

**Boston** (city, Massachusetts)  
art museums  
Gardner, Isabella Stewart **21** 152-155

**Boston Celtics** (basketball team)  
Cousy, Bob **21** 92-94

**BOSWELL, JAMES** (1740-1795), Scottish biographer and diarist **2** 432-434

**Botany** (science)  
classification  
Rafinesque, Constantine Samuel **21** 359-361

**BOTHA, LOUIS** (1862-1919), South African soldier and statesman **2** 434-436

**BOTHA, PIETER WILLEM** (born 1916), prime minister (1978-1984) and first executive state president of the Republic of South Africa **2** 436-438

**BOTHE, WALTHER** (1891-1957), German physicist **2** 438-439

**BOTTICELLI, SANDRO** (1444-1510), Italian painter **2** 439-440

**BOUCHER, FRANÇOIS** (1703-1770), French painter **2** 440-442

**BOUCICAULT, DION** (1820-1890), Irish-American playwright and actor **2** 442-443

**BOUDICCA** (Boadicea; died 61 A.D.), Icení queen **18** 56-58

**BOUDINOT, ELIAS** (Buck Watie; Galagina; 1803-1839), Cherokee leader and author **21** 52-54

**BOUGAINVILLE, LOUIS ANTOINE DE** (1729-1811), French soldier and explorer **2** 443-444

**BOULANGER, NADIA** (1887-1979), French pianist and music teacher **20** 56-58

**BOULEZ, PIERRE** (born 1925), French composer, conductor, and teacher **2** 444-445

**BOUMEDIENE, HOUARI** (born 1932), Algerian revolutionary, military leader, and president **2** 445-446

**BOURASSA, JOSEPH-HENRI-NAPOLÉON** (1868-1952), French-Canadian nationalist and editor **2** 446-447

**BOURASSA, ROBERT** (born 1933), premier of the province of Quebec (1970-1976 and 1985-) **2** 447-449

**BOURDELLE, EMILE-ANTOINE** (1861-1929), French sculptor **2** 449-450

**BOURGOIS, LÉON** (1851-1925), French premier 1895-1896 **2** 450-451

**BOURGOIS, LOUISE** (born 1911), American sculptor **2** 451-452

**BOURGEOIS, BLESSED MARGUERITE** (1620-1700), French educator and religious founder **2** 452-453

**BOURGUIBA, HABIB** (1903-2000), Tunisian statesman **2** 453-455

**BOURKE-WHITE, MARGARET** (1904-1971), American photographer and photojournalist **2** 455-456

**BOURNE, RANDOLPH SILLIMAN** (1886-1918), American pacifist and cultural critic **2** 456-457

**BOUTROS-GHALI, BOUTROS** (born 1922), Egyptian diplomat and sixth secretary-general of the United Nations (1991-) **2** 457-458

**BOUTS, DIRK** (1415/20-1475), Dutch painter **2** 458-459

**BOWDITCH, HENRY INGERSOLL** (1808-1892), American physician **2** 459-460

**BOWDITCH, NATHANIEL** (1773-1838), American navigator and mathematician **2** 460-461

**BOWDOIN, JAMES** (1726-1790), American merchant and politician **2** 461-462

**BOWEN, ELIZABETH** (1899-1973), British novelist **2** 462-463

**BOWERS, CLAUDE GERNADE** (1878-1958), American journalist, historian, and diplomat **2** 463

**BOWIE, DAVID** (David Robert Jones; born 1947), English singer, songwriter, and actor **18** 58-60

**BOWLES, PAUL** (1910-1999), American author, musical composer, and translator **19** 31-34

**BOWLES, SAMUEL** (1826-1878), American newspaper publisher **2** 464

**BOWMAN, ISAIAH** (1878-1950), American geographer **2** 464-465

**BOXER, BARBARA** (born 1940), U.S. Senator from California **2** 465-468

**Boxers**  
see Athletes, American—boxers

**Boxing Hall of Fame** (United States)  
Pep, Willie **21** 342-344

**Boy Scout Association**  
Baden-Powell, Robert **21** 16-18

**BOYER, JEAN PIERRE** (1776-1850), Haitian president 1818-1845 **2** 468-469

**BOYLE, ROBERT** (1627-1691), British chemist and physicist **2** 469-471

**BOYLSTON, ZABDIEL** (1679-1766), American physician **2** 471

**BOZEMAN, JOHN M.** (1837-1867), American pioneer **2** 471-472

**BRACKENRIDGE, HUGH HENRY** (1749-1816), American lawyer and writer **2** 472-473

**BRACON, HENRY** (Henry of Bratton; c. 1210-1268), English jurist **21** 54-55

**BRADBURY, RAY** (born 1920), American fantasy and science fiction writer **2** 473-474

**BRADDOCK, EDWARD** (1695-1755), British commander in North America **2** 474-475

**BRADFORD, WILLIAM** (1590-1657), leader of Plymouth Colony **2** 475-476

**BRADFORD, WILLIAM** (1663-1752), American printer **2** 476-477

**BRADFORD, WILLIAM** (1722-1791), American journalist **2** 477

**BRADLAUGH, CHARLES** (1833-1891), English freethinker and political agitator **2** 478

**BRADLEY, ED** (born 1941), African American broadcast journalist **2** 478-481

**BRADLEY, FRANCIS HERBERT** (1846-1924), English philosopher **2** 481-482

**BRADLEY, JAMES** (1693-1762), English astronomer **2** 482-483

**BRADLEY, MARION ZIMMER** (born 1930), American author **18** 60-62

**BRADLEY, OMAR NELSON** (1893-1981), American general **2** 483-484

**BRADLEY, TOM** (1917-1998), first African American mayor of Los Angeles **2** 484-485

**BRADMAN, SIR DONALD GEORGE** (born 1908), Australian cricketer **2** 485-486

**BRADSTREET, ANNE DUDLEY** (circa 1612-1672), English-born American poet **2** 486-487

**BRADY, MATHEW B.** (circa 1823-1896), American photographer **2** 487-488

**BRAGG, SIR WILLIAM HENRY** (1862-1942), English physicist **2** 488-489

**BRAHE, TYCHO** (1546-1601), Danish astronomer **2** 489-490

**BRAHMS, JOHANNES** (1833-1897), German composer **2** 490-492

**BRAILLE, LOUIS** (1809-1852), French teacher and creator of braille system **2** 492-493

**BRAMAH, JOSEPH** (Joe Bremmer; 1749-1814), English engineer and inventor **20** 58-59

**BRAMANTE, DONATO** (1444-1514), Italian architect and painter **2** 493-494

**BRANCUSI, CONSTANTIN** (1876-1957), Romanian sculptor in France **2** 494-496

**BRANDEIS, LOUIS DEMBITZ** (1856-1941), American jurist **2** 496-497  
influenced by  
Taylor, Frederick Winslow **21** 400-402

**BRANDO, MARLON** (born 1924), American actor **2** 497-499

**BRANDT, WILLY** (Herbert Frahm Brandt; 1913-1992), German statesman, chancellor of West Germany **2** 499-500

**BRANSON, RICHARD** (born 1950), British entrepreneur **19** 34-36

**BRANT, JOSEPH** (1742-1807), Mohawk Indian chief **2** 500-501

**BRANT, MARY** (1736-1796), Native American who guided the Iroquois to a British alliance **2** 501-503

**BRANT, SEBASTIAN** (1457-1521), German author **2** 503-504

**BRAQUE, GEORGES** (1882-1967), French painter **2** 504-505

**BRATTAIN, WALTER H.** (1902-1987), American physicist and co-inventor of the transistor **2** 505-507

**BRAUDEL, FERNAND** (1902-1985), leading exponent of the *Annales* school of history **2** 507-508

**BRAUN, FERDINAND** (1850-1918), German recipient of the Nobel Prize in Physics for work on wireless telegraphy **2** 508-509

**BRAY, JOHN RANDOLPH** (1879-1978), American animator and cartoonist **21** 55-57

**BRAZZA, PIERRE PAUL FRANÇOIS CAMILLE SAVORGNAN DE** (1852-1905), Italian-born French explorer **2** 509-510

**BREASTED, JAMES HENRY** (1865-1935), American Egyptologist and archeologist **2** 510-511

**BRÉBEUF, JEAN DE** (1593-1649), French Jesuit missionary **2** 511-512

**BRECHT, BERTOLT** (1898-1956), German playwright **2** 512-514

**BRENNAN, WILLIAM J., JR.** (born 1906), United States Supreme Court justice **2** 514-515

**BRENTANO, CLEMENS** (1778-1842), German poet and novelist **2** 515-516

**BRENTANO, FRANZ CLEMENS** (1838-1917), German philosopher **2** 516-517

**BRESHKOVSKY, CATHERINE** (1844-1934), Russian revolutionary **2** 517-519

**BRETON, ANDRÉ** (1896-1966), French author **2** 519-520

**BREUER, MARCEL** (1902-1981), Hungarian-born American architect **2** 520-521

**BREUIL, HENRI EDOUARD PROSPER** (1877-1961), French archeologist **2** 521-522

**BREWSTER, KINGMAN, JR.** (1919-1988), president of Yale University (1963-1977) **2** 522-523

**BREWSTER, WILLIAM** (circa 1566-1644), English-born Pilgrim leader **2** 523-524

**BREYER, STEPHEN** (born 1938), U.S. Supreme Court justice **2** 524-527

**BREZHNEV, LEONID ILICH** (1906-1982), general secretary of the Communist party of the Union of Soviet Socialist Republics (1964-1982) and president of the Union of Soviet Socialist Republics (1977-1982) **2** 527-528

**BRIAN BORU** (940?-1014), Irish king **18** 62-64

**BRIAND, ARISTIDE** (1862-1932), French statesman **2** 528-529

**BRICE, FANNY** (1891-1951), vaudeville, Broadway, film, and radio singer and comedienne **3** 1-2

**BRIDGER, JAMES** (1804-1881), American fur trader and scout **3** 2-3

**BRIDGES, HARRY A.R.** (1901-1990), radical American labor leader **3** 3-5

**BRIDGMAN, PERCY WILLIAMS** (1882-1961), American physicist **3** 5-6

**BRIGHT, JOHN** (1811-1889), English politician **3** 6-7

**BRIGHT, RICHARD** (1789-1858), English physician **3** 7-8

**BRIGHTMAN, EDGAR SHEFFIELD** (1884-1953), philosopher of religion and exponent of American Personalism **3** 8-9

**BRISBANE, ALBERT** (1809-1890), American social theorist **3** 9

**BRISTOW, BENJAMIN HELM** (1832-1896), American lawyer and Federal official **3** 9-10

**Britain, history of**  
see England

**British East India Co.**  
see East India Co. (British)

**BRITTEN, BENJAMIN** (1913-1976), English composer **3** 10-11

**BROAD, CHARLIE DUNBAR** (1887-1971), English philosopher **3** 12

**BROCK, SIR ISAAC** (1769-1812), British general **3** 12-13

**BRODSKY, JOSEPH** (Iosif Alexandrovich Brodsky, 1940-1996), Russian-born Nobel Prize winner and fifth United States poet laureate **3** 13-15

**BRONTË, CHARLOTTE** (1816-1855), English novelist **3** 17-18

**BRONTË, EMILY** (1818-1848), English novelist **3** 18-19

**BRONZINO** (1503-1572), Italian painter **3** 19

**BROOK, PETER** (born 1925), world-renowned theater director **3** 19-21

**BROOKE, ALAN FRANCIS** (Viscount Alanbrooke; 1883-1963), Irish military leader **20** 59-61

**BROOKE, SIR JAMES** (1803-1868), British governor in Borneo **3** 21-22

**BROOKE, RUPERT** (1887-1915), English poet **3** 22-23

**BROOKNER, ANITA** (born 1928), British art historian and novelist **3** 23-24

**BROOKS, GWENDOLYN** (born 1917), first African American author to receive the Pulitzer Prize for Literature **3** 24-26

**BROOKS, PHILLIPS** (1835-1893), American Episcopalian bishop **3** 26

**BROTHERS, JOYCE** (Joyce Diane Bauer; born 1927), American psychologist who pioneered radio phone-in questions for professional psychological advice **3** 26-28

**BROUDY, HARRY SAMUEL** (born 1905), American philosopher, teacher, and author **3** 28-29

**BROUWER, ADRIAEN** (1605/06-1638), Flemish painter **3** 29-30

**BROWDER, EARL RUSSELL** (1891-1973), American Communist leader **3** 30-31

**BROWN, ALEXANDER** (1764-1834), American merchant and banker **3** 31-32

**BROWN, BENJAMIN GRATZ** (1826-1885), American politician **3** 32-33

**BROWN, CHARLES BROCKDEN** (1771-1810), American novelist **3** 33

**BROWN, CHARLOTTE EUGENIA HAWKINS** (born Lottie Hawkins; 1882-1961), African American educator and humanitarian **3** 34

**BROWN, GEORGE** (1818-1880), Canadian politician **3** 35-36

**BROWN, HELEN GURLEY** (born 1922), American author and editor **3** 36-37

**BROWN, JAMES** (born 1928), African American singer **3** 37-39

**BROWN, JOHN** (1800-1859), American abolitionist **3** 39-41

**BROWN, JOSEPH EMERSON** (1821-1894), American lawyer and politician **3** 41-42

**BROWN, LES** (Leslie Calvin Brown; born 1945), American motivational speaker, author, and television host **19** 36-39

**BROWN, MOSES** (1738-1836), American manufacturer and merchant **3** 42-43

**BROWN, RACHEL FULLER** (1898-1980), American biochemist **3** 43-44

**BROWN, ROBERT** (1773-1858), Scottish botanist **20** 61-63

**BROWN, RONALD H.** (1941-1996), African American politician, cabinet official **3** 44-47

**BROWN, TINA** (Christina Hambly Brown; born 1953), British editor who transformed the English magazine

*Tatler*, then the United States magazines *Vanity Fair* and the *New Yorker* **3** 47-48

**BROWN, WILLIAM WELLS** (1815/16-1884), African American author and abolitionist **3** 48-49

**BROWNE, SIR THOMAS** (1605-1682), English author **3** 49-50

**BROWNER, CAROL M.** (born 1955), U.S. Environmental Protection Agency administrator **3** 50-52

**BROWNING, ELIZABETH BARRETT** (1806-1861), English poet **3** 52-53

**BROWNING, ROBERT** (1812-1889), English poet **3** 53-55

**BROWNLOW, WILLIAM GANNAWAY** (1805-1877), American journalist and politician **3** 55-56

**BROWNMILLER, SUSAN** (born 1935), American activist, journalist, and novelist **3** 56-57

**BROWNSON, ORESTES AUGUSTUS** (1803-1876), American clergyman and transcendentalist **3** 57-58

**BRUBACHER, JOHN SEILER** (1898-1988), American historian and educator **3** 58-59

**BRUBECK, DAVE** (born 1920), American pianist, composer, and bandleader **3** 59-61

**BRUCE, BLANCHE KELSO** (1841-1898), African American politician **3** 62-63

**BRUCE, DAVID** (1855-1931), Australian parasitologist **3** 63

**BRUCE, JAMES** (1730-1794), Scottish explorer **3** 63-64

**BRUCE, LENNY** (Leonard Alfred Schneider; 1925-1966), American comedian **19** 39-41

**BRUCE OF MELBOURNE, 1ST VISCOUNT** (Stanley Melbourne Bruce; 1883-1967), Australian statesman **3** 61-62

**BRUCKNER, JOSEPH ANTON** (1824-1896), Austrian composer **3** 64-65

**BRUEGEL, PIETER, THE ELDER** (1525/30-1569), Netherlandish painter **3** 65-67

**BRÛLÉ, ÉTIENNE** (circa 1592-1633), French explorer in North America **3** 67-68

**BRUNDTLAND, GRO HARLEM** (1939-1989), Norwegian prime minister and chair of the United Nations World Commission for Environment and Development **3** 68-69

**BRUNEL, ISAMBARD KINGDOM** (1806-1859), English civil engineer **3** 69-70

**BRUNELLESCHI, FILIPPO** (1377-1446), Italian architect and sculptor **3** 70-72

**BRUNER, JEROME SEYMOUR** (born 1915), American psychologist **3** 72-73

**BRUNHOFF, JEAN de** (1899-1937), French author and illustrator **19** 41-42

**BRUNNER, ALOIS** (born 1912), Nazi German officer who helped engineer the destruction of European Jews **3** 73-74

**BRUNNER, EMIL** (1889-1966), Swiss Reformed theologian **3** 74-75

**BRUNO, GIORDANO** (1548-1600), Italian philosopher and poet **3** 75-76

**BRUTON, JOHN GERARD** (born 1947), prime minister of Ireland **3** 76-77

**BRUTUS, DENNIS** (born 1924), exiled South African poet and political activist opposed to apartheid **3** 77-78

**BRUTUS, MARCUS JUNIUS** (circa 85-42 B.C.), Roman statesman **3** 79-80

**BRYAN, WILLIAM JENNINGS** (1860-1925), American lawyer and politician **3** 80-82

**BRYANT, PAUL** ("Bear;" 1919-1983), American college football coach **3** 82-83

**BRYANT, WILLIAM CULLEN** (1794-1878), American poet and editor **3** 83-85

**BRYCE, JAMES** (1838-1922), British historian, jurist, and statesman **3** 85

**BRZEZINSKI, ZBIGNIEW** (1928-1980), assistant to President Carter for national security affairs (1977-1980) **3** 85-87

**BUBER, MARTIN** (1878-1965), Austrian-born Jewish theologian and philosopher **3** 87-89

**BUCHALTER, LEPKE** (Louis Bachalter; 1897-1944), American gangster **19** 42-44

**BUCHANAN, JAMES** (1791-1868), American statesman, president 1857-1861 **3** 89-90

**BUCHANAN, PATRICK JOSEPH** (born 1938), commentator, journalist, and presidential candidate **3** 90-91

**BUCK, PEARL SYDENSTRICKER** (1892-1973), American novelist **3** 91-93

**BUCKINGHAM, 1ST DUKE OF** (George Villiers; 1592-1628), English courtier and military leader **3** 93-94

**BUCKINGHAM, 2D DUKE OF** (George Villiers; 1628-1687), English statesman **3** 94-95

**BUCKLE, HENRY THOMAS** (1821-1862), English historian **3** 95-96

**BUCKLEY, WILLIAM F., JR.** (born 1925), conservative American author, editor, and political activist **3** 96-97

**BUDDHA** (circa 560-480 B.C.), Indian founder of Buddhism **3** 97-101

**BUDDHADĀSA BHIKKHU** (Nguam Phanich; born 1906), founder of Wat Suan Mokkhabalārama in southern Thailand and interpreter of Theravāda Buddhism **3** 101-102

**BUDÉ, GUILLAUME** (1467-1540), French humanist **3** 102-103

**BUDGE, DON** (J. Donald Budge; born 1915), American tennis player **21** 57-59

**BUECHNER, FREDERICK** (born 1926), American novelist and theologian **3** 103-105

**BUEL, JESSE** (1778-1839), American agriculturalist and journalist **3** 105

**BUFFALO BILL** (William Frederick Cody; 1846-1917), American scout and publicist **3** 105-106

**BUFFETT, WARREN** (born 1930), American investment salesman **3** 106-109

**BUFFON, COMTE DE** (Georges Louis Leclerc; 1707-1788), French naturalist **3** 109-111

**BUGEAUD DE LA PICONNERIE, THOMAS ROBERT** (1784-1849), Duke of Isly and marshal of France **3** 111

**BUICK, DAVID** (1854-1929), American inventor and businessman **19** 44-45

**BUKHARI, MUHAMMAD IBN ISMAIL AL-** (810-870), Arab scholar and Moslem saint **3** 111-112

**BUKHARIN, NIKOLAI IVANOVICH** (1858-1938), Russian politician **3** 112-113

**BUKOWSKI, CHARLES** (1920-1994), American writer and poet **3** 113-115

**BULATOVIC, MOMIR** (born 1956), president of Montenegro (1990-1992) and of the new Federal Republic of Yugoslavia (1992-) **3** 115-116

**BULFINCH, CHARLES** (1763-1844), American colonial architect **3** 116-117

**BULGAKOV, MIKHAIL AFANASIEVICH** (1891-1940), Russian novelist and playwright **3** 117

**BULGANIN, NIKOLAI** (1885-1975), chairman of the Soviet Council of Ministers (1955-1958) **3** 118-119



**BULOSAN, CARLOS** (1911-1956), American author and poet **21** 59-61

**BULTMANN, RUDOLF KARL** (1884-1976), German theologian **3** 119-120

**BUNAU-VARILLA, PHILIPPE JEAN** (1859-1940), French engineer and soldier **3** 120-121

**BUNCHE, RALPH JOHNSON** (1904-1971), African American diplomat **3** 121-122

**BUNDY, McGEORGE** (born 1919), national security adviser to two presidents **3** 122-124

**BUNIN, IVAN ALEKSEEVICH** (1870-1953), Russian poet and novelist **3** 124

**BUNSEN, ROBERT WILHELM** (1811-1899), German chemist and physicist **3** 124-125

**BUNSHAFT, GORDON** (1909-1990), American architect **3** 125-127

**BUNUEL, LUIS** (1900-1983), Spanish film director **3** 127-128

**BUNYAN, JOHN** (1628-1688), English author and Baptist preacher **3** 128-129

**BURBANK, LUTHER** (1849-1926), American plant breeder **3** 129-131

**BURCHFIELD, CHARLES** (1893-1967), American painter **3** 131-132

**BURCKHARDT, JACOB CHRISTOPH** (1818-1897), Swiss historian **3** 132-133

**BURCKHARDT, JOHANN LUDWIG** (1784-1817), Swiss-born explorer **3** 133

**BURGER, WARREN E.** (1907-1986), Chief Justice of the United States Supreme Court (1969-1986) **3** 133-136

**BURGESS, ANTHONY** (John Anthony Burgess Wilson; 1917-1993), English author **3** 136-137

**BURGOYNE, JOHN** (1723-1792), British general and statesman **3** 137-138

**BURKE, EDMUND** (1729-1797), British statesman, political theorist, and philosopher **3** 138-141

**BURKE, KENNETH** (born 1897), American literary theorist and critic **3** 141-142

**BURKE, ROBERT O'HARA** (1820-1861), Irish-born Australian policeman and explorer **3** 142-143

**BURKE, SELMA** (1900-1995), African American sculptor **3** 143-144

**BURLINGAME, ANSON** (1820-1870), American diplomat **3** 144-145

**BURNE-JONES, SIR EDWARD COLEY** (1833-1898), English painter and designer **3** 145-146

**BURNET, SIR FRANK MACFARLANE** (1899-1985), Australian virologist **3** 146-147

**BURNET, GILBERT** (1643-1715), British bishop and historian **3** 147

**BURNETT, FRANCES HODGSON** (Frances Eliza Hodgson Burnett; 1849-1924), English-born American author **18** 64-67

**BURNETT, LEO** (1891-1971), American advertising executive **19** 45-47

**BURNEY, FRANCES "FANNY"** (1752-1840), English novelist and diarist **3** 147-148

**BURNHAM, DANIEL HUDSON** (1846-1912), American architect and city planner **3** 148-149

**BURNHAM, FORBES** (1923-1985), leader of the independence movement in British Guiana and Guyana's first prime minister **3** 149-151

**BURNS, ANTHONY** (1834-1862), African American slave **3** 151

**BURNS, ARTHUR** (1904-1987), American economic statesman **3** 151-153

**BURNS, GEORGE** (born Nathan Birnbaum; 1896-1996), American comedian and actor **3** 153-155

**BURNS, KEN** (Kenneth Lauren Burns; born 1953), American documentary filmmaker **20** 63-65

**BURNS, ROBERT** (1759-1796), Scottish poet **3** 155-156

**BURR, AARON** (1756-1836), American politician, vice president 1801-1805 **3** 156-159

**BURRI, ALBERTO** (1915-1995), Italian painter **3** 159-160

**BURRITT, ELIHU** (1810-1879), American pacifist, author, and linguist **3** 160

**BURROUGHS, EDGAR RICE** (1875-1950), American author **18** 67-68

**BURROUGHS, JOHN** (1837-1921), American naturalist and essayist **3** 160-161

**BURROUGHS, WILLIAM S.** (1914-1997), American writer **3** 162-163

**BURTON, RICHARD** (Richard Jenkins; 1925-1984), British actor **3** 163-164

**BURTON, SIR RICHARD FRANCIS** (1821-1890), English explorer, author, and diplomat **3** 164-166

**BURTON, ROBERT** (1577-1640), English author and clergyman **3** 166-167

**BUSCH, ADOLPHUS** (1839-1913), American brewer and businessman **19** 47-49

**BUSH, GEORGE** (George Herbert Walker Bush; born 1924), United States vice president (1981-1989) and president (1989-1993) **3** 167-169  
relatives  
Bush, George Walker **21** 61-64

**BUSH, GEORGE WALKER** (born 1946), United States president (2001-) **21** 61-64

**BUSH, VANNEVAR** (1890-1974), American scientist and engineer **3** 169-171

**BUSHNELL, DAVID** (1742-1824), American inventor **21** 64-65

**BUSHNELL, HORACE** (1802-1876), American Congregational clergyman **3** 171-172

**BUSIA, KOFI ABREFA** (1914-1978), Ghanaian premier and sociologist **3** 172-173

#### Business and industrial leaders

##### English

Baring, Francis **21** 20-22  
Starley, James **21** 392-393  
Worth, Charles Frederick **21** 436-438

##### French

Escoffier, Auguste **21** 122-124  
Reuter, Paul Julius von **21** 366-367  
Worth, Charles Frederick **21** 436-438  
communications industry  
news services  
Reuter, Paul Julius von **21** 366-367

##### German

Fugger, Jakob **21** 147-149

##### Italian

Aldus Manutius **21** 3-5

#### Business and industrial leaders, American

##### advertising industry

Bass, Saul **21** 25-27  
Lasker, Albert **21** 251-254

##### bankers (19th-20th century)

Perkins, George Walbridge **21** 344-347

##### barbed wire

Glidden, Joseph **21** 167-170

##### cosmetics and beauty aids industry

Gillette, King Camp **21** 163-166

##### entertainment industry

Bray, John Randolph **21** 55-57

Corman, Roger **21** 87-89

Fox, William **21** 143-144

Lasky, Jesse **21** 254-256

Todd, Mike **21** 402-404

##### food and beverage industry

Kellogg, John Harvey **21** 239-242

##### health industry

Kellogg, John Harvey **21** 239-242

Nidetch, Jean **21** 318-320  
 Pinkham, Lydia **21** 351-353  
 industrial management  
 Gilbreth, Frank **21** 162-163  
 Taylor, Frederick Winslow **21** 400-402  
 insurance  
 Perkins, George Walbridge **21** 344-347  
 land developers  
 Flagler, Henry **21** 135-137  
 management advice for  
 Drucker, Peter **21** 110-112  
 mining industry  
 Guggenheim, Daniel **21** 185-187  
 oil industry  
 Drake, Edwin **21** 108-110  
 Flagler, Henry **21** 135-137  
 pharmaceutical industry  
 Squibb, Edward Robinson **21** 390-392  
 railroad industry (builders)  
 Fink, Albert **21** 133-135  
 railroad industry (executives)  
 Fink, Albert **21** 133-135  
 razor blades  
 Gillette, King Camp **21** 163-166  
 self-improvement  
 Atlas, Charles **21** 14-15  
 Nidetch, Jean **21** 318-320  
 textile industry  
 Jacquard, Joseph Marie **21** 216-218

**BUSONI, FERRUCCIO BENVENUTO**  
 (1866-1924) Italian musician **3** 173-174

**BUSSOTTI, SYLVANO** (born 1931)  
 Italian composer **3** 174-175

**BUSTAMANTE, WILLIAM ALEXANDER**  
 (1884-1977), Jamaican labor leader  
 and first prime minister (1962-1967) **3** 175-177

**BUTE, 3D EARL OF** (John Stuart; 1713-1792), British statesman, prime minister 1762-1763 **3** 177-178

**BUTHELEZI, MANGOSUTHU GATSHA**  
 (born 1928), chief of the Zulu  
 "homeland" and an important figure  
 in the struggle to end apartheid in  
 South Africa **3** 178-179

**BUTLER, BENJAMIN FRANKLIN** (1818-1893), American politician and military leader **21** 65-67

**BUTLER, JOHN** (1728-1796), British Indian agent and Loyalist leader **3** 180

**BUTLER, JOSEPH** (1692-1752), English philosopher and theologian **3** 180-181

**BUTLER, NICHOLAS MURRAY** (1862-1947), American educator **3** 181

**BUTLER, OCTAVIA E.** (born 1947), African American novelist and essayist **3** 182-183

**BUTLER, SAMUEL** (1613-1680) English poet **3** 183-184

**BUTLER, SAMUEL** (1835-1902), English novelist and essayist **3** 183

**BUTTERFIELD, JOHN** (1801-1869), American financier and politician **3** 184-185

**BUXTEHUDE, DIETRICH** (1637-1707), Danish composer and organist **3** 185-186

**BYRD, RICHARD EVELYN** (1888-1957), American admiral and polar explorer **3** 186-187

**BYRD, WILLIAM** (1543?-1623), English composer **3** 187-188

**BYRD, WILLIAM** (1652-1704), English colonial planter and merchant **3** 188-189

**BYRD, WILLIAM II** (1674-1744), American diarist and government official **3** 189-190

**BYRNE, JANE** (born 1934), first woman mayor of Chicago **3** 190-191

**BYRNES, JAMES FRANCIS** (1879-1972), American public official **3** 191-192

**BYRON, GEORGE GORDON NOEL** (6th Baron Byron; 1788-1824), English poet **3** 193-194

## C

**Cabaret** (musical)  
 Ebb, Fred **21** 113-115  
 Kander, John **21** 235-237

**CABELL, JAMES BRANCH** (1879-1958), American essayist and novelist **3** 195-196

**CABET, ÉTIENNE** (1788-1856), French political radical **3** 196

**CABEZA DE VACA, ÁLVAR NÚÑEZ**  
 (circa 1490-circa 1557), Spanish explorer **3** 197

**CABEZÓN, ANTONIO** (1510-1566), Spanish composer **3** 197-198

**CABLE, GEORGE WASHINGTON** (1844-1925), American novelist **3** 198-199

**CABOT, JOHN** (flourished 1471-1498), Italian explorer in English service **3** 199-200

**CABOT, RICHARD CLARKE** (1868-1939), American physician **3** 200

**CABOT, SEBASTIAN** (circa 1482-1557), Italian-born explorer for England and Spain **3** 200-201

**CABRAL, AMÍLCAR LOPES** (1924-1973), father of modern African nationalism in Guinea-Bissau and the Cape Verde Islands **3** 202-203

**CABRAL, PEDRO ÁLVARES** (1467/68-1520), Portuguese navigator **3** 203-204

**CABRILLO, JUAN RODRÍGUEZ** (died 1543), Portuguese explorer for Spain **3** 204-205

**CABRINI, ST. FRANCES XAVIER** (1850-1917), Italian-born founder of the Missionary Sisters of the Sacred Heart **3** 205

**CACCINI, GIULIO** (circa 1545-1618), Italian singer and composer **3** 205-206

**CADAMOSTO, ALVISE DA** (circa 1428-1483), Italian explorer **3** 206-207

**CAEDMON** (650-c.680), English Christian poet **20** 66-67

**CADILLAC, ANTOINE DE LAMOTHE** (1658-1730), French explorer and colonial administrator **18** 69-71

**CAESAR, (GAIUS) JULIUS** (100-44 B.C.), Roman general and statesman **3** 207-210

**CAESAR, SHIRLEY** (born 1938), African American singer **3** 210-211

**CAGE, JOHN** (1912-1992), American composer **3** 211-214

**CAGNEY, JAMES** (1899-1986), American actor **21** 68-71

**CAHAN, ABRAHAM** (1860-1951), Lithuanian-American Jewish author **3** 214

**CAILLIÉ, AUGUSTE RENÉ** (1799-1838), French explorer **3** 214-215

**CAIN, JAMES** (1892-1977), American journalist and author **19** 50-52

**CAJETAN, ST.** (1480-1547), Italian reformer; cofounder of the Theatines **3** 215-216

**CALAMITY JANE** (Martha Jane Cannary; 1852-1903), American frontier woman **3** 216

**CALDECOTT, RANDOLPH** (1846-1886), English artist and illustrator **19** 52-55

**CALDER, ALEXANDER** (1898-1976), American sculptor **3** 216-218

**CALDERA RODRÍGUEZ, RAFAEL** (born 1916), president of Venezuela (1969-1974) **3** 218-219

**CALDERÓN, ALBERTO P.** (1920-1998), Hispanic American mathematician **3** 219-220

**CALDERÓN, PEDRO** (1600-1681), Spanish poet and playwright **3** 221-222

**CALDERÓN FOURNIER, RAFAEL** (born 1949), president of Costa Rica (1990-) **3** 222-223

**CALDICOTT, HELEN BROINOWSKI** (born 1938), Australian physician and activist **18** 71-73

**CALDWELL, ERSKINE** (1903-1987), American novelist **3** 223-224

**CALDWELL, SARAH** (born 1924), long-time artistic director, conductor, and founder of the Opera Company of Boston **3** 224-226

**CALHOUN, JOHN CALDWELL** (1782-1850), American statesman **3** 226-228

**California, University of** (Berkeley) statistics Neyman, Jerzy **21** 316-318

**CALIGULA** (12-41), Roman emperor 37-41 **3** 228-229

**Call Me Madam** (musical) Merman, Ethel **21** 295-297

**CALLAGHAN, EDWARD MORLEY** (1903-1990), Canadian novelist **3** 229-230

**CALLAGHAN, LEONARD JAMES** (born 1912), Labor member of the British Parliament and prime minister, 1976-1979 **3** 230-231

**CALLAHAN, DANIEL** (born 1930), American philosopher who focused on biomedical ethics **3** 231-233

**CALLAHAN, HARRY** (1912-1999), American photographer **20** 67-69

**CALLAS, MARIA** (Cecilia Sophia Anna Maria Kalogeropoulos; 1923-1977), American opera soprano **18** 73-75

**CALLEJAS ROMERO, RAFAEL LEONARDO** (born 1943), president of Honduras (1990-) **3** 233-234

**CALLENDER, CLIVE ORVILLE** (born 1936), African American surgeon **18** 75-77

**CALLES, PLUTARCO ELÍAS** (1877-1945), Mexican revolutionary leader **3** 234-235

**CALLIMACHUS** (circa 310-240 B.C.), Greek poet **3** 235-236

**CALLOWAY, CAB** (1907-1994) American singer, songwriter, and bandleader **3** 236-238

**CALVERT, CHARLES** (3rd Baron Baltimore; 1637-1715), English proprietor of colonial Maryland **3** 238

**CALVERT, GEORGE** (1st Baron Baltimore; circa 1580-1632), English statesman, founder of Maryland colony **3** 238-239

**CALVIN, JOHN** (1509-1564), French Protestant reformer **3** 239-242

**CALVIN, MELVIN** (1911-1986), American chemist **3** 242-243

**CALVINO, ITALO** (1923-1985), Italian author **3** 243-244

**CAMDESSUS, MICHEL** (born 1933), French civil servant and managing director of the International Monetary Fund **3** 244-246

**Camera** see Photography

**CAMERON, JULIA MARGARET** (1815-1879), British photographer **20** 69-71

**CAMERON, SIMON** (1799-1889), American politician **3** 246-247

**Camille** (film) Gibbons, Cedric **21** 158-159

**CAMOËNS, LUIS VAZ DE** (1524-1580), Portuguese poet **3** 247-249

**CAMPANELLA, ROY** (1921-1993), American baseball player **19** 55-57

**CAMPANELLA, TOMMASO** (Giovanni Domenico Campanella; 1568-1639), Italian philosopher, political theorist, and poet **3** 249

**CAMPBELL, ALEXANDER** (1788-1866), Irish-born American clergyman **3** 249-250

**CAMPBELL, AVRIL PHAEDRA DOUGLAS (KIM)** (born 1947), Canada's first woman prime minister **3** 250-252

**CAMPBELL, BEN NIGHTHORSE** (born 1933), Native American United States senator from Colorado **3** 252-253

**CAMPBELL, COLIN** (Baron Clyde; 1792-1863), English army officer **20** 71-73

**CAMPBELL, JOSEPH** (1904-1987), American editor and popularizer of comparative mythology **3** 253-255

**CAMPIN, ROBERT** (circa 1375/80-1444), Flemish painter **3** 255

**CAMPOS, ROBERTO OLIVEIRA** (born 1917), Brazilian economist and diplomat **18** 77-79

**Campra, André** (1660-1744), French composer Philidor, François-André **21** 347-349

**CAMUS, ALBERT** (1913-1960), French novelist, essayist, and playwright **3** 255-257

**CANALETTO** (1697-1768), Italian painter **3** 257-258

**Cancer research** Fibiger, Johannes **21** 131-133

**CANISIUS, ST. PETER** (1521-1597), Dutch Jesuit **3** 258

**CANNING, GEORGE** (1770-1827), English orator and statesman **3** 258-260

**CANNON, ANNIE JUMP** (1863-1941), American astronomer **3** 260-261

**CANNON, JOSEPH GURNEY** (1836-1926), American politician **3** 261-262

**CANOT, THEODORE** (1804-1860), French-Italian adventurer and slave trader **3** 262-263

**CANOVA, ANTONIO** (1757-1822), Italian sculptor **3** 263-264

**Canterbury, see of** (England) archbishops Langton, Stephen **21** 249-251 rebuilt William of Sens **21** 432-434

**CANTOR, EDDIE** (Isador Iskowitz; 1892-1964), American singer and comedian **3** 264-265

**CANTOR, GEORG FERDINAND LUDWIG PHILIPP** (1845-1918), German mathematician **3** 265-266

**CANUTE I THE GREAT** (c. 995-1035), Viking king of England and Denmark **3** 266-269

**CANUTT, YAKIMA** (Enos Edward Canutt; 1896-1986), American rodeo performer, actor, stuntman, and film director **21** 71-72

**CAPA, ROBERT** (Endre Friedmann; 1913-1954), Hungarian-American war photographer and photojournalist **3** 269-271

**ČAPEK, KAREL** (1890-1938), Czech novelist, playwright, and essayist **3** 271-272

**CAPETILLO, LUISA** (1879-1922), Puerto Rican labor leader and activist **20** 73-74

**CAPONE, AL** (Alphonso Caponi, a.k.a. "Scarface;" 1899-1947), American gangster **3** 272-273

**CAPOTE, TRUMAN** (born Truman Streckfus Persons; 1924-1984), American author **3** 273-275

**CAPP, AL** (Alfred Gerald Capp; 1909-1979), American cartoonist and satirist **3** 275-276

**CAPRA, FRANK** (1897-1991), American film director **3** 276-278

**CAPRIATI, JENNIFER** (born 1976), American tennis player **3** 278-281

**CAPTAIN JACK** (Kientpoos; circa 1837-1873), American tribal leader **21** 72-74

**CARACALLA** (188-217), Roman emperor **3** 281-282

**CARAVAGGIO** (1573-1610), Italian painter **3** 282-284

**CARAWAY, HATTIE WYATT** (1878-1950), first woman elected to the United States Senate in her own right **3** 284-285

**Card games, rules for**  
Hoyle, Edmond **21** 206-208

**CARDANO, GERONIMO** (1501-1576), Italian mathematician, astronomer, and physician **3** 285-286

**CARDENAL, ERNESTO** (born 1925), Nicaraguan priest, poet, and revolutionary **19** 57-59

**CÁRDENAS, LÁZARO** (1895-1970), Mexican revolutionary president 1934-1940 **3** 286-287

**CÁRDENAS SOLÓRZANO, CUAUHTÉMOC** (born 1934), Mexican politician **3** 287-288

**CARDIN, PIERRE** (born 1922), French fashion designer **18** 79-81

**Cardiology** (medicine)  
Forssmann, Werner **21** 140-141

**CARDOSO, FERNANDO HENRIQUE** (born 1931), sociologist and president of Brazil **18** 81-83

**CARDOZO, BENJAMIN NATHAN** (1870-1938), American jurist and legal philosopher **3** 288-290

**CARDUCCI, GIOSUÈ** (1835-1907), Italian poet **3** 290-291

**CAREW, ROD** (born 1945), Panamanian baseball player **3** 291-292

**CAREY, GEORGE LEONARD** (born 1935), archbishop of Canterbury **3** 293-294

**CAREY, HENRY CHARLES** (1793-1879), American writer on economics **3** 294-295

**CAREY, PETER** (born 1943), Australian author **3** 295-297

**CAREY, WILLIAM** (1761-1834), English Baptist missionary **3** 297

**CAREY THOMAS, MARTHA** (1857-1935), American educator **3** 297-298

**CARÍAS ANDINO, TIBURCIO** (1876-1969), Honduran dictator (1932-1949) **3** 298-299

**CARISSIMI, GIACOMO** (1605-1674), Italian composer **3** 299-300

**CARLETON, GUY** (1st Baron Dorchester; 1724-1808), British general and statesman **3** 300-301

**CARLIN, GEORGE** (born 1937), American comedian **3** 301-303

**CARLSON, CHESTER F.** (1906-1968), American inventor of the process of xerography **3** 303-304

**Carlton Hotel** (London, England)  
Escoffier, Auguste **21** 122-124

**CARLYLE, THOMAS** (1795-1881), Scottish essayist and historian **3** 304-305

**CARMICHAEL, STOKELY** (1941-1998), African American civil rights activist **3** 305-308

**CARNAP, RUDOLF** (1891-1970), German-American philosopher **3** 308-309

**CARNEADES** (circa 213-circa 128 B.C.), Greek philosopher **3** 309

**CARNEGIE, ANDREW** (1835-1919), American industrialist and philanthropist **3** 309-312

**CARNEGIE, HATTIE** (born Henrietta Kanengeiser; 1889-1956), American fashion designer **3** 313

**CARNOT, LAZARE NICOLAS MARGUERITE** (1753-1823), French engineer, general, and statesman **3** 313-314

**CARNOT, NICHOLAS LÉONARD SADI** (1796-1832), French physicist **3** 315

**CARO, ANTHONY** (born 1924), English sculptor **3** 316

**CARO, JOSEPH BEN EPHRAIM** (1488-1575), Jewish Talmudic scholar **3** 316-317

**CAROTHERS, WALLACE HUME** (1896-1937), American chemist **3** 317-318

**CARPEAUX, JEAN BAPTISTE** (1827-1875), French sculptor and painter **3** 318-319

**CARR, EMILY** (1871-1945), Canadian painter and writer **3** 319

**CARR-SAUNDERS, SIR ALEXANDER MORRIS** (1886-1966), English demographer and sociologist **3** 333-334

**CARRANZA, VENUSTIANO** (1859-1920), Mexican revolutionary, president 1914-1920 **3** 321-322

**CARREL, ALEXIS** (1873-1944), French-American surgeon **3** 322-323

**CARRERA, JOSÉ MIGUEL** (1785-1821), Chilean revolutionary **3** 323-324

**CARRERA, JOSÉ RAFAEL** (1814-1865), Guatemalan statesman, president 1851-1865 **3** 324-325

**CARRIER, WILLS** (1876-1950), American inventor who was the "father of air conditioning" **3** 325-326

**CARRINGTON, BARON** (born 1919), British politician and secretary-general of the North Atlantic Treaty Organization (1984-1988) **3** 326-327

**CARROLL, ANNA ELLA** (1815-1893), American political writer and presidential aide **3** 327-331

**CARROLL, JOHN** (1735-1815), American Catholic bishop **3** 331-332

**CARROLL, LEWIS** (pseudonym of Charles Lutwidge Dodgson; 1832-1898), English cleric and author **3** 332-333

**CARSON, BEN** (born 1951), African American surgeon **18** 83-85

**CARSON, CHRISTOPHER "KIT"** (1809-1868), American frontiersman **3** 334-335

**CARSON, JOHNNY** (born 1925), American television host and comedian **3** 335-337

**CARSON, RACHEL LOUISE** (1907-1964), American biologist and author **3** 337-338

**CARTER, ELLIOTT COOK, JR.** (born 1908), American composer **3** 338-339

**CARTER, HOWARD** (1874-1939), English archaeologist and artist **20** 74-76

**CARTER, JAMES EARL** ("Jimmy" Carter; born 1924), United States president (1977-1981) **3** 339-342

**CARTIER, SIR GEORGE-ÉTIENNE** (1814-1873), Canadian statesman **3** 342-343

**CARTIER, JACQUES** (1491-1557), French explorer and navigator **3** 343-344

**CARTIER-BRESSON, HENRI** (born 1908), French photographer and painter **19** 59-61

**Cartography** (science)  
Behaim, Martin **21** 30-32

**CARTWRIGHT, ALEXANDER** (1820-1898), baseball pioneer **21** 74-77

**CARTWRIGHT, PETER** (1785-1872), American Methodist preacher **3** 344-345

**CARUSO, ENRICO** (1873-1921), Italian operatic tenor **3** 345

**CARVER, GEORGE WASHINGTON** (1864-1943), African American agricultural chemist **3** 346-347

**CARVER, JONATHAN** (1710-1780), American explorer and writer **3** 347-348

**CASALS, PABLO** (born Pau Carlos Salvador Casals y Defill; 1876-1973), Spanish cellist, conductor, and composer **3** 348-350

**CASANOVA, GIACOMO JACOPO GIROLAMO, CHEVALIER DE SEINGLAT** (1725-1798), Italian adventurer **3** 350-351

**CASE, STEVE** (born 1958), American businessman **19** 61-64

**CASEMENT, ROGER** (1864-1916), Irish diplomat and nationalist **20** 76-78

**CASEY, WILLIAM J.** (1913-1987), American director of the Central Intelligence Agency (CIA) **3** 351-353

**CASH, JOHNNY** (born 1932), American singer and songwriter **3** 353-355

**CASS, LEWIS** (1782-1866), American statesman **3** 355-356

**CASSATT, MARY** (1845-1926), American painter **3** 356-357

**CASSIODORUS, FLAVIUS MAGNUS AURELIUS, SENATOR** (circa 480-circa 575), Roman statesman and author **3** 357-358

**CASSIRER, ERNST** (1874-1945), German philosopher **3** 358-359

**CASTELO BRANCO, HUMBERTO** (1900-1967), Brazilian general, president 1964-1966 **3** 359-360

**CASTIGLIONE, BALDASSARE** (1478-1529), Italian author and diplomat **3** 360-361

**CASTILLA, RAMÓN** (1797-1867), Peruvian military leader and president **3** 361

**CASTLE, IRENE and VERNON** (1910-1918), ballroom dancers **3** 361-363

**CASTLEREAGH, VISCOUNT** (Robert Stewart; 1769-1822), British statesman **3** 363-364

**CASTRO ALVES, ANTÔNIO DE** (1847-1871), Brazilian poet **3** 364-365

**CASTRO RUZ, FIDEL** (born 1926), Cuban prime minister **3** 365-368

**CATHER, WILLA SIBERT** (1873-1947), American writer **3** 368-369

**CATHERINE OF ARAGON** (1485-1536), Spanish princess, first queen consort of Henry VIII of England **18** 85-88

**CATHERINE OF SIENA, ST.** (1347-1380), Italian mystic **3** 369-370

**CATHERINE THE GREAT** (1729-1796), Russian empress 1762-1796 **3** 370-372

**Catholic Church**  
see Roman Catholic Church

**CATILINE** (Lucius Sergius Catilina; circa 108-62 B.C.), Roman politician and revolutionary **3** 372-373

**CATLIN, GEORGE** (1796-1872), American painter **3** 373-374

**CATO, MARCUS PORCIUS, THE ELDER** (234-149 B.C.), Roman soldier, statesman, and historian **3** 375

**CATO THE YOUNGER** (Marcus Porcius Cato Uticensis; 95-46 B.C.), Roman politician **3** 374-375

**CATT, CARRIE CHAPMAN** (1859-1947), American reformer **3** 375-376

**CATTELL, JAMES McKEEN** (1860-1944), American psychologist and editor **3** 376-377

**Cattle industry**  
fencing for  
Glidden, Joseph **21** 167-170

**CATULLUS, GAIUS VALERIUS** (circa 84-circa 54 B.C.), Roman poet **3** 377-378

**CAUCHY, AUGUSTIN LOUIS** (1789-1857), French mathematician **3** 378-380

**CAVAFY, CONSTANTINE P.** (Konstantinos P. Kabaphēs; 1863-1933), first modernist Greek poet **3** 381-382

**CAVALCANTI, GUIDO** (circa 1255-1300), Italian poet **3** 382

**CAVALLI, PIETRO FRANCESCO** (1602-1676), Italian composer **3** 382-383

**CAVENDISH, HENRY** (1731-1810), English physicist and chemist **3** 383-384

**CAVOUR, CONTE DI** (Camillo Benso; 1810-1861), Italian statesman **3** 385-386

**CAXIAS, DUQUE DE** (Luiz Alves de Lima e Silva; 1803-1880), Brazilian general and statesman **3** 386

**CAXTON, WILLIAM** (1422-1491), English printer **3** 386-387

**CBS**  
see Columbia Broadcasting System

**CEAUSESCU, NICOLAE** (1918-1989), Romanian statesman **3** 387-388

**CECIL OF CHELWOOD, VISCOUNT** (Edgar Algernon Robert Cecil; 1864-1958), English statesman **3** 388-389

**CELA Y TRULOCK, CAMILO JOSÉ** (born 1916), Spanish author **3** 389-390

**CÉLINE, LOUIS FERDINAND** (pen name of Ferdinand Destouches; 1894-1961), French novelist **3** 390-391

**CELLINI, BENVENUTO** (1500-1571), Italian goldsmith and sculptor **3** 391-392

**CELSIUS, ANDERS** (1701-1744), Swedish astronomer **3** 392

**CELSUS, AULUS CORNELIUS** (circa 25 B.C.-A.D. 45?), Roman medical author **3** 393

**Censorship**  
United States  
Hays, Will **21** 197-199

**Central Committee** (Union of Soviet Socialist Republics)  
see Statesmen, Russian—Central Committee; Communist party (Union of Soviet Socialist Republics)

**Central Powers** (WWI)  
see World War I

**CEREZO AREVALO, MARCO VINICIO** (born 1942), president of Guatemala (1986-1991) **3** 393-395

**CERVANTES, MIGUEL DE SAAVEDRA** (1547-1616), Spanish novelist **3** 395-398

**CÉSPEDES, CARLOS MANUEL DE** (1819-1874), Cuban lawyer and revolutionary **3** 398-399

**CESTI, PIETRO** (Marc'Antonio Cesti; 1623-1669), Italian composer **3** 399-400

**CETSHWAYO** (Cetewayo; circa 1826-1884), king of Zululand 1873-1879 **3** 400

**CÉZANNE, PAUL** (1839-1906), French painter **3** 400-402

**CHADLI BENJEDID** (born 1929), president of the Algerian Republic (1979-) **3** 402-404

**CHADWICK, FLORENCE** (1918-1995), American swimmer **19** 64-66

**CHADWICK, SIR EDWIN** (1800-1890), English utilitarian reformer **3** 404-405

**CHADWICK, SIR JAMES** (1891-1974), English physicist **3** 405-406

**CHADWICK, LYNN RUSSELL** (born 1914), English sculptor **18** 88-90

**CHAGALL, MARC** (1887-1985), Russian painter **3** 406-407

**CHAI LING** (born 1966), Chinese student protest leader **19** 67-68

**CHAIN, ERNST BORIS** (1906-1979), German-born English biochemist **3** 407-408

**CHALMERS, THOMAS** (1780-1847), Scottish reformer and theologian **3** 408-409

**CHAMBERLAIN, ARTHUR NEVILLE** (1869-1940), English statesman **3** 409-411

**CHAMBERLAIN, HOUSTON STEWART** (1855-1927), English-born German writer **3** 411

**CHAMBERLAIN, JOSEPH** (1836-1914), English politician **3** 411-413

**CHAMBERLAIN, WILT** (born 1936), American basketball player **3** 413-415

**Chamberlain's war**  
see Boer War (1899-1902)

**CHAMBERLIN, THOMAS CHROWDER** (1843-1928), American geologist **3** 415-416

**CHAMBERS, WHITTAKER** (Jay Vivian; 1901-1961), magazine editor who helped organize a Communist spy ring in the United States government **3** 416-417

**CHAMORRO, VIOLETA BARRIOS DE** (born 1930), newspaper magnate, publicist, and first woman president of Nicaragua (1990) **3** 417-419

**CHAMPLAIN, SAMUEL DE** (circa 1570-1635), French geographer and explorer **3** 419-421

**CHAMPOLLION, JEAN FRANÇOIS** (1790-1832), French Egyptologist **3** 421

**CHANCELLOR, RICHARD** (died 1556), English navigator **3** 422

**CHANDLER, ALFRED DU PONT, JR.** (born 1918), American historian of American business **3** 422-423

**CHANDLER, RAYMOND, JR.** (1888-1959), American author of crime fiction **3** 423-425

**CHANDLER, ZACHARIAH** (1813-1879), American politician **3** 425-426

**CHANDRAGUPTA MAURYA** (died circa 298 B.C.), emperor of India 322?-298 **3** 426

**CHANDRASEKHAR, SUBRAHMANYAN** (1910-1995), Indian-born American physicist **3** 426-429

**CHANEL, COCO** (born Gabrielle Chanel; 1882-1971), French fashion designer **3** 429

**CHANNEY, LON** (Alonzo Chaney; 1883-1930), American actor **19** 68-70

**CHANG CHIEN** (1853-1926), Chinese industrialist and social reformer **3** 429-430

**CHANG CHIH-TUNG** (1837-1909), Chinese official and reformer **3** 430-431

**CHANG CHÜ-CHENG** (1525-1582), Chinese statesman **3** 431-432

**CHANG CHÜEH** (died 184), Chinese religious and revolutionary leader **3** 432-433

**CHANG HSÜEH-CH'ENG** (1738-1801), Chinese scholar and historian **3** 433

**CHANG PO-GO** (died 846), Korean adventurer and merchant prince **3** 433-434

**CHANG TSO-LIN** (1873-1928), Chinese warlord **3** 434-435

**CHANNING, EDWARD** (1856-1931), American historian **3** 435

**CHANNING, WILLIAM ELLERY** (1780-1842), Unitarian minister and theologian **3** 435-436

**CHAO MENG-FU** (1254-1322), Chinese painter **3** 436-437

**CHAPIN, FRANCIS STUART** (1888-1974), American sociologist **3** 437-438

**CHAPLIN, CHARLES SPENCER** (1889-1977), American film actor, director, and writer **3** 438-440  
Coogan, Jackie **21** 83-85

**CHAPMAN, GEORGE** (1559/60-1634), English poet, dramatist, and translator **3** 440-441

**CHAPMAN, JOHN** (Johnny Appleseed; c. 1775-1847), American horticulturist and missionary **21** 77-78

**CHAPMAN, SYDNEY** (1888-1970), English geophysicist **3** 441

**CHARCOT, JEAN MARTIN** (1825-1893), French psychiatrist **3** 442

**CHARDIN, JEAN BAPTISTE SIMÉON** (1699-1779), French painter **3** 442-443

**CHARGAFF, ERWIN** (born 1905), American biochemist who worked with DNA **3** 444-445

**CHARLEMAGNE** (742-814), king of the Franks, 768-814, and emperor of the West, 800-814 **3** 445-447

**CHARLES** (born 1948), Prince of Wales and heir apparent to the British throne **3** 448-450

**CHARLES I** (1600-1649), king of England 1625-1649 **3** 450-452

**CHARLES II** (1630-1685), king of England, Scotland, and Ireland 1660-1685 **3** 452-454

**CHARLES II** (1661-1700), king of Spain 1665-1700 **3** 454

**CHARLES III** (1716-1788), king of Spain 1759-1788 **3** 454-455

**CHARLES IV** (1316-1378), Holy Roman emperor 1346-1378 **3** 455-456

**CHARLES IV** (1748-1819), king of Spain 1788-1808 **3** 456-457

**CHARLES V** (1337-1380), king of France 1364-1380 **3** 459-460

**CHARLES V** (1500-1558), Holy Roman emperor 1519-1558 **3** 457-459  
associates  
Fugger, Jakob **21** 147-149  
Rome sacked (1527)  
Clement VII **21** 81-83

**CHARLES VI** (1368-1422), king of France 1380-1422 **3** 460-461

**CHARLES VII** (1403-1461), king of France 1422-1461 **3** 461-462

**CHARLES VIII** (1470-1498), king of France 1483-1498 **3** 462-463

**CHARLES X** (1757-1836), king of France 1824-1830 **3** 463-464

**CHARLES XII** (1682-1718), king of Sweden 1697-1718 **3** 464-466

**CHARLES XIV JOHN** (1763-1844), king of Sweden 1818-1844 **2** 205-206

**CHARLES, RAY** (Robinson; born 1932), American jazz musician—singer, pianist, and composer **3** 469-470

**CHARLES ALBERT** (1798-1849), king of Sardinia 1831-1849 **3** 466

**CHARLES EDWARD LOUIS PHILIP CASIMIR STUART** (1720-1788), Scottish claimant to English and Scottish thrones **3** 466-467

**CHARLES THE BOLD** (1433-1477), duke of Burgundy 1467-1477 **3** 467-469

**CHARNISAY, CHARLES DE MENOU** (Seigneur d'Aulnay; circa 1604-1650), French governor of Acadia **3** 470-471

**CHARONTON, ENGUERRAND** (circa 1410/15-after 1466), French painter **3** 471

**CHARPENTIER, MARC ANTOINE** (1634-1704), French composer **3** 471-472

**CHARRON, PIERRE** (1541-1603), French philosopher and theologian **3** 472

**CHASE, PHILANDER** (1775-1852), American Episcopalian bishop and missionary **3** 472-473

**CHASE, SALMON PORTLAND** (1808-1873), American statesman and jurist **3** 473-475

**CHASE, SAMUEL** (1741-1811), American politician and jurist **3** 475-476

**CHASE, WILLIAM MERRITT** (1849-1916), American painter **3** 476-477

**CHATEAUBRIAND, VICOMTE DE** (1768-1848), French author **3** 477-479

**CHATICHAI CHOONHAVAN** (1922-1998), prime minister of Thailand (1988-1990) **3** 479-480

**CHATTERJI, BANKIMCHANDRA** (1838-1894), Bengali novelist **3** 480-481

**CHATTERTON, THOMAS** (1752-1770), English poet **3** 481-482

**CHAUCER, GEOFFREY** (circa 1345-1400), English poet **3** 482-485

**CHAUNCEY, CHARLES** (1705-1787), American Calvinist clergyman and theologian **3** 485-486

**CHÁVEZ, CARLOS** (1899-1978), Mexican conductor and composer **3** 486

**CHAVEZ, CESAR** (1927-1993), American labor leader **3** 486-487

**CHÁVEZ, DENNIS** (1888-1962), Hispanic American politician **3** 488-489

**CHAVEZ, LINDA** (born 1947), Hispanic American civil rights activists **3** 489-491

**CHAVIS, BENJAMIN** (born 1948), African American religious leader, civil rights activist, labor organizer, and author **3** 491-493

**CHEEVER, JOHN** (1912-1982), American short-story writer **3** 493-494

#### Chefs

Escoffier, Auguste **21** 122-124

**CHEKHOV, ANTON PAVLOVICH** (1860-1904), Russian author **3** 494-497

**CHELMSFORD, 1st VISCOUNT** (Frederic John Napier Thesinger Chelmsford; 1868-1933), English statesman **3** 497

#### Chemistry (science)

chemical reactions

Marggraf, Andreas **21** 273-275

industrial

Leblanc, Nicolas **21** 256-258

organic

Sertürner, Friedrich **21** 379-381

**CH'EN TU-HSIU** (1879-1942), Chinese statesman and editor **3** 501-502

**CHENEY, RICHARD B(RUCE)** (born 1941), U.S. secretary of defense under George Bush **3** 497-499

**CHENG HO** (1371-circa 1433), Chinese admiral **3** 500

**CHÉNIER, ANDRÉ MARIE** (1762-1794), French poet **3** 500-501

**CHERENKOV, PAVEL ALEKSEEVICH** (1904-1990), Russian physicist **3** 502-503

**CHERNENKO, KONSTANTIN USTINOVICH** (1911-1985), the Soviet Union general secretary from February 1984 to March 1985 **3** 503-504

**CHERNYSHEVSKY, NIKOLAI GAVRILOVICH** (1828-1889), Russian

journalist, critic, and social theorist **3** 504-505

**Cherokee Indians** (North America) forced migration

Boudinot, Elias **21** 52-54

literature

Boudinot, Elias **21** 52-54

**CHERUBINI, LUIGI CARLO ZANOBI SALVATORE MARIA** (1760-1842), Italian-born French composer **3** 505-506

**CHESNUT, MARY BOYKIN** (1823-1886), Civil War diarist **3** 506-508

**CHESNUTT, CHARLES WADDELL** (1858-1932), African American author and lawyer **20** 78-82

#### Chess (game)

Philidor, François-André **21** 347-349

**CHESTERTON, GILBERT KEITH** (1874-1936), English author and artist **3** 508-509

**CHEVROLET, LOUIS** (1878-1941), auto racer and entrepreneur **20** 82-84

**CH'I PAI-SHIH** (1863-1957), Chinese painter and poet **3** 526-527

**CHIA SSU-TAO** (1213-1275), Chinese statesman **3** 514-515

**CHIANG CHING-KUO** (1910-1988), chairman of the Nationalist party and president of the Republic of China in Taiwan (1978-1988) **3** 509-510

**CHIANG KAI-SHEK** (1887-1975), Chinese nationalist leader and president **3** 510-513

**CHIARI, ROBERTO** (born 1905), president of Panama (1960-1964) **3** 513-514

#### Chicago (city, Illinois)

development

Root, John Wellborn **21** 372-374

office buildings

Jenney, William Le Baron **21** 221-223

#### Chicago (musical)

Ebb, Fred **21** 113-115

**CHICAGO, JUDY** (Judith Cohen; born 1939), American artist and activist **3** 515-516

#### Chicago, University of (Illinois)

sociology

Wirth, Louis **21** 434-436

#### Chicago Bears (football team)

Nagurski, Bronko **21** 309-311

Sayers, Gale **21** 377-379

**CHICHERIN, GEORGI VASILYEVICH** (1872-1936), Russian statesman **3** 516-517

**CHIEN-LUNG** (Hung-li; 1711-1799), Chinese emperor (1735-1799) **21** 78-79

**CHIEPE, GAOSITWE KEAGAKWA TIBE** (born 1926), intellectual, educator, diplomat, politician, and cabinet minister of external affairs of Botswana **3** 517

**CHIFLEY, JOSEPH BENEDICT** (1885-1951), Australian statesman **3** 518

**CHIH-I** (Chih-k'ai, 538-597), Chinese Buddhist monk **3** 518-519

**CHILD, JULIA McWILLIAMS** (born 1912), chef, author, and television personality **3** 519-520

**CHILD, LYDIA MARIA FRANCIS** (1802-1880), American author and abolitionist **3** 520-521

#### Child labor (economics)

Folks, Homer **21** 137-140

**CHILDE, VERE GORDON** (1892-1957), Australian prehistorian and archeologist **3** 521-522

**CHILDRESS, ALICE** (1920-1994), African American dramatist, author, and poet **3** 522-524

**CH'IN KUEI** (1090-1155), Chinese official **3** 524-525

#### China (nation, East Asia)

##### • DYNASTIC CHRONOLOGY

1368-1644 (Ming dynasty)

Chu Yuan-chang **21** 79-81

1644-1912 (Ch'ing or Manchu dynasty)

Chien-lung **21** 78-79

#### Chinese art

patrons

Chien-lung **21** 78-79

**Ch'ing** (Manchu; Chinese dynasty, ruled 1644-1912)

decline and overthrow

Chien-lung **21** 78-79

emperors

Chien-lung **21** 78-79

**CHINN, MAY EDWARD** (1896-1980), African American physician **3** 525-526

**CHIPPENDALE, THOMAS** (1718-1779), English cabinetmaker **4** 1-2

**CHIRAC, JACQUES** (born 1932), French prime minister **4** 2-3

**CHIRICO, GIORGIO DE** (1888-1978), Italian painter **4** 4

**CHISHOLM, CAROLINE** (1808-1877), British author and philanthropist **4** 4- 7

**CHISHOLM, SHIRLEY ANITA ST. HILL** (born 1924), first African American woman to serve in the United States Congress **4** 7-9

**CHISSANO, JOAQUIM ALBERTO** (born 1939), a leader of Mozambique's war for independence and later president of Mozambique (1986-) **4** 9-11

**CHISUM, JOHN SIMPSON** (1824-1884), American rancher **4** 11

**CH'I-YING** (circa 1786-1858), Chinese statesman and diplomat **4** 12

**CHMIELNICKI, BOGDAN** (1595-1657), Cossack leader of Ukrainian revolt **4** 12-13

**CH'OE CH'UNG-HON** (1149-1219), Korean general **4** 13

**CHOMSKY, NOAM AVRAM** (born 1928), American linguist and philosopher **4** 13-15

**CHONG CHUNG-BU** (1106-1179), Korean general **4** 15

**CHONGJO** (1752-1800), king of Korea **4** 15-16

**CHOPIN, FRÉDÉRIC FRANÇOIS** (1810-1849), Polish-French composer and pianist **4** 16-18

**CHOPIN, KATHERINE** ("Kate"; born Katherine O'Flaherty; 1851-1904), American writer, poet, and essayist **4** 18-20

**CHOPRA, DEEPAK** (born 1946), Indian physician, author, and educator **20** 84-86

**CHOU EN-LAI** (1898-1976), Chinese Communist premier **4** 20-22

**CHOU KUNG** (flourished circa 1116 B.C.), Chinese statesman **4** 22-23

**CHRESTIEN DE TROYES** (flourished 12th century), French poet **4** 23-24

**CHRÉTIEN, JOSEPH-JACQUES-JEAN "JEAN"** (born 1934), French Canadian politician and Canada's 20th prime minister **4** 24-25

**CHRISTIAN IV** (1577-1648), king of Denmark and Norway 1588-1648 **20** 86-89

**CHRISTIE, AGATHA** (Agatha Mary Clarissa Miller; 1890-1976), best selling mystery author **4** 25-26

**CHRISTINA OF SWEDEN** (1626-1689), queen of Sweden 1632-1654 **4** 26-29

**CHRISTINE DE PISAN** (1364/65-circa 1430), French author **4** 29-30

**CHRISTO** (Christo Vladimiroff Javacheff; born 1935), Bulgarian-born sculptor noted for large-scale environmental artworks **4** 30-31

**CHRISTOPHE, HENRI** (1767-1820), Haitian patriot and king **4** 32

**CHRISTOPHER, WARREN MINOR** (born 1925), United States secretary of state **4** 32-33

**CHRISTUS, PETRUS** (circa 1410-1472/73), Flemish painter **4** 33-34

**CHRISTY, EDWIN P.** (1815-1862), American minstrel **4** 34-35

**CHRYSIPPUS** (circa 280-circa 206 B.C.), Greek Stoic philosopher **4** 35-36

**CHRYSLER, WALTER PERCY** (1875-1940), American manufacturer **4** 36-37

**CHU YUAN-CHANG** (Hongwu; T'ai Tsu; Kao-ti; 1328-1398), Chinese emperor (1368-1398) **21** 79-81

**CHU, PAUL CHING-WU** (born 1941), Chinese-American experimentalist in solid-state physics **4** 37-39

**CHU HSI** (Chu Fu-tzu; 1130-1200), Chinese scholar and philosopher **4** 40-43

**CHU TEH** (1886-1976), Chinese Communist military leader **4** 54-55

**CHULALONGKORN** (Rama V; 1853-1910), king of Thailand 1868-1910 **4** 43-45

**CHUN DOO HWAN** (born 1931), army general turned politician and president of the Republic of Korea (South Korea); 1981-1988 **4** 45-47

**CHUNG, CONNIE** (born 1946), American correspondent and reporter **4** 47-48

**CHUNG-SHU, TUNG** (circa 179-104 B.C.), Chinese man of letters **4** 48-49

**CHURCH, FREDERICK EDWIN** (1826-1900), American painter **4** 49-50

**Church of Rome**  
see Roman Catholic Church

**CHURCHILL, WINSTON** (1871-1947), American novelist **4** 50-51

**CHURCHILL, SIR WINSTON LEONARD SPENCER** (1874-1965), English statesman **4** 51-53

**CHURRIGUERA, JOSÉ BENITO DE** (1665-1725), Spanish architect and sculptor **4** 53-54

**CICERO, MARCUS TULLIUS** (106-43 B.C.), Roman orator and writer **4** 55-58

**CID, THE** (Cid Campeador; 1043-1099), Spanish medieval warrior **4** 58-59

**CILLER, TANSU** (born 1946), prime minister of Turkey (1993-) **4** 59-60

**CIMABUE** (flourished late 13th century), Italian painter **4** 60-61

**CIMAROSA, DOMENICO** (1749-1801), Italian opera composer **4** 61-62

**Cincinnati Reds** (baseball team)  
Rose, Pete **21** 374-376

**Cinematography**  
Struss, Karl **21** 398-399  
Toland, Gregg **21** 405-407

**CINQUE, JOSEPH** (circa 1813-circa 1879), West African slave leader **4** 62

**CISNEROS, HENRY G.** (born 1947), first Hispanic mayor in Texas **4** 62-64

**CISNEROS, SANDRA** (born 1954), Hispanic American short story writer and poet **4** 64-65

**CISSÉ, SOULEYMANE** (born 1940), Malian filmmaker **4** 65-66

**Citizen Kane** (film)  
Toland, Gregg **21** 405-407

**CITROËN, ANDRÉ-GUSTAVE** (1878-1935), French automobile manufacturer **4** 66-68

**City planning**  
see Town planning

**Civil War, United States** (1861-1865)

- **UNION**
  - army
    - Butler, Benjamin Franklin **21** 65-67
    - Sickles, Daniel Edgar **21** 385-388
  - army campaigns
    - supplies for the army
      - Squibb, Edward Robinson **21** 390-392

**CLAIBORNE, LIZ** (Elizabeth Claiborne Ortenberg; born 1929), American businesswoman and clothing designer **4** 68-69

**CLANCY, TOM** (born 1947), American author **4** 70-71

**CLAPHAM, SIR JOHN HAROLD** (1873-1946), English economic historian **4** 71

**CLAPP, MARGARET ANTOINETTE** (1910-1974), American author, educator, and president of Wellesley College (1949-1966) **4** 71-72

**CLAPPERTON, HUGH** (1788-1827), Scottish explorer of Africa **4** 72-73

**CLAPTON, ERIC** (born 1945), English guitarist, singer, and songwriter **18** 90-92

**CLARENDON, 1ST EARL OF** (Edward Hyde; 1609-1674), English statesman and historian **4** 73-75

**CLARK, GEORGE ROGERS** (1752-1818), American Revolutionary War soldier **4** 75-76

**CLARK, JOHN BATES** (1847-1938), American economist **4** 76-77



**CLARK, JOHN MAURICE** (1884-1963), American economist **4** 77-78

**CLARK, KENNETH B.** (born 1914), American social psychologist **4** 78-79

**CLARK, KENNETH M.** (Lord; 1903-1983), English art historian **4** 79-80

**CLARK, MARK WAYNE** (1896-1984), American general **4** 80-81

**CLARK, TOM CAMPBELL** (1899-1977), President Harry S. Truman's attorney general and Supreme Court justice **4** 81-82

**CLARK, WILLIAM** (1770-1838), American explorer and soldier **4** 82-83

**CLARK, WILLIAM ANDREWS** (1839-1925), American copper entrepreneur and politician **4** 83-85

**CLARKE, ARTHUR CHARLES** (born 1917), English author **18** 92-94

**CLARKE, KENNETH HARRY** (born 1940), Conservative politician and Great Britain's chancellor of the exchequer (1993-) **4** 85-87

**CLARKE, MARCUS ANDREW HISLOP** (1846-1881), English-born Australian journalist and author **4** 87-88

**CLARKE, SAMUEL** (1675-1729), English theologian and philosopher **4** 88

**CLAUDE LORRAIN** (1600-1682), French painter, draftsman, and etcher **4** 89-90

**CLAUDEL, PAUL LOUIS CHARLES** (1868-1955), French author and diplomat **4** 90-91

**CLAUDIUS GERMANICUS, TIBERIUS** (Claudius I; 10 B.C. -A.D. 54), emperor of Rome 41-54 **4** 91-92

**CLAUSEWITZ, KARL VON** (Karl Philipp Gottlieb von Clausewitz; 1780-1831), Prussian military strategist **20** 89-91

**CLAUSIUS, RUDOLF JULIUS EMANUEL** (1822-1888), German physicist **4** 92-94

**CLAVER, ST. PETER** (1580-1654), Spanish Jesuit missionary **4** 94

**CLAY, HENRY** (1777-1852), American lawyer and statesman **4** 94-96

**CLAYTON, JOHN MIDDLETON** (1796-1856), American lawyer and statesman **4** 96-97

**CLEAVER, LEROY ELDRIDGE** (1935-1998), American writer and Black Panther leader **4** 97-98

**CLEISTHENES** (flourished 6th century B.C.), Athenian statesman **4** 98-99

**CLEMENCEAU, GEORGES** (1841-1929), French statesman **4** 99-101

**CLEMENS NON PAPA, JACOBUS** (circa 1510-circa 1556), Flemish composer **4** 101

**CLEMENT V** (1264-1314), pope 1304-1314 **4** 101-102

**CLEMENT VII** (Giulia de Medici; 1478-1534), pope (1523-1534) **21** 81-83

**CLEMENT OF ALEXANDRIA** (circa 150-circa 215), Christian theologian **4** 102-103

**CLEMENTE, ROBERTO** (1934-1972), Hispanic American baseball player **19** 70-72

**CLEOMENES I** (flourished circa 520-490 B.C.), Spartan king **4** 103

**CLEOMENES III** (circa 260-219 B.C.), king of Sparta 235-219 **4** 103-104

**CLEON** (circa 475-422 B.C.), Athenian political leader **4** 104-105

**CLEOPATRA** (69-30 B.C.), queen of Egypt **4** 105-106

**CLEVELAND, JAMES** (1932-1991), African American singer, songwriter, and pianist **4** 106-108

**CLEVELAND, STEPHEN GROVER** (1837-1908), American statesman, twice president **4** 108-110

**Cleveland Browns** (football team) Graham, Otto **21** 174-176

**Cleveland Indians** (baseball team) Feller, Bob **21** 129-131

**CLINE, PATSY** (born Virginia Patterson Hensley; 1932-1963), American singer **4** 110-112

**CLINTON, DeWITT** (1769-1828), American lawyer and statesman **4** 112-113

**CLINTON, GEORGE** (1739-1812), American patriot and statesman **4** 113-114

**CLINTON, SIR HENRY** (1738?-1795), British commander in chief during the American Revolution **4** 114-115

**CLINTON, HILLARY RODHAM** (born 1947), American politician and first lady **4** 115-117

**CLINTON, WILLIAM JEFFERSON** ("Bill" Clinton; born 1946), 42nd president of the United States **4** 117-119

**CLIVE, ROBERT** (Baron Clive of Plassey; 1725-1774), English soldier and statesman **4** 119-120

**CLODION** (1738-1814), French sculptor **4** 121

**CLODIUS PULCHER, PUBLIUS** (died 52 B.C.), Roman politician **4** 121-122

**CLOUET, FRANÇOIS** (circa 1516-circa 1572), French portrait painter **4** 122-123

**CLOUET, JEAN** (circa 1485-circa 1541), French portrait painter **4** 122-123

**CLOUGH, ARTHUR HUGH** (1819-1861), English poet **4** 123-124

**CLOVIS I** (465-511), Frankish king **4** 124

**COBB, TYRUS RAYMOND** (1886-1961), baseball player **4** 124-126

**COBBETT, WILLIAM** (1763-1835), English journalist and politician **4** 126-127

**COBDEN, RICHARD** (1804-1865), English politician **4** 127-128

**COCHISE** (circa 1825-1874), American Chiricahua Apache Indian chief **4** 128

**COCHRAN, JACQUELINE** (Jackie Cochran; 1910-1980), American aviator and businesswoman **18** 94-96

**COCHRAN, JOHNNIE** (born 1937), African American lawyer **4** 128-131

**COCHRANE, THOMAS** (Earl of Dundonald; 1775-1860), British naval officer **20** 91-93

**COCKCROFT, JOHN DOUGLAS** (1897-1967), English physicist **4** 131-132

**COCTEAU, JEAN** (1889-1963), French writer **4** 132-133

**COE, SEBASTIAN** (born 1956), English track athlete **20** 93-95

**COEN, JAN PIETERSZOOM** (circa 1586-1629), Dutch governor general of Batavia **4** 133

**COETZEE, J(OHN) M.** (born 1940), white South African novelist **4** 133-135

**COFFIN, LEVI** (1789-1877), American antislavery reformer **4** 135

**COFFIN, WILLIAM SLOANE, JR.** (born 1924), Yale University chaplain who spoke out against the Vietnam War **4** 135-137

**COHAN, GEORGE MICHAEL** (1878-1942), American actor and playwright **4** 137-138

**COHEN, HERMANN** (1842-1918), Jewish-German philosopher **4** 138-139

**COHEN, MORRIS RAPHAEL** (1880-1947), American philosopher and teacher **4** 139-140

**COHEN, WILLIAM S.** (born 1940), American secretary of defense **18** 96-98

**COHN, FERDINAND** (1829-1898), German botanist **20** 95-97

**COHN-BENDIT, DANIEL** (born 1946), led “new left” student protests in France in 1968 **4** 140-141

**COKE, SIR EDWARD** (1552-1634), English jurist and parliamentarian **4** 141-142

**COLBERT, JEAN BAPTISTE** (1619-1683), French statesman **4** 142-143

**COLBY, WILLIAM E.** (1920-1996), American director of the Central Intelligence Agency (CIA) **4** 143-145

**COLDEN, CADWALLADER** (1688-1776), American botanist and politician **4** 145-146

**COLE, GEORGE DOUGLAS HOWARD** (1889-1959), English historian and economist **4** 146-147

**COLE, JOHNNETTA** (born 1936), African American scholar and educator **4** 147-149

**COLE, NAT** (a.k.a. Nat “King” Cole, born Nathaniel Adams Coles; 1919-1965), American jazz musician **4** 149-151

**COLE, THOMAS** (1801-1848), American painter **4** 151-152

**COLEMAN, BESSIE** (1892-1926), first African American to earn an international pilot’s license **4** 152-154

**COLERIDGE, SAMUEL TAYLOR** (1772-1834), English poet and critic **4** 154-156

**COLES, ROBERT MARTIN** (born 1929), American social psychiatrist, social critic, and humanist **4** 156-157

**COLET, JOHN** (circa 1446-1519), English theologian **4** 157-158

**COLETTE, SIDONIE GABRIELLE** (1873-1954), French author **4** 158-159

**COLIGNY, GASPARD DE** (1519-1572), French admiral and statesman **4** 159-160

**COLLIER, JOHN** (1884-1968), American proponent of Native American culture **4** 160-162

**COLLINGWOOD, ROBIN GEORGE** (1889-1943), English historian and philosopher **4** 162

**COLLINS, EDWARD KNIGHT** (1802-1878), American businessman and shipowner **4** 162-163

**COLLINS, EILEEN** (born 1956), American astronaut **4** 163-165

**COLLINS, MARVA** (born Marva Deloise Nettles; b. 1936), African American educator **4** 165-167

**COLLINS, MICHAEL** (1890-1922), Irish revolutionary leader and soldier **4** 167-168

**COLLINS, WILLIAM** (1721-1759), English lyric poet **4** 168-169

**COLLINS, WILLIAM WILKIE** (1824-1889), English novelist **4** 169-170

**COLLOR DE MELLO, FERNANDO** (born 1949), businessman who became president of Brazil in 1990 **4** 170-172

**COLT, SAMUEL** (1814-1862), American inventor and manufacturer **4** 172-173

**COLTRANE, JOHN** (1926-1967), African American jazz saxophonist **4** 173-174

**COLUM, PADRAIC** (1881-1972), Irish-American poet and playwright **4** 174-175

**COLUMBA, ST.** (circa 521-597), Irish monk and missionary **4** 175-176

**COLUMBAN, ST.** (circa 543-615), Irish missionary **4** 176

**Columbia Broadcasting System** (communications)  
Goldmark, Peter Carl **21** 170-172  
Herrmann, Bernard **21** 199-202

**COLUMBUS, CHRISTOPHER** (1451-1506), Italian navigator, discoverer of America **4** 176-179  
John II **21** 223-225

**COLWELL, RITA R.** (born 1934), American marine microbiologist **4** 179-180

**COMANECI, NADIA** (Nadia Conner; born 1961), Romanian gymnast **18** 98-100

**COMENIUS, JOHN AMOS** (1592-1670), Moravian theologian and educational reformer **4** 180-181

**Comet** (astronomy)  
Peirce, Benjamin **21** 340-342

**COMINES, PHILIPPE DE** (circa 1445-1511), French chronicler **4** 181

**COMMAGER, HENRY STEELE** (1902-1998), American historian, textbook author, and editor **4** 181-183

**COMMONER, BARRY** (born 1917), American biologist and environmental activist **4** 183-185

**COMMONS, JOHN ROGERS** (1862-1945), American historian **4** 185

**Communist party** (United States)  
members  
Trumbo, Dalton **21** 409-411

**COMNENA, ANNA** (1083-1148), Byzantine princess and historian **4** 185-186

**COMPTON, ARTHUR HOLLY** (1892-1962), American physicist **4** 186-188

**Computers and calculating machines**  
Jacquard, Joseph Marie **21** 216-218

**COMSTOCK, ANNA BOTSFORD** (1854-1930), American artist and natural science educator **20** 97-99

**COMSTOCK, ANTHONY** (1844-1915), American antivice crusader **4** 188-189

**COMSTOCK, HENRY TOMPKINS PAIGE** (1820-1870), American gold prospector **4** 189

**COMTE, AUGUSTE** (1798-1857), French philosopher **4** 189-191

**CONABLE, BARBER B., JR.** (born 1922), head of the World Bank (1986-1991) **4** 191-192

**CONANT, JAMES BRYANT** (1893-1978), American chemist and educator **4** 192-193

**CONDÉ, PRINCE DE** (Louis II de Bourbon 1621-1686), French general **4** 193-194

**CONDILLAC, ÉTIENNE BONNOT DE** (1715-1780), French philosopher and educator **4** 194-195

**CONDORCET, MARQUIS DE** (Marie Jean Antoine Nicolas Caritat; 1743-1794), French philosopher and mathematician **4** 195-196

**CONE, JAMES HALL** (born 1938), American theologian **4** 196-197

**CONFUCIUS** (551-479 B.C.), Chinese teacher and philosopher **4** 197-200

**Congressional Medal of Honor** (United States)  
Moffett, William Adger **21** 299-301

**Congressmen**  
see Statesmen, American—legislative

**CONGREVE, WILLIAM** (1670-1729), English dramatist **4** 200-201

**CONKLING, ROSCOE** (1829-1888), American politician **4** 201-202

**CONNALLY, JOHN BOWDEN, JR.** (born 1917), Texas governor, political adviser, and confidant to presidents **4** 202-204

**Connecticut** (state, United States)  
and U.S. Constitution  
Ellsworth, Oliver **21** 115-117

**CONNERY, SEAN** (Thomas Connery; born 1930), Scottish actor **18** 100-102

**CONNOLLY, CYRIL** (1903-1974), British novelist and literary and social critic **4** 204-205

**CONNOLLY, MAUREEN** (1934-1969), American tennis player **19** 72-74

**CONRAD, JOSEPH** (1857-1924), Polish-born English novelist **4** 205-207

**Conservation** (United States)  
supporters  
Marsh, George Perkins **21** 275-277

**CONSTABLE, JOHN** (1776-1837), English landscape painter **4** 208-209

**CONSTANTINE I** (circa 274-337), Roman emperor 306-337 **4** 209-211

**CONSTANTINE XI** (Palaeologus; 1405-1453), Byzantine emperor 1448-1453 **4** 211-212

**Constitutional Convention** (United States; 1787)  
delegate signers (New England)  
Ellsworth, Oliver **21** 115-117

**Consulate** (France; 1799-1804)  
see France—1799-1804

**CONTI, NICCOLÒ DE'** (circa 1396-1469), Venetian merchant-adventurer **4** 212-213

**CONWAY, JILL KATHRYN KER** (born 1934), historian interested in the role of women and president of Smith College **4** 213-214

**COOGAN, JACKIE** (John Leslie Coogan, Jr.; 1914-1984), American actor **21** 83-85

**COOK, JAMES** (1728-1779), English explorer, navigator, and cartographer **4** 214-215  
associates  
Montagu, John, fourth Earl of Sandwich **21** 301-303

**COOKE, JAY** (1821-1905), American merchant banker **4** 215-216

**COOLEY, CHARLES HORTON** (1864-1929), American social psychologist, sociologist, and educator **4** 216-217

**COOLIDGE, JOHN CALVIN** (1872-1933), president of the United States 1923-1929 **4** 217-219

**COOMBS, HERBERT COLE** (Nugget; born 1906), Australian economist **4** 219-220

**COONEY, JOAN GANZ** (born 1929), American television program producer and publicist **19** 74-76

**COOPER, GARY** (Frank James Cooper; 1901-1961), American motion picture actor **21** 85-87

**COOPER, JAMES FENIMORE** (1789-1851), American novelist and social critic **4** 220-223

**COOPER, PETER** (1791-1883), American inventor and manufacturer **4** 223-224

**COOPER, THOMAS** (1759-1839), English-born American scientist and educator **4** 224

**COORS, ADOLPH** (Adolph Herrman Kohrs; 1847-1929), American brewer and businessman **19** 76-78

**COPEAU, JACQUES** (1879-1949), French dramatic theorist, director, and actor who established the Vieux Colombier **4** 225

**COPERNICUS, NICOLAUS** (1473-1543), Polish astronomer **4** 226-227

**COPLAND, AARON** (1900-1990), American composer **4** 227-228

**COPLEY, JOHN SINGLETON** (1738-1815), American portrait painter **4** 228-230

**COPPOLA, FRANCIS FORD** (born 1939), American filmmaker and author **18** 102-104

**Copper mining** (industry)  
Guggenheim, Daniel **21** 185-187

**CORDOBA, GONZALO FERNANDEZ DE** (1453-1515), Spanish military leader **20** 99-100

**CORELLI, ARCANGELO** (1653-1713), Italian composer and violinist **4** 230-231

**CORI, GERTY T.** (born Gerty Theresa Radnitz; 1896-1957), American biochemist **4** 231-234

**CORINTH, LOVIS** (1838-1925), German artist **4** 234

**CORMAN, ROGER** (born 1926), American film director and producer **21** 87-89

**CORNEILLE, PIERRE** (1606-1684), French playwright **4** 234-236

**CORNELL, EZRA** (1807-1874), American financier and philanthropist **4** 236-237

**CORNELL, JOSEPH** (1903-1972), American artist **4** 237-238

**CORNING, ERASTUS** (1794-1872), American merchant and financier **4** 238-239

**CORNPLANTER** (c. 1732-1836), Seneca village leader **4** 239-241

**CORNWALLIS, CHARLES** (1st Marquess Cornwallis; 1738-1805), British soldier and statesman **4** 241-243

**CORONA, BERT** (born 1918), Hispanic American union organizer **4** 243-247

**CORONADO, FRANCISCO VÁSQUEZ DE** (1510-1554), Spanish explorer and colonial official **4** 247

**COROT, JEAN BAPTISTE CAMILLE** (1796-1875), French painter **4** 247-249

**CORREGGIO** (circa 1494-1534), Italian painter **4** 249-251

**CORRIGAN, MICHAEL AUGUSTINE** (1839-1902), American Catholic archbishop **4** 253

**CORRIGAN and WILLIAMS** founders of the women's peace movement in Northern Ireland **4** 251-253

**CORT, HENRY** (1740-1800), English ironmaster **4** 254

**CORTE REAL, GASPARD AND MIGUEL**, Portuguese explorers **4** 254-255

**CORTÉS, HERNÁN** (1485?-1547), Spanish conquistador **4** 255-256

**CORTONA, PIETRO DA** (1596-1669), Italian painter and architect **4** 256

**COSBY, WILLIAM HENRY, JR.** ("Bill" Cosby; born 1937), American entertainer **4** 257-258

**COSGRAVE, LIAM** (born 1920), Irish foreign minister and prime minister (1973-1977) **4** 258-260

**COSIO VILLEGAS, DANIEL** (1898-1976), Mexican teacher, civil servant, and author of studies of Mexican history **4** 260-261

**COTTEN, ELIZABETH** ("Libba"; born Elizabeth Nevills; 1892-1987), African American musician **4** 261-263

**COTTON, JOHN** (1584-1652), American Congregationalist clergyman **4** 263-265

**COUBERTIN, PIERRE DE** (Pierre Fredy, Baron de Coubertin; 1863-1937), French organizer of the modern Olympic Games **21** 89-92

**COUGHLIN, CHARLES EDWARD** (1891-1979), Canadian-American priest and politician **4** 265-266

**COULOMB, CHARLES AUGUSTIN DE** (1736-1806), French physicist **4** 266-267

**COULTON, GEORGE GORDON** (1858-1947), English historian **4** 267

**COUNTS, GEORGE SYLVESTER** (1889-1974), American educator and educational sociologist **4** 267-269

**COUPER, ARCHIBALD SCOTT** (1831-1892), British chemist **4** 269-270

**COUPER, JAMES HAMILTON** (1794-1866), American agriculturist **4** 270

**COUPERIN, FRANÇOIS** (1668-1733), French composer, organist, and harpsichordist **4** 270-271

**COURBET, JEAN DESIRÉ GUSTAVE** (1819-1877), French painter **4** 271-273

**COURLANDER, HAROLD** (1908-1996), American folklorist and author **19** 78-80

**COURNOT, ANTOINE AUGUSTIN** (1801-1877), French mathematician, philosopher, and economist **4** 273

**Courtesans**  
Mata Hari **21** 279-282

**COUSIN, VICTOR** (1792-1867), French educator and philosopher **4** 273-274

**COUSINS, NORMAN** (1912-1990), editor-in-chief of the *Saturday Review* and advocate for world peace **4** 274-276

**COUSTEAU, JACQUES-YVES** (1910-1997), undersea explorer, photographer, inventor, writer, television producer, and filmmaker **4** 276-277

**COUSY, BOB** (Robert Joseph Cousy; born 1928), American basketball player and coach **21** 92-94

**Covent Garden** (London)  
Kean, Edmund **21** 237-239

**COVERDALE, MILES** (1488-1568), English Puritan **4** 278

**COVILHÃO, PEDRO DE** (circa 1455-circa 1530), Portuguese explorer and diplomat **4** 278-279

**COWARD, NOEL** (1899-1973), English playwright, actor, and composer **4** 279-280

**COWELL, HENRY DIXON** (1897-1965), American composer and pianist **4** 280-281

**COWLEY, ABRAHAM** (1618-1667), English writer **4** 281-282

**COWPER, WILLIAM** (1731-1800), English poet **4** 282

**COX, ARCHIBALD** (born 1912), American lawyer, educator, author, labor arbitrator, and public servant **4** 283-284

**COX, HARVEY** (born 1929), American theologian and author **4** 284-285

**COXE, TENCH** (1755-1824), American political economist and businessman **4** 285-286

**COXEY, JACOB SECHLER** (1854-1951), American reformer and businessman **4** 286-287

**COYSEVOX, ANTOINE** (1640-1720), French sculptor **4** 287-288

**CRABBE, GEORGE** (1754-1832), English poet **4** 288

**CRAIG, EDWARD GORDON** (1872-1966), European actor, designer, director, and theoretician **4** 288-289

**CRANACH, LUCAS, THE ELDER** (1472-1553), German painter, engraver, and designer of woodcuts **4** 289-290

**CRANDALL, PRUDENCE** (1803-1890), American educator **4** 291

**CRANE, HART** (1899-1932), American poet **4** 291-293

**CRANE, STEPHEN** (1871-1900), American writer and poet **4** 293-295

**CRANMER, THOMAS** (1489-1556), English reformer, archbishop of Canterbury **4** 295-296

**CRASHAW, RICHARD** (1612/1613-49), English poet **4** 296

**CRASSUS DIVES, MARCUS LICINIUS** (circa 115-53 B.C.), Roman financier and politician **4** 296-297

**CRAVEIRINHA, JOSÉ** (born 1922), Mozambican journalist and lyric poet **4** 297-299

**CRAWFORD, JOAN** (Lucille Fay LeSueur; 1906-1977), American actress **19** 80-82

**CRAWFORD, WILLIAM HARRIS** (1772-1834), American politician **4** 299-300

**CRAXI, BETTINO** (1934-2000), statesman and prime minister of the Italian republic (1983-1987) **4** 300-301

**CRAY, SEYMOUR** (1925-1996), American computer engineer **4** 301-303

**CRAZY HORSE** (circa 1842-1877), American Indian, Oglala Sioux war chief **4** 303-304

**CREEL, GEORGE** (1876-1953), American writer and journalist **4** 304-305

**CRÉMAZIE, OCTAVE** (1827-1879), Canadian poet **4** 305-306

**CRERAR, THOMAS ALEXANDER** (1876-1975), Canadian political leader **4** 306

**CRESSON, EDITH** (born 1934), first woman prime minister of France **4** 306-307

**CRÈVECOEUR, ST. JOHN DE** (1735-1813), French-American farmer and writer **4** 307-308

**CRICHTON, (JOHN) MICHAEL** (a.k.a. Michael Douglas, Jeffrey Hudson, and John Lange; b. 1942), American novelist, screenwriter, and director **4** 308-310

**CRICK, FRANCIS HARRY CROMPTON** (born 1916), English molecular biologist **4** 310

**Criminals, English**  
Blackbeard **21** 38-41

**CRISPI, FRANCESCO** (1819-1901), Italian statesman **4** 310-311

**CRISTIANI, ALFREDO** ("Fredy" Cristiani; born 1947), president of El Salvador (1989-) **4** 311-313

**CRISTOFORI, BARTOLOMEO** (1655-1731), Italian musician and inventor of the piano **21** 94-96

**CROCE, BENEDETTO** (1866-1952), Italian philosopher, critic and educator **4** 313-314

**CROCKETT, DAVID** (1786-1836), American frontiersman **4** 314-316

**CROLY, HERBERT DAVID** (1869-1930), American editor and author **4** 316-317

**CROLY, JANE** (Jennie June; 1829-1901), American journalist **21** 96-96

**CROMER, 1ST EARL OF** (Evelyn Baring; 1841-1907), English statesman **4** 317

**CROMWELL, OLIVER** (1599-1658), English statesman and general **4** 317-320

**CROMWELL, THOMAS** (Earl of Essex; circa 1485-1540), English statesman 1532-1540 **4** 320-321

**CRONKITE, WALTER LELAND, JR.** (born 1916), American journalist and radio and television news broadcaster **4** 321-322

**CROOK, GEORGE** (1828-1890), American general and frontiersman **4** 322-323

**CROOKES, SIR WILLIAM** (1832-1919), English chemist and physicist **4** 323-324

**CROSBY, HARRY LILLIS** (Bing; 1903-1977), American singer and radio and television personality **4** 324-326

**CROWLEY, ALEISTER** (1875-1947), English author and magician **18** 107-109

**CROWTHER, SAMUEL ADJAI** (circa 1806-1891), Nigerian Anglican bishop **4** 326

**CRUMB, GEORGE** (born 1929), American composer and teacher **4** 326-328

**CRUZ, OSWALDO GONÇALVES** (1872-1917), Brazilian microbiologist and epidemiologist **4** 328-329

**CUAUHTEMOC** (circa 1496-1525), Aztec ruler **4** 329

**CUBBERLEY, ELLWOOD PATTERSON** (1868-1941), American educator and university dean **4** 329-331

**CUDWORTH, RALPH** (1617-1688), English philosopher and theologian **4** 331

**CUFFE, PAUL** (1759-1817), African American ship captain and merchant **4** 331-332

**CUGOANO, OTTOBAH** (circa 1757-after 1803), African abolitionist in England **4** 332-333

**CUKOR, GEORGE** (1899-1983), American film director **19** 82-84

**CULLEN, COUNTÉE** (1903-1946), African American poet **4** 333-334

**CULLEN, MAURICE GALBRAITH** (1866-1934), Canadian painter **4** 334

**CULLEN, PAUL** (1803-1879), Irish cardinal **20** 100-103

**CUMMINGS, EDWARD ESTLIN** (1894-1962), American poet **4** 334-336

**CUNHA, EUCLIDES RODRIGUES PIMENTA DA** (1866-1909), Brazilian writer **4** 336-337

**CUNNINGHAM, GLENN** (1909-1988), American track and field athlete **21** 96-99

**CUNNINGHAM, IMOGEN** (1883-1976), American photographer **19** 84-86

**CUNNINGHAM, MERCE** (born 1919), American dancer and choreographer **4** 337-338

**CUOMO, MARIO MATTHEW** (born 1932), Democratic New York state governor **4** 338-339

**CURIE, ÈVE** (Eve Curie Labouisse; born 1904), French musician, author and diplomat **18** 109-111

**CURIE, MARIE SKŁODOWSKA** (1867-1934), Polish-born French physicist **4** 339-341

**CURIE, PIERRE** (1859-1906), French physicist **4** 341-344

**CURLEY, JAMES MICHAEL** (1874-1958), American politician **4** 344-345

**CURRIE, SIR ARTHUR WILLIAM** (1875-1933), Canadian general **4** 345

**CURRIER AND IVES** (1857-1907), American lithographic firm **4** 345-346

**CURRY, JABEZ LAMAR MONROE** (1815-1903), American politician **4** 346-347

**CURTIN, ANDREW GREGG** (1815-1894), American politician **4** 347-348

**CURTIN, JOHN JOSEPH** (1885-1945), Australian statesman, prime minister **4** 348-349

**CURTIS, BENJAMIN ROBBINS** (1809-1874), American jurist, United States Supreme Court justice **4** 349

**CURTIS, CHARLES BRENT** (1860-1936), American vice president (1929-1932) and legislator **21** 99-100

**CURTIS, GEORGE WILLIAM** (1824-1892), American writer and reformer **4** 349-350

**CURTISS, GLENN HAMMOND** (1878-1930), American aviation pioneer **4** 350-351

**CURZON, GEORGE NATHANIEL** (1st Marquess Curzon of Kedleston; 1859-1925), English statesman **4** 351-352

**CUSA, NICHOLAS OF** (1401-1464), German prelate and humanist **4** 352-353

**CUSHING, HARVEY WILLIAMS** (1869-1939), American neurosurgeon **4** 353-354

**CUSHMAN, CHARLOTTE** (1816-1876), American actress **4** 354-355

**CUSTER, GEORGE ARMSTRONG** (1839-1876), American general **4** 355-356

**CUTLER, MANASSEH** (1742-1823), American clergyman, scientist, and politician **4** 356-357

**CUVIER, BARON GEORGES LÉOPOLD** (1769-1832), French zoologist and biologist **4** 357-359

**CUVILLIÉS, FRANÇOIS** (1695-1768), Flemish architect and designer **4** 359-360

**CUYP, AELBERT** (1620-1691), Dutch painter **4** 360-361

**CYNEWULF** (8th or 9th century), Anglo-Saxon poet **20** 103-104

**CYPRIANUS, THASCIUS CAECILIANUS** (died 258), Roman bishop of Carthage **4** 361-362

**CYRIL (OF ALEXANDRIA), ST.** (died 444), Egyptian bishop, Doctor of the Church **4** 362

**CYRIL, ST.** (827-869), Apostle to the Slavs **4** 362

**CYRUS THE GREAT** (ruled 550-530 B.C.), founder of the Persian Empire **4** 363-364

## D

**DA PONTE, LORENZO** (Emanuele Conegliano; 1749-1838), Italian librettist and poet **20** 105-106

**DAGUERRE, LOUIS JACQUES MANDÉ** (1787-1851), French painter and stage designer **4** 365-366

**DAHL, ROALD** (1916-1990), Welsh-born English author **4** 366-367

**DAIGO II** (1288-1339), Japanese emperor **4** 367-368

**DAIMLER, GOTTLIEB** (1834-1900), German mechanical engineer **4** 368  
Otto, Nikolaus August **21** 331-333

**DALADIER, ÉDOUARD** (1884-1970), French statesman **4** 369

**DALAI LAMA** (Lhamo Thondup; born 1935), 14th in a line of Buddhist spiritual and temporal leaders of Tibet **4** 369-371

**DALE, SIR HENRY HALLETT** (1875-1968), English pharmacologist and neurophysiologist **4** 371-373

**DALEY, RICHARD J.** (1902-1976), Democratic mayor of Chicago (1955-1976) **4** 373-375

**DALHOUSIE, 1ST MARQUESS OF** (James Andrew Broun Ramsay; 1812-1860), British statesman **4** 375-376

**DALI, SALVADOR** (1904-1989), Spanish painter **4** 376-377

**DALLAPICCOLA, LUIGI** (1904-1975), Italian composer **4** 377-378

**DALTON, JOHN** (1766-1844), English chemist **4** 378-379

**DALY, MARCUS** (1841-1900), American miner and politician **4** 379-380

**DALY, MARY** (born 1928), American feminist theoretician and philosopher **4** 380-381

**DALZEL, ARCHIBALD** (or Dalziel; 1740-1811), Scottish slave trader **4** 381-382

**DAM, CARL PETER HENRIK** (1895-1976), Danish biochemist **4** 382-383

**DAMIEN, FATHER** (1840-1889), Belgian missionary **4** 383

**DAMPIER, WILLIAM** (1652-1715), English privateer, author, and explorer **4** 384

**DANA, CHARLES ANDERSON** (1819-1897), American journalist **4** 384-385

**DANA, RICHARD HENRY, JR.** (1815-1882), American author and lawyer **4** 385-386

**DANDOLO, ENRICO** (circa 1107-1205), Venetian doge 1192-1205 **4** 386-387

**DANDRIDGE, DOROTHY** (1922-1965), African American actress and singer **18** 112-114

**DANIELS, JOSEPHUS** (1862-1948), American journalist and statesman **4** 387

**D'ANNUNZIO, GABRIELE** (1863-1938), Italian poet and patriot **4** 388

**DANQUAH, JOSEPH B.** (1895-1965), Ghanaian nationalist and politician **4** 388-389

**DANTE ALIGHIERI** (1265-1321), Italian poet **4** 389-391

**DANTON, GEORGES JACQUES** (1759-1794), French revolutionary leader **4** 391-393

**DARBY, ABRAHAM** (1677-1717), English iron manufacturer **20** 106-107

**DARÍO, RUBÉN** (1867-1916), Nicaraguan poet **4** 393-394

**DARIUS I** (the Great; ruled 522-486 B.C.), king of Persia **4** 394-395

**DARROW, CLARENCE SEWARD** (1857-1938), American lawyer **4** 396-397

**DARWIN, CHARLES ROBERT** (1809-1882), English naturalist **4** 397-399

**DARWIN, ERASMUS** (1731-1802), English physician, author, botanist and inventor **18** 114-116

**DARWISH, MAHMUD** (born 1942), Palestinian poet **4** 399-401

**DAS, CHITTA RANJAN** (1870-1925), Indian lawyer, poet, and nationalist **4** 401-402

**DAUBIGNY, CHARLES FRANÇOIS** (1817-1878), French painter and etcher **4** 402

**DAUDET, ALPHONSE** (1840-1897), French novelist and dramatist **4** 402-403

**DAUMIER, HONORÉ VICTORIN** (1808-1879), French lithographer, painter, and sculptor **4** 403-405

**DAVENPORT, JOHN** (1597-1670), English Puritan clergyman **4** 405-406

**DAVID** (ruled circa 1010-circa 970 B.C.), Israelite king **4** 406-407

**DAVID I** (1084-1153), king of Scotland **4** 407

**DAVID, JACQUES LOUIS** (1748-1825), French painter **4** 407-409

**DAVIES, ARTHUR BOWEN** (1862-1928), American painter **4** 409-410

**DAVIES, RUPERT** (1917-1976), British actor **18** 116-117

**DAVIES, WILLIAM ROBERTSON** (1913-1995), Canadian author **18** 117-119

**DAVIGNON, VISCOUNT (ETIENNE)** (born 1932), an architect of European integration and unity through the Commission of the European Communities **4** 410-411

**DAVIS, ALEXANDER JACKSON** (1803-1892), American architect **4** 411

**DAVIS, ANGELA** (Angela Yvonne Davis; born 1944), African American scholar and activist **4** 412-413

**DAVIS, ARTHUR VINING** (1867-1962), general manager of the Aluminum Company of America (ALCOA) **4** 413-414

**DAVIS, BENJAMIN O., SR.** (1877-1970), first African American general in the regular United States Armed Services **4** 414-415

**DAVIS, BETTE** (1908-1989), American actress **18** 119-121

**DAVIS, GLENN** (born 1925), American football player **21** 101-103

**DAVIS, HENRY WINTER** (1817-1865), American lawyer and politician **4** 415-416

**DAVIS, JEFFERSON** (1808-1889), American statesman, president of the Confederacy 1862-1865 **4** 416-418

**DAVIS, JOHN** (circa 1550-1605), English navigator **4** 419

**DAVIS, MILES** (1926-1991), jazz trumpeter, composer, and small-band leader **4** 419-421

**DAVIS, OSSIE** (born 1917), African American playwright, actor, and director **4** 421-422

**DAVIS, RICHARD HARDING** (1864-1916), American journalist, novelist, and dramatist **4** 422-423

**DAVIS, SAMMY, JR.** (1925-1990), African American singer, dancer, and actor **4** 423-424

**DAVIS, STUART** (1894-1964), American cubist painter **4** 424-425

**DAVIS, WILLIAM MORRIS** (1850-1934), American geographer and geologist **4** 425-426

**DAVY, SIR HUMPHRY** (1778-1829), English chemist and natural philosopher **4** 426-427

**DAWES, HENRY LAURENS** (1816-1903), American politician **4** 427

**DAWSON, WILLIAM LEVI** (1899-1990), African American composer, performer, and music educator **4** 427-428

**DAY, DOROTHY** (1897-1980), a founder of the Catholic Worker Movement **4** 428-429

**DAYAN, MOSHE** (1915-1981), Israeli general and statesman **4** 429-431

**DAYANANDA SARASWATI** (1824-1883), Indian religious leader **4** 431

**DE ANDRADE, MARIO** (Mario Coelho Pinto Andrade; born 1928), Angolan poet, critic, and political activist **4** 434-435

**DE BEAUVOIR, SIMONE** (1908-1986), French writer and leader of the modern feminist movement **4** 440-441

**DE BOW, JAMES DUNWOODY BROWNSON** (1820-1867), American editor and statistician **4** 441-442

**DE BROGLIE, LOUIS VICTOR PIERRE RAYMOND** (1892-1987), French physicist **4** 442-444

**DE FOREST, LEE** (1873-1961), American inventor **4** 459-460

**DE GASPERI, ALCIDE** (1881-1954), Italian statesman, premier 1945-1953 **4** 462-463

**DE GAULLE, CHARLES ANDRÉ JOSEPH MARIE** (1890-1970), French general, president 1958-1969 **4** 463-465

**DE KLERK, FREDRIK WILLEM** (born 1936), state president of South Africa (1989-) **4** 466-468

**DE KOONING, WILLEM** (1904-1997), Dutch-born American painter **4** 468-469

**DE LA MADRID HURTADO, MIGUEL** (born 1934), president of Mexico (1982-1988) **4** 471-472

**DE LA ROCHE, MAZO LOUISE** (1879-1961), Canadian author **4** 474-475

**DE LEON, DANIEL** (1852-1914), American Socialist theoretician and politician **4** 479-480

**DE L'ORME, PHILIBERT** (1510-1570), French architect **9** 519

**DE MILLE, AGNES** (1905-1993), American dancer, choreographer, and author **4** 486-488

**DE NIRO, ROBERT** (born 1943), American actor and film producer **21** 103-106

**DE SANCTIS, FRANCESCO** (1817-1883), Italian critic, educator, and legislator **4** 505

**DE SICA, VITTORIO** (1902-1974), Italian filmmaker **21** 106-108

**DE SMET, PIERRE JEAN** (1801-1873), Belgian Jesuit missionary **4** 509-510

**DE SOTO, HERNANDO** (1500-1542), Spanish conqueror and explorer **4** 510-511

**DE VALERA, EAMON** (1882-1975), American-born Irish revolutionary leader and statesman **4** 514-515

**DE VRIES, HUGO** (1848-1935), Belgian botanist in the fields of heredity and the origin of species **4** 516-518

**DE WOLFE, ELSIE** (1865-1950), American interior decorator **20** 107-108

**Deaf, the**  
education of  
Epée, Charles-Michel de l'**21** 120-122

**DEÁK, FRANCIS** (1803-1876), Hungarian statesman **4** 431-432

**DEAKIN, ALFRED** (1856-1919), Australian statesman **4** 432-433

**DEAN, JAMES** (James Byron Dean; 1931-1955), American actor and cult figure **4** 433-434

**DEANE, SILAS** (1737-1789), American merchant lawyer and diplomat **4** 435-437

**DEB, RADHAKANT** (1783-1867), Bengali reformer and cultural nationalist **4** 437

**DEBAKEY, MICHAEL ELLIS** (born 1908), American surgeon **4** 437-438

**DEBARTOLO, EDWARD JOHN, SR. and JR.**, real estate developers who specialized in large regional malls **4** 438-440

**DEBS, EUGENE VICTOR** (1855-1926), American union organizer **4** 444-445

**DEBUSSY, (ACHILLE) CLAUDE** (1862-1918), French composer **4** 445-447

**DEBYE, PETER JOSEPH WILLIAM** (1884-1966), Dutch-born American physical chemist **4** 447-448

**DECATUR, STEPHEN** (1779-1820), American naval officer **4** 448-449

**DEE, RUBY** (born Ruby Ann Wallace; b. 1924), African American actor **4** 449-452

**DEER, ADA E.** (born 1935), Native American social worker, activist, and director of Bureau of Indian Affairs **4** 452-454

**DEERE, JOHN** (1804-1886), American inventor and manufacturer **4** 455

**DEERING, WILLIAM** (1826-1913), American manufacturer **4** 455-456

**DEES, MORRIS S., JR.** (born 1936), American civil rights attorney **4** 456-457

**DEFOE, DANIEL** (1660-1731), English novelist, journalist, and poet **4** 457-459

**DEGANAWIDA** (also DeKanhawidah; c. 1550-c. 1600), Native American prophet, leader, and statesman **4** 460-461

**DEGAS, (HILAIRE GERMAIN) EDGAR** (1834-1917), French painter and sculptor **4** 461-462

**DEKKER, THOMAS** (circa 1572-circa 1632), English playwright and pamphleteer **4** 465-466

**DELACROIX, (FERDINAND VICTOR) EUGÈNE** (1798-1863), French painter **4** 469-471

**DELANCEY, STEPHEN** (1663-1741), American merchant and politician **4** 473

**DELANY, MARTIN ROBINSON** (1812-1885), African American army officer, politician, and judge **4** 473-474

**DELAUNAY, ROBERT** (1885-1941), French abstract painter **4** 475-476

**DELBRÜCK, MAX** (1906-1981), German-born American molecular biologist **4** 476-478

**DELCASSÉ, THÉOPHILE** (1852-1923), French statesman **4** 478-479

**DELLINGER, DAVID** (born 1915), American pacifist **4** 480-481

**DELORIA, VINE, JR.** (born 1933), Native American author, poet, and activist **4** 481-484

**DELORS, JACQUES** (born 1925), French president of the European Commission and chief architect of Western Europe's drive toward market unity by 1992 **4** 484-486

**DEL PILAR, MARCELO H.** (1850-1896), Philippine revolutionary propagandist and satirist **4** 486

**DEMILLE, CECIL BLOUNT** (1881-1959), American film director and producer **4** 488-490  
Lasky, Jesse **21** 254-256

**DEMIREL, SÜLEYMAN** (born 1924), Turkish politician, prime minister, and leader of the Justice party **4** 490-493

**Democratic party** (United States)  
leaders (Texas)  
Garner, John Nance **21** 155-157  
vice presidents  
Garner, John Nance **21** 155-157

**DEMOCRITUS** (circa 494-circa 404 B.C.), Greek natural philosopher **4** 493-494

**Demography** (social science)  
Graunt, John **21** 176-178

**DEMOIVRE, ABRAHAM** (1667-1754), Franco-English mathematician **4** 494-495

**DEMOSTHENES** (384-322 B.C.), Greek orator **4** 495-496

**DEMPSEY, JACK** (William Harrison Dempsey; 1895-1983), American boxer **4** 496-497

**DEMUTH, CHARLES** (1883-1935), American painter **4** 497-498

**DENG XIAOPING** (Teng Hsiao-p'ing; 1904-1997), leader in the People's Republic of China (PRC) in the 1970s **4** 498-500

**DENIKIN, ANTON** (1872-1947), Russian soldier **20** 108-111

**DENKTASH, RAUF** (born 1924), president of the Turkish Republic of Northern Cyprus (1985-) **4** 500-502

**DEODORO DA FONSECA, MANOEL** (1827-1892), Brazilian statesman, president 1890-1891 **4** 502

**DERAIN, ANDRÉ** (1880-1954), French painter **4** 503

**DERRIDA, JACQUES** (born 1930), French philosopher **4** 503-505

**DESCARTES, RENÉ** (1596-1650), French philosopher and mathematician **4** 505-508

**Designers**  
clothing  
Worth, Charles Frederick **21** 436-438  
stage sets  
Menzies, William Cameron **21** 291-293

**DESSALINES, JEAN JACQUES** (1758-1806), Haitian nationalist and politician **4** 511-512

**DETT, ROBERT NATHANIEL** (1882-1943), African American composer, conductor, and music educator **4** 512

**DEUTSCH, KARL WOLFGANG** (1912-1992), American political scientist **4** 512-514

**DEVLIN, BERNADETTE** (McAliskey; born 1947), youngest woman ever elected to the British Parliament **4** 515-516

**DEVRIES, WILLIAM CASTLE** (born 1943), American heart surgeon **4** 518-519

**DEW, THOMAS RODERICK** (1802-1846), American political economist **4** 519

**DEWEY, GEORGE** (1837-1917), American naval officer **4** 520

**DEWEY, JOHN** (1859-1952), American philosopher and educator **4** 520-523

**DEWEY, MELVIL** (1851-1931), American librarian and reformer **4** 523-524

**DEWEY, THOMAS EDMUND** (1902-1971), American lawyer and politician **4** 524

**DEWSON, MARY WILLIAMS** (Molly; 1874-1962), American reformer, government official, and organizer of women for the Democratic party **4** 525

**DIAGHILEV, SERGEI** (1872-1929), Russian who inspired artists, musicians, and dancers to take ballet to new heights of public enjoyment **4** 525-527

**DIAGNE, BLAISE** (1872-1934), Senegalese political leader **4** 527

**DIAMOND, DAVID** (born 1915), American composer and teacher **4** 527-529

**DIANA, PRINCESS OF WALES** (born Diana Frances Spencer; 1961-1997), member of British royal family **4** 529-533

**DIAS DE NOVAIS, BARTOLOMEU** (died 1500), Portuguese explorer **4** 533-534

**DÍAZ, PORFIRIO** (José de la Cruz Porfirio Díaz; 1830-1915), Mexican general and politician **4** 534-536

**DÍAZ DEL CASTILLO, BERNAL** (circa 1496-circa 1584), Spanish soldier and historian **4** 536-537

**DÍAZ ORDAZ, GUSTAVO** (1911-1979), president of Mexico (1964-1970) **4** 537-538

**DICKENS, CHARLES JOHN HUFFAM** (1812-1870), English author **4** 538-541

**DICKEY, JAMES** (1923-1997), American poet **19** 87-89

**DICKINSON, EMILY** (1830-1886), American poet **4** 541-543

**DICKINSON, JOHN** (1732-1808), American lawyer, pamphleteer, and politician **4** 543-544

**DICKSON, LAURIE** (William Kennedy Laurie Dickson; 1860-1935), British inventor and filmmaker **20** 112-113

**DIDEROT, DENIS** (1713-1784), French philosopher, playwright, and encyclopedist **5** 1-2

**DIDION, JOAN** (born 1934), American author **20** 113-116

**DIEBENKORN, RICHARD** (born 1922), American abstract expressionist painter **5** 2-4

**DIEFENBAKER, JOHN GEORGE** (1895-1979), Canadian statesman **5** 4-5

**DIELS, (OTTO PAUL) HERMANN** (1876-1954), German organic chemist **5** 5-6

**DIEM, NGO DINH** (1901-1963), South Vietnamese president 1955-1963 **5** 6-7

**DIESEL, RUDOLF** (1858-1913), German mechanical engineer **5** 7

**DIKE, KENNETH** (Kenneth Onwuka Dike; 1917-1983), African historian who set up the Nigerian National Archives **5** 7-8

**DILLINGER, JOHN** (1903-1934), American criminal **5** 9

**DILTHEY, WILHELM CHRISTIAN LUDWIG** (1833-1911), German historian and philosopher **5** 10

**DIMAGGIO, JOE** (born Giuseppe Paolo DiMaggio, Jr.; 1914-1999), American baseball player **5** 10-11

**DIMITROV, GEORGI** (1882-1949), head of the Communist International (1935-1943) and prime minister of Bulgaria (1944-1949) **5** 11-13

**DINESEN BLIXEN-FINECKE, KAREN** (a.k.a. Isak Dinesen; 1885-1962), Danish author **5** 13-14

**DINGANE** (circa 1795-1840), Zulu king **5** 14-15

**DINKINS, DAVID** (born 1927), African American politician and mayor of New York City **5** 15-18

**DINWIDDIE, ROBERT** (1693-1770), Scottish merchant and colonial governor **5** 18-19

**DIOCLETIAN** (Gaius Aurelius Valerius Diocletianus; 245-circa 313), Roman emperor 284-305 **5** 19-20

**DIOGENES** (circa 400-325 B.C.), Greek philosopher **5** 20-21

**DIOP, CHEIKH ANTA** (1923-1986), African historian **5** 21-22

**DIOR, CHRISTIAN** (1905-1957), French fashion designer **5** 22

**Diphtheria** (medicine)  
Fibiger, Johannes **21** 131-133

**Diplomats**  
English  
Montagu, John, fourth Earl of Sandwich **21** 301-303  
Portuguese  
Behaim, Martin **21** 30-32

**Diplomats, American**  
19th century (in Italy)  
Marsh, George Perkins **21** 275-277  
19th century (in Spain)  
Sickles, Daniel Edgar **21** 385-388  
19th century (in Turkey)  
Marsh, George Perkins **21** 275-277

**Diplomats, English**  
18th century  
Montagu, John, fourth Earl of Sandwich **21** 301-303

**DIRAC, PAUL ADRIEN MAURICE** (1902-1984), English physicist **5** 23-24

**Dirigible** (aeronautics)  
Moffett, William Adger **21** 299-301

**DIRKSEN, EVERETT MCKINLEY** (1896-1969), Republican congressman and senator from Illinois **5** 24-26

**Diseases of Workers** (book)  
Ramazzini, Bernardino **21** 362-364

**DISNEY, WALTER ELIAS** (1901-1966), American film maker and entrepreneur **5** 26-27

**DISRAELI, BENJAMIN** (1st Earl of Beaconsfield; 1804-1881), English statesman, prime minister 1868 and 1874-1880 **5** 27-29

**DIVINE, FATHER** (born George Baker?; c. 1877-1965), African American religious leader **5** 29-32

**DIX, DOROTHEA LYNDE** (1802-1887), American reformer **5** 32-33

**DIX, OTTO** (1891-1969), German painter and graphic artist **5** 33-34

**DJILAS, MILOVAN** (1911-1995), Yugoslavian writer **5** 34

**DO MUOI** (born 1917), prime minister of the Socialist Republic of Vietnam (1988-) **5** 53-55

**DOBELL, SIR WILLIAM** (1899-1970), Australian artist **5** 34-35

**DOBZHANSKY, THEODOSIUS** (1900-1975), Russian-American biologist who studied natural selection **5** 35-37

**DOCTOROW, EDGAR LAURENCE** (born 1931), American author **19** 89-91

**Doctors of the Church**  
see Religious leaders, Christian—  
Doctors

**Doctrine of the Faith, Congregation for the**  
see Inquisition, Holy Roman and  
Universal

**DODGE, GRACE HOADLEY** (1856-1914), American feminist, philanthropist, and social worker **5** 37-38

**DODGE, JOHN FRANCIS (1864-1920) AND HORACE ELGIN** (1868-1920), American automobile manufacturers **18** 121-123

**DOE, SAMUEL KANYON** (1951-1990), Liberian statesman **5** 38-39

**DOENITZ, KARL** (1891-1980), German naval officer **20** 116-117

**DOI TAKAKO** (born 1928), chairperson of the Japan Socialist party **5** 39-41



**DOLE, ELIZABETH HANFORD** (born 1936), American lawyer, politician, and first female United States secretary of transportation **5** 41-43

**DOLE, ROBERT J.** (born 1923), Republican Senator **5** 43-46

**DOLE, SANFORD BALLARD** (1844-1926), American statesman **5** 46

**DOLLFUSS, ENGELBERT** (1892-1934), Austrian statesman **5** 47

**DÖLLINGER, JOSEF IGNAZ VON** (1799-1890), German historian and theologian **5** 47-48

**DOMAGK, GERHARD JOHANNES PAUL** (1895-1964), German bacteriologist **5** 48-50

**DOMINGO, PLACIDO** (born 1941), Spanish-born lyric-dramatic tenor **5** 50-51

**DOMINIC, ST.** (circa 1170-1221), Spanish Dominican founder **5** 51-52

**DOMITIAN** (Titus Flavius Domitianus Augustus; 51-96), Roman emperor 81-96 **5** 52-53

**DONATELLO** (Donato di Niccolò Bardi; 1386-1466), Italian sculptor **5** 55-56

**DONATUS** (died circa 355), schismatic bishop of Carthage **5** 56-57

**DONG, PHAM VAN** (born 1906), premier first of the Democratic Republic of Vietnam (DRV) and after 1976 of the Socialist Republic of Vietnam (SRV) **5** 57-59

**DONIZETTI, GAETANA** (1797-1848), Italian opera composer **5** 59-60

**DONLEAVY, JAMES PATRICK** (born 1926), Irish author and playwright **19** 91-93

**DONNE, JOHN** (1572-1631), English metaphysical poet **5** 60-61

**DONNELLY, IGNATIUS** (1831-1901), American politician and author **5** 62

**DONNER, GEORG RAPHAEL** (1693-1741), Austrian sculptor **5** 63

**DONOSO, JOSÉ** (1924-1996), Chilean writer **5** 63-65

**DOOLITTLE, HILDA** (1886-1961), American poet and novelist **5** 65-66

**DOOLITTLE, JAMES HAROLD** (1896-1993), American transcontinental pilot **5** 66-68

**DORIA, ANDREA** (1466-1560), Italian admiral and politician **18** 123-125

**DORR, RHETA CHILDE** (1868-1948), American journalist **5** 68-69

**DORSEY, JIMMY** (James Dorsey; 1904-1957), American musician and bandleader **19** 93-95

**DOS PASSOS, RODERIGO** (1896-1970), American novelist **5** 69-71

**DOS SANTOS, JOSÉ EDUARDO** (born 1942), leader of the Popular Movement for the Liberation of Angola and president of Angola **5** 71-72

**DOS SANTOS, MARCELINO** (born 1929), Mozambican nationalist insurgent, statesman, and intellectual **5** 72-74

**DOSTOEVSKY, FYODOR** (1821-1881), Russian novelist **5** 74-77

**DOUGLAS, DONALD WILLS** (1892-1981), American aeronautical engineer **5** 77

**DOUGLAS, GAVIN** (circa 1475-1522), Scottish poet, prelate, and courtier **5** 77-78

**DOUGLAS, SIR JAMES** (1286?-1330), Scottish patriot **5** 80-82

**DOUGLAS, MARY TEW** (born 1921), British anthropologist and social thinker **5** 79-80

**DOUGLAS, STEPHEN ARNOLD** (1813-1861), American politician **5** 80-82

**DOUGLAS, THOMAS CLEMENT** (1904-1986), Canadian clergyman and politician, premier of Saskatchewan (1944-1961), and member of Parliament (1962-1979) **5** 82-83

**DOUGLAS, WILLIAM ORVILLE** (1898-1980), American jurist **5** 83-85

**DOUGLAS-HOME, ALEC** (Alexander Frederick Home; 1903-1995), Scottish politician **20** 117-119

**DOUGLASS, FREDERICK** (circa 1817-1895), African American leader and abolitionist **5** 85-86

**DOVE, ARTHUR GARFIELD** (1880-1946), American painter **5** 86-87

**DOVE, RITA FRANCES** (born 1952), United States poet laureate **5** 87-89

**DOW, CHARLES** (1851-1902), American journalist **19** 95-97

**DOW, NEAL** (1804-1897), American temperance reformer **5** 89-90

**DOWLAND, JOHN** (1562-1626), British composer and lutenist **5** 90

**DOWNING, ANDREW JACKSON** (1815-1852), American horticulturist and landscape architect **5** 90-91

**DOYLE, SIR ARTHUR CONAN** (1859-1930), British author **5** 91-92

**DRAGO, LUIS MARÍA** (1859-1921), Argentine international jurist and diplomat **5** 92-93

**DRAKE, DANIEL** (1785-1852), American physician **5** 93-94

**DRAKE, EDWIN** (1819-1880), American oil well driller and speculator **21** 108-110

**DRAKE, SIR FRANCIS** (circa 1541-1596), English navigator **5** 94-96

**DRAPER, JOHN WILLIAM** (1811-1882), Anglo-American scientist and historian **5** 96-97

**DRAYTON, MICHAEL** (1563-1631), English poet **5** 97-98

**DREISER, (HERMAN) THEODORE** (1871-1945), American novelist **5** 98-100

**DREW, CHARLES RICHARD** (1904-1950), African American surgeon **5** 100-101

**DREW, DANIEL** (1797-1879), American stock manipulator **5** 101-102

**DREXEL, KATHERINE** (1858-1955), founded a Catholic order, the Sisters of the Blessed Sacrament **5** 102-103

**DREXLER, KIM ERIC** (born 1955), American scientist and author **20** 119-121

**DREYFUS, ALFRED** (1859-1935), French army officer **5** 103-105

**DRIESCH, HANS ADOLF EDUARD** (1867-1941), German biologist and philosopher **5** 105

**DRUCKER, PETER** (born 1909), American author and business consultant **21** 110-112

**Drugs, regulation of** (United States) Squibb, Edward Robinson **21** 390-392

**Drury Lane Theatre** (London) Kean, Edmund **21** 237-239

**DRUSUS, MARCUS LIVIUS** (circa 124-91 B.C.), Roman statesman **5** 105-106

**DRYDEN, JOHN** (1631-1700), English poet, critic, and dramatist **5** 106-107

**DRYSDALE, SIR GEORGE RUSSELL** (1912-1981), Australian painter **5** 107-109

**DUANE, WILLIAM** (1760-1835), American journalist **5** 109

**DUARTE, JOSÉ NAPOLEÓN** (1926-1990), civilian reformer elected president of El Salvador in 1984 **5** 109-111

**DUBČEK, ALEXANDER** (1921-1992), Czechoslovak politician **5** 112-113

**DUBE, JOHN LANGALIBALELE** (1870-1949), South African writer and Zulu propagandist **5** 113

**DU BELLAY, JOACHIM** (circa 1522-1560), French poet **5** 113-114

**DUBINSKY, DAVID** (1892-1982), American trade union official **5** 114-115

**DUBNOV, SIMON** (1860-1941), Jewish historian, journalist, and political activist **5** 115-116

**DU BOIS, WILLIAM EDWARD BURGHARDT** (1868-1963), African American educator, pan-Africanist, and protest leader **5** 116-118

**DU BOIS-REYMOND, EMIL** (1818-1896), German physiologist **5** 118-119

**DUBOS, RENÉ JULES** (1901-1982), French-born American microbiologist **5** 119

**DUBUFFET, JEAN PHILLIPE ARTHUR** (born 1901), French painter **5** 119-120

**DUCCIO DI BUONINSEGNA** (1255/60-1318/19), Italian painter **5** 121-122

**DUCHAMP, MARCEL** (1887-1968), French painter **5** 122-123

**DUCHAMP-VILLON, RAYMOND** (1876-1918), French sculptor **5** 123

**DUDLEY, BARBARA** (born 1947), American director of Greenpeace **5** 123-124

**DUDLEY, THOMAS** (1576-1653), American colonial governor and Puritan leader **5** 124-125

**DUFAY, GUILLAUME** (circa 1400-1474), Netherlandish composer **5** 125-126

**DUFF, ALEXANDER** (1806-1878), Scottish Presbyterian missionary **5** 126-127

**DUGAN, ALAN** (born 1923), American poet **5** 127-128

**DUGDALE, RICHARD LOUIS** (1841-1883), English-born American sociologist **5** 128-129

**DUHEM, PIERRE MAURICE MARIE** (1861-1916), French physicist, chemist, and historian of science **5** 129

**DUKAKIS, MICHAEL** (born 1933), American governor of Massachusetts **5** 130-133

**DUKE, JAMES BUCHANAN** (1856-1925), American industrialist and philanthropist **5** 133-134

**DULL KNIFE** (born Morning Star; c. 1810-1883), Northern Cheyenne tribal leader **5** 135-136

**DULLES, JOHN FOSTER** (1888-1959), American statesman and diplomat **5** 134-135

**DUMAS, ALEXANDRE** (1803-1870), French playwright and novelist **5** 136-138

**DUMAS, JEAN BAPTISTE ANDRÉ** (1800-1884), French Chemist **5** 138-139

**DU MAURIER, DAPHNE** (Lady Browning; 1907-1989), English author **18** 125-127

**DUNANT, JEAN HENRI** (1828-1910), Swiss philanthropist **5** 139-141

**DUNBAR, PAUL LAURENCE** (1872-1906), African American poet and novelist **5** 141-142

**DUNBAR, WILLIAM** (circa 1460-circa 1520), Scottish poet and courtier **5** 142-143

**DUNBAR, WILLIAM** (1749-1810), Scottish-born American scientist and planter **5** 143-144

**DUNCAN, ISADORA** (1878-1927), American dancer **5** 144-145

**DUNHAM, KATHERINE** (born 1910), African American dancer, choreographer, and anthropologist **5** 145-146

**DUNMORE, 4TH EARL OF** (John Murray; 1732-1809), British colonial governor **5** 147

**DUNNE, FINLEY PETER** (1867-1936), American journalist **5** 147-148

**DUNNING, WILLIAM ARCHIBALD** (1857-1922), American historian **5** 148-149

**DUNS SCOTUS, JOHN** (1265/66-1308), Scottish philosopher and theologian **5** 149-150

**DUNSTABLE, JOHN** (circa 1390-1453), English composer **5** 150-151

**DUNSTAN, ST.** (circa 909-988), English monk and archbishop **5** 151-152

**DUNSTER, HENRY** (circa 1609-1659), English-born American clergyman **5** 152-153

**DUONG VAN MINH** (born 1916), Vietnamese general and politician **18** 285-287

**DUPLEIX, MARQUIS** (Joseph François; 1697-1763), French colonial administrator **5** 153

**DU PONT, ÉLEUTHÈRE IRÉNÉE** (1771-1834), French-born American manufacturer **5** 154

**DU PONT, PIERRE SAMUEL** (1870-1954), American industrialist **5** 154-155

**DU PONT DE NEMOURS, PIERRE SAMUEL** (1739-1817), French political economist **5** 155-156

**DURAND, ASHER BROWN** (1796-1886), American painter and engraver **5** 156-157

**DURANT, THOMAS CLARK** (1820-1885), American railroad executive **5** 157-158

**DURANT, WILLIAM CRAPO** (1861-1947), American industrialist **5** 158

**DÜRER, ALBRECHT** (1471-1528), German painter and graphic artist **5** 159-161

**DURHAM, 1ST EARL OF** (John George Lambton; 1792-1840), English statesman **5** 161-162

**DURKHEIM, ÉMILE** (1858-1917), French philosopher and sociologist **5** 162-163

**DURRELL, LAWRENCE** (1912-1990), British author of novels, poetry, plays, short stories, and travel books **5** 163-164

**DÜRRENMATT, FRIEDRICH** (1921-1990), Swiss playwright **5** 164-165

**DUVALIER, FRANÇOIS** (Papa Doc; 1907-1971), Haitian president 1957-1971 **5** 165-166

**DUVALIER, JEAN CLAUDE** (Baby Doc; born 1949), president of Haiti (1971-1986) **5** 166-168

**DVOŘÁK, ANTONIN** (1841-1904), Czech composer **5** 168-169

**DWIGHT, TIMOTHY** (1752-1817), American educator and Congregational minister **5** 169

**DYLAN, BOB** (born Robert Allen Zimmerman; b. 1941), American singer, songwriter, and guitarist **5** 170-171

**DYSON, FREEMAN JOHN** (born 1923), British-American physicist **5** 171-173

**DZERZHINSKY, FELIX EDMUNDOVICH** (1877-1926), Soviet politician and revolutionary **5** 173-174

## E

**EADS, JAMES BUCHANAN** (1820-1887), American engineer and inventor **5** 175-176

**EAKINS, THOMAS** (1844-1916), American painter **5** 176-177  
Gross, Samuel David **21** 183-185

**EARHART, AMELIA MARY** (1897-1937), American aviator **5** 177-179

**EARL, RALPH** (1751-1801), American painter **5** 179

**EARLE, SYLVIA A.** (Born Sylvia Alice Reade; b. 1935), American marine biologist and oceanographer **5** 180-181

**EARP, WYATT BARRY STEPP** (1848-1929), gun-fighting marshal of the American West **5** 181-182

**EAST, EDWARD MURRAY** (1879-1938), American plant geneticist **5** 182-183

**East India Co.** (British)  
officials  
Baring, Francis **21** 20-22

**EASTMAN, CHARLES A.** (1858-1939), Native American author **5** 183-185

**EASTMAN, GEORGE** (1854-1932), American inventor and industrialist **5** 186

**EASTMAN, MAX** (Max Forrester Eastman; 1883-1969), American poet, radical editor, translator, and author **5** 187-188

**EASTWOOD, CLINT** (born 1930), American movie star and director **5** 188-190

**EATON, DORMAN BRIDGMAN** (1823-1899), American lawyer and author **5** 190-191

**EBAN, ABBA** (Abba Solomon Eban; born 1915), Israeli statesman, diplomat, and scholar **5** 191-192

**EBB, FRED** (born 1935), American lyricist **21** 113-115  
Kander, John **21** 235-237

**EBBERS, BERNIE** (born 1941), American businessman **20** 122-124

**EBBINGHAUS, HERMANN** (1850-1909) German psychologist **5** 192-193

**EBERT, FRIEDRICH** (1871-1925), German president 1919-1925 **5** 193-194

**ÉBOUÉ, ADOLPHE FELIX SYLVESTRE** (1885-1944), African statesman, governor of French Equatorial Africa **5** 194

**ECCLES, SIR JOHN CAREW** (1903-1997), Australian neurophysiologist **5** 195-196

**ECEVIT, BÜLENT** (born 1925), Turkish statesman and prime minister **5** 196-197

**ECHEVERRÍA, JOSÉ ESTÉBAN** (1805-1851), Argentine author and political theorist **5** 197-198

**ECHEVERRÍA ALVAREZ, LUIS** (born 1922), president of Mexico (1970-1976) **5** 198-200

**ECK, JOHANN MAIER VON** (1486-1543), German theologian **5** 200

**ECKERT, JOHN PRESPEER** (1919-1995), American computer engineer **20** 124-126

**ECKHART, (JOHANN) MEISTER** (circa 1260-circa 1327), German Dominican theologian **5** 200-201

**ECO, UMBERTO** (born 1932), Italian scholar and novelist **18** 128-130

**Economics** (social science)  
historical theory  
Ely, Richard **21** 117-120  
social theories  
Ely, Richard **21** 117-120

**EDDINGTON, SIR ARTHUR STANLEY** (1882-1944), English astronomer **5** 201-202

**EDDY, MARY BAKER** (1821-1910), American founder of the Christian Science Church **5** 202

**EDELMAN, MARIAN WRIGHT** (born 1939), lobbyist, lawyer, civil rights activist, and founder of the Children's Defense Fund **5** 202-204

**EDEN, ANTHONY** (1897-1977), English statesman, prime minister 1955-1957 **5** 204-205

**EDERLE, GERTRUDE** (born 1906), American swimmer **19** 98-100

**EDGEWORTH, MARIA** (1767-1849), British author **5** 205-206

**EDISON, THOMAS ALVA** (1847-1931), American inventor **5** 206-208  
associates  
Muybridge, Eadweard **21** 305-308

**Editors**  
Danish  
Fibiger, Johannes **21** 131-133

**Editors, American**  
magazines and journals (18th century)  
Croly, Jane **21** 96-96  
magazines and journals (19th-20th century)  
Kellogg, John Harvey **21** 239-242

**Education** (Canada)  
Naismith, James **21** 311-313

**Education** (Europe)  
England  
Hill, Rowland **21** 202-204  
France  
Epée, Charles-Michel de l'**21** 120-122  
LaChapelle, Marie **21** 245-247  
Italy  
Merici, Angela **21** 293-295

**Education** (United States)  
equal opportunity  
Barnett, Marguerite Ross **21** 22-24  
health  
Kellogg, John Harvey **21** 239-242  
higher  
Barnett, Marguerite Ross **21** 22-24  
medical  
Gross, Samuel David **21** 183-185  
shorthand writing  
Gregg, John Robert **21** 178-180

**EDWARD I** (1239-1307), king of England 1272-1307 **5** 208-210

**EDWARD II** (Edward of Carnarvon; 1284-1327), king of England 1307-27 **5** 210

**EDWARD III** (1312-1377), king of England 1327-77 **5** 211-212

**EDWARD IV** (1442-1483), king of England 1461-70 **5** 212-213

**EDWARD VI** (1537-1553), king of England and Ireland 1547-53 **5** 213-214

**EDWARD VII** (1841-1910), king of Great Britain and Ireland 1901-10 **5** 214-215

**EDWARD VIII** (1894-1972), King of England (1936) and Duke of Windsor after abdicating his throne **5** 215-217

**EDWARD THE BLACK PRINCE** (1330-1376), English soldier-statesman **5** 217-218

**EDWARD THE CONFESSOR** (died 1066, last king of the house of Wessex, reigned 1042-1066) **5** 218-219

**EDWARD THE ELDER** (died 924), king of England 899-924 **5** 219-220

**EDWARDS, JONATHAN** (1703-1758), American Puritan theologian **5** 220-222

**EDWARDS, MELVIN** (born 1937), African-American sculptor **5** 222-223

**EGGLESTON, EDWARD** (1837-1902), American Methodist minister and historian **5** 223-224

**EHRENBURG, ILYA GRIGORIEVICH** (1891-1967), Russian author **5** 224-225

**EHRlich, PAUL** (1854-1915), German bacteriologist **5** 225-226

**EICHMANN, ADOLF** (1906-1962), German Nazi war criminal **5** 226-227

**EIFFEL, ALEXANDRE GUSTAVE** (1832-1923), French engineer **5** 227-228

**EIJKMAN, CHRISTIAN** (1858-1930), Dutch physician and biologist **5** 228

**EINSTEIN, ALBERT** (1879-1955), German-born American physicist **5** 228-231

**EISAI** (1141-1215), Japanese Buddhist monk **5** 231-232

**EISELEY, LOREN COREY** (1907-1977), American interpreter of science for the layman **5** 232-233

**EISENHOWER, DWIGHT DAVID** (1890-1969), American general and statesman, president 1953-61 **5** 233-236

**EISENHOWER, MAMIE DOUD** (1896-1979), American First Lady **5** 236-237

**EISENHOWER, MILTON** (Milton Stover Eisenhower; 1899-1985), American adviser to U.S. presidents and college president **5** 237-238

**EISENMAN, PETER D.** (born 1932), American architect **5** 239-240

**EISENSTAEDT, ALFRED** (1898-1995), American photographer and photojournalist **19** 100-102

**EISENSTEIN, SERGEI MIKHAILOVICH** (1898-1948), Russian film director and cinema theoretician **5** 240-242

**EISNER, MICHAEL** (born 1942), American businessman **19** 102-104

**EITOKU, KANO** (1543-1590), Japanese painter of the Momoyama period **5** 242

**EKWENSI, CYPRIAN** (born 1921), Nigerian writer **5** 242-243

**ELDERS, JOYCELYN** (born 1933), first African American and second woman U.S. surgeon general **5** 243-246

**ELEANOR OF AQUITAINE** (circa 1122-1204), queen of France 1137-52, and of England 1154-1204 **5** 246-247

**Electronic music**  
Pierce, John Robinson **21** 349-351

**ELGAR, SIR EDWARD** (1857-1934), English composer **5** 247-248

**ELGIN, 8TH EARL OF** (James Bruce; 1811-63), English governor general of Canada **5** 248-249

**ELIADE, MIRCEA** (1907-1986), Rumanian-born historian of religions and novelist **5** 249-250

**ELIAS, TASLIM OLAWALE** (1914-1991), Nigerian academic and jurist and president of the International Court of Justice **5** 250-251

**ELIJAH BEN SOLOMON** (1720-1797), Jewish scholar **5** 251-252

**ELION, GERTRUDE B.** (1918-1999), American biochemist and Nobel Prize winner **5** 252-254

**ELIOT, CHARLES WILLIAM** (1834-1926), American educator **5** 254

**ELIOT, GEORGE** (pen name of Mary Ann Evans; 1819-80), English novelist **5** 254-256

**ELIOT, JOHN** (1604-1690), English-born missionary to the Massachusetts Indians **5** 256-258

**ELIOT, THOMAS STEARNS** (1888-1965), American-English poet, critic, and playwright **5** 258-261

**ELIZABETH** (Elizabeth Petrovna; 1709-61), empress of Russia 1741-61 **5** 261-263

**ELIZABETH I** (1533-1603), queen of England and Ireland 1558-1603 **5** 263-266  
court  
Harington, John **21** 193-195

**ELIZABETH II** (born 1926), queen of Great Britain and Ireland **5** 266-269

**ELIZABETH BAGAAAYA NYABONGO OF TORO** (born 1940), Ugandan ambassador **5** 269-271

**ELIZABETH BOWES-LYON** (Elizabeth Angela Marguerite Bowes-Lyon; born 1900), queen of Great Britain and Ireland (1936-1952) and Queen Mother after 1952 **5** 261-263

**ELIZABETH OF HUNGARY** (1207-1231), saint and humanitarian **5** 271-272

**Elizabethan literature**  
see English literature—Elizabethan

**ELLINGTON, "DUKE" EDWARD KENNEDY** (born 1899), American jazz composer **5** 273-274

**ELLIS, HAVELOCK** (Henry Havelock Ellis; 1959-1939), British psychologist and author **20** 126-128

**ELLISON, RALPH WALDO** (1914-1994), African American author and spokesperson for racial identity **5** 274-275

**ELLSBERG, DANIEL** (born 1931), U.S. government official and Vietnam peace activist **5** 275-277

**ELLSWORTH, LINCOLN** (1880-1951), American adventurer and polar explorer **5** 277

**ELLSWORTH, OLIVER** (1745-1807), American senator and Supreme Court Chief Justice **21** 115-117

**ELSASSER, WALTER MAURICE** (1904-1991), American physicist **5** 277-278

**ELY, RICHARD** (1854-1943), American economist and social reformer **21** 117-120

**EMERSON, RALPH WALDO** (1803-1882), American poet, essayist, and philosopher **5** 278-280

**EMINESCU, MIHAIL** (1850-1889), Romanian poet **5** 280-281

**EMMET, ROBERT** (1778-1803), Irish nationalist and revolutionary **5** 281-282

**EMPEDOCLES** (circa 493-circa 444 B.C.), Greek philosopher, poet, and scientist **5** 282

**ENCINA, JUAN DEL** (1468-1529?), Spanish author and composer **5** 283

**Encyclopedia** (reformer book)  
*De proprietatibus rerum*  
Bartholomaeus Anglicus **21** 24-25  
*Speculum majus*  
Vincent of Beauvais **21** 416-418

**ENDARA, GUILLERMO** (born 1936), installed as president of Panama by the U.S. Government in 1989 **5** 283-284

**ENDECOTT, JOHN** (1588-1655), English colonial governor of Massachusetts **5** 284-285

**ENDERS, JOHN FRANKLIN** (1897-1985), American virologist **5** 285-286

**ENGELS, FRIEDRICH** (1820-1895), German revolutionist and social theorist **5** 286-288

**Engine** (machine)  
Otto, Nikolaus August **21** 331-333

**Engineering**  
civil  
Robert, Henry Martyn **21** 367-370  
electrical  
Goldmark, Peter Carl **21** 170-172  
mechanical  
Maudslay, Henry **21** 286-288  
military  
Robert, Henry Martyn **21** 367-370  
Stevin, Simon **21** 395-398

**England**  
• 1216-1307 (PLANTAGENET)  
Church and State  
Bracton, Henry **21** 54-55

**ENGLAND, JOHN** (1786-1842), Irish Catholic bishop in America **5** 288

**English art and architecture**  
architecture  
William of Sens **21** 432-434

**English literature**  
cookbooks  
Glasse, Hannah **21** 166-167  
satire (verse)  
Harington, John **21** 193-195

**ENNIN** (794-864), Japanese Buddhist monk **5** 288-289

**ENNIUS, QUINTUS** (239-169 B.C.)  
Roman poet **5** 289

**ENSOR, JAMES** (1860-1949), Belgian painter and graphic artist **5** 289-290

**Environmental activists** (United States)  
Marsh, George Perkins **21** 275-277

**EPAMINONDAS** (c. 425-362 B.C.),  
Theban general and statesman **5**  
291-292

**EPÉE, CHARLES-MICHEL DE L'** (1712-  
1789), French sign language developer  
**21** 120-122

**EPHRON, NORA** (born 1941), American  
author, screenwriter and film director  
**18** 130-132

**EPICETUS** (circa 50-circa 135), Greek  
philosopher **5** 292

**EPICURUS** (circa 342-270 B.C.), Greek  
philosopher, founder of Epicureanism  
**5** 292-294

**Epistles** (New Testament)  
see Bible—New Testament (Epistolists)

**EPSTEIN, ABRAHAM** (1892-1945),  
Russian-born American economist **5**  
294-295

**EPSTEIN, SIR JACOB** (1880-1959),  
American-born English sculptor **5**  
295-296

**EQUIANO, OLAUDAH** (1745-circa  
1801), African author and former slave  
**5** 296-297

**ERASISTRATUS** (c. 304 B.C.- c. 250  
B.C.), Greek physician and anatomist  
**5** 297-298

**ERASMUS, DESIDERIUS** (1466-1536),  
Dutch author, scholar, and humanist **5**  
298-300

**ERASMUS, GEORGES HENRY** (born  
1948), Canadian Indian leader **5**  
300-301

**ERATOSTHENES OF CYRENE** (circa 284-  
circa 205 B.C.), Greek mathematician,  
geographer, and astronomer **5** 301-302

**ERCILLA Y ZÚÑIGA, ALONSO DE**  
(1533-1594), Spanish poet, soldier,  
and diplomat **5** 302

**ERHARD, LUDWIG** (1897-1977),  
German statesman, West German  
chancellor 1963-66 **5** 302-304

**ERIC THE RED** (Eric Thorvaldsson;  
flourished late 10th century),  
Norwegian explorer **5** 304

**ERICKSON, ARTHUR CHARLES** (born  
1924), Canadian architect and  
landscape architect **5** 304-306

**ERICSON, LEIF** (971-circa 1015), Norse  
mariner and adventurer **5** 306-307

**ERICSSON, JOHN** (1803-1889),  
Swedish-born American engineer and  
inventor **5** 307-308

**ERIGENA, JOHN SCOTUS** (circa 810-  
circa 877), Irish scholastic philosopher  
**5** 308-309

**ERIKSON, ERIK HOMBURGER** (1902-  
1994), German-born American  
psychoanalyst and educator **5** 309-310

**ERLANGER, JOSEPH** (1874-1965),  
American physiologist **5** 310-311

**ERNST, MAX** (born 1891), German  
painter **5** 311-312

**ERSHAD, HUSSAIN MOHAMMAD** (born  
1930), Bengali military leader and  
president of Bangladesh (1982-1990) **5**  
312-314

**ERTÉ** (Romain de Tiroff; 1892-1990),  
Russian fashion illustrator and stage set  
designer **5** 314-316

**ERVIN, SAM J., JR.** (1896-1985), lawyer,  
judge, U.S. senator, and chairman of  
the Senate Watergate Committee **5**  
316-317

**ERVING, JULIUS WINFIELD** (a.k.a. Dr.  
J.; b. 1950), African American  
basketball player **5** 317-319

**ERZBERGER, MATTHIAS** (1875-1921),  
German statesman **5** 319-320

**ESCALANTE, JAIME** (born 1930),  
Hispanic American educator **5**  
320-321

**ESCHER, MAURITS CORNELIS** (M.C.  
Escher; 1898-1972), Dutch graphic  
artist **18** 132-134

**ESCOFFIER, AUGUSTE** (Georges Auguste  
Escoffier; 1846-1935), French chef **21**  
122-124

**ESENIN, SERGEI ALEKSANDROVICH**  
(1895-1925), Russian poet **5** 321

**ESSEX, 2D EARL OF** (Robert Devereux;  
1567-1601), English courtier **5**  
321-322

**ESTES, RICHARD** (born 1932), American  
realist painter **5** 322-323

**ESTEVAN** (a.k.a. Estabanico, Estevanico  
the Black; c. 1500-1539), Moroccan  
explorer **5** 324-325

**ESTRADA CABRERA, MANUEL** (1857-  
1924), Guatemalan president 1898-  
1920 **5** 325-326

**ESTRADA PALMA, TOMÁS** (1835-1908),  
Cuban president 1902-1906 **5** 326-327

**ETHELRED THE UNREADY** (968?-1016),  
Anglo-Saxon king of England 978-1016  
**5** 327

**EUCLID** (flourished 300 B.C.), Greek  
mathematician **5** 327-329

**EUDOXUS OF CNIDUS** (circa 408-circa  
355 B.C.), Greek astronomer,

mathematician, and physician **5**  
329-330

**Eugénie** (1826-1920), empress of the  
French 1853-71  
Worth, Charles Frederick **21** 436-438

**EUGENE OF SAVOY** (1663-1736),  
French-born Austrian general and  
diplomat **5** 330-331

**EULER, LEONARD** (1707-1783), Swiss  
mathematician **5** 331-332

**EURIPIDES** (480-406 B.C.), Greek  
playwright **5** 332-334

**EUTROPIUS** (fl. 4th century), Roman  
historian and official **20** 128-130

**EUTYCHES** (circa 380-455), Byzantine  
monk **5** 335

**Evangelists** (New Testament)  
see Bible—New Testament

**EVANS, ALICE** (1881-1975), American  
bacteriologist **19** 104-106

**EVANS, SIR ARTHUR JOHN** (1851-  
1941), English archeologist **5** 335-336

**EVANS, EDITH** (1888-1976), English  
actress who portrayed comic  
characters **5** 336-337

**EVANS, GEORGE HENRY** (1805-1856),  
American labor and agrarian reformer  
**5** 337-338

**EVANS, OLIVER** (1755-1819), American  
inventor **5** 338

**EVANS, WALKER** (1903-1975), American  
photographer of American life between  
the world wars **5** 339

**EVANS-PRITCHARD, SIR EDWARD**  
**EVAN** (1902-1973), English social  
anthropologist **5** 340

**EVARTS, WILLIAM MAXWELL** (1818-  
1901), American lawyer and statesman  
**5** 340-341

**EVATT, HERBERT VERE** (1894-1965),  
Australian statesman and jurist **5**  
341-343

**EVELYN, JOHN** (1620-1706), English  
author **5** 343-344

**EVERETT, EDWARD** (1794-1865),  
American statesman and orator **5** 344

**EVERGOOD, PHILIP** (1901-1973),  
American painter **5** 345

**EVERS, MEDGAR** (1925-1963), African  
American civil rights leader **5** 345-348

**EVERS-WILLIAMS, MYRLIE** (born Myrlie  
Louise Beasley; b. 1933), civil rights  
leader, lecturer, and writer **5** 348-350

**EWING, WILLIAM MAURICE** (1906-  
1974), American oceanographer **5**  
350-351

**EWONWU, BENEDICT CHUKA** (born 1921), Nigerian sculptor and painter **5** 351-352

#### Executions

France  
Mata Hari **21** 279-282

**Exegesis, biblical**  
see Bible

#### Explorers, English

mountain climbers  
Mallory, George **21** 268-271

#### Explorers, Portuguese

of Africa  
Behaim, Martin **21** 30-32

**EYCK, HUBERT VAN** (died 1426), Flemish painter **5** 352-354

**EYCK, JAN VAN** (circa 1390-1441), Flemish painter **5** 352-354

**EYRE, EDWARD JOHN** (1815-1901), English explorer of Australia **5** 354

**EZANA** (flourished 4th century), Ethiopian king **5** 354-355

**EZEKIEL** (flourished 6th century B.C.), Hebrew priest and prophet **5** 355-356

**EZRA** (flourished 5th century B.C.), Hebrew priest, scribe, and reformer **5** 356-357

## F

**FABERGÉ, CARL** (Peter Carl Fabergé; Karl Gustavovich Fabergé; 1846-1920), Russian jeweler and goldsmith **21** 125-127

**FABIUS, LAURENT** (born 1946), prime minister of France in the 1980s **5** 358-359

**FACKENHEIM, EMIL LUDWIG** (born 1916), liberal post-World War II Jewish theologian **5** 359-361

**Factory system** (manufacturing)  
see Industrial Revolution—factory system

**FADIL AL-JAMALI, MUHAMMAD** (born 1903), Iraqi educator, writer, diplomat, and politician **5** 361-362

**FADLALLAH, SAYYID MUHAMMAD HUSAYN** (born 1935), Shi'i Muslim cleric and Lebanese political leader **5** 362-364

**FAHD IBN ABDUL AZIZ AL-SAUD** (born 1920), son of the founder of modern Saudi Arabia and king **5** 364-366

**FAHRENHEIT, GABRIEL DANIEL** (1686-1736), German physicist **5** 366

**FAIDHERBE, LOUIS LÉON CÉSAR** (1818-1889), French colonial governor **5** 366-367

**FAIR, JAMES RUTHERFORD, JR.** (born 1920), American chemical engineer and educator **20** 131-131

**FAIRBANKS, DOUGLAS** (Douglas Elton Ulman; 1883-1939), American actor and producer **19** 107-108

**FAIRCLOUGH, ELLEN LOUKS** (born 1905), Canadian Cabinet minister **5** 367-368

**FAIRUZ** (née Nuhad Haddad; born 1933), Arabic singer **5** 368-369

**FAISAL I** (1883-1933), king of Iraq 1921-33 **5** 370-371

**FAISAL II** (1935-1958), king of Iraq, 1953-1958 **20** 132-132

**FAISAL IBN ABD AL AZIZ IBN SAUD** (1904-1975), Saudi Arabian king and prominent Arab leader **5** 371-372

**FALCONET, ÉTIENNE MAURICE** (1716-1791), French sculptor **5** 372

**FALLA, MANUEL DE** (1876-1946), Spanish composer **5** 372-373

**FALLETTA, JOANN** (born 1954), American conductor **5** 373-375

**FALWELL, JERRY** (born 1933), fundamentalist religious leader who also promoted right-wing political causes **5** 375-376

**FAN CHUNG-YEN** (1899-1952), Chinese statesman **5** 376-377

**FANEUIL, PETER** (1700-1743), American colonial merchant and philanthropist **5** 377

**FANFANI, AMINTORE** (1908-1999), Italian prime minister **5** 378-379

**FANON, FRANTZ** (1925-1961), Algerian political theorist and psychiatrist **5** 379-380

**FARADAY, MICHAEL** (1791-1867), English physicist and chemist **5** 380

**FARGO, WILLIAM GEORGE** (1818-1881), American businessman **5** 380-381

**FARLEY, JAMES A.** (1888-1976), Democratic Party organizer and political strategist **5** 381-383

**Farm machinery** (agriculture)  
Tull, Jethro **21** 411-413

**FARMER, FANNIE MERRITT** (1857-1915), American authority on cookery **5** 383

**FARMER, JAMES** (1920-1999), American civil rights activist who helped organize the 1960s "freedom rides" **5** 383-385

**FARMER, MOSES GERRISH** (1820-1893), American inventor and manufacturer **5** 385

**FARNESE, ALESSANDRO** (Duke of Parma; 1545-1592), Italian general and diplomat **20** 132-135

**FARNSWORTH, PHILO T.** (1906-1971), American inventor of the television **5** 386-387

**FAROUK I** (1920-1965), king of Egypt 1937-1952 **5** 387-388

**FARRAGUT, DAVID GLASGOW** (1801-1870), American naval officer **5** 388-389

**FARRAKHAN, LOUIS** (Louis Eugene Walcott, born 1933), a leader of one branch of the Nation of Islam popularly known as Black Muslims and militant spokesman for Black Nationalism **5** 389-390

**FARRELL, JAMES THOMAS** (1904-1979), American novelist and social and literary critic **5** 390-391

**FARRELL, SUZANNE** (née Roberta Sue Ficker; born 1945), American classical ballerina **5** 391-393

**"Father of . . ."**  
see Nicknames

**Fathers of the Church**  
see Religious leaders, Christian—Fathers

**FAULKNER, BRIAN** (1921-1977), prime minister of Northern Ireland (1971-1972) **5** 393-395

**FAULKNER, WILLIAM** (1897-1962), American novelist **5** 395-397

**FAURÉ, GABRIEL URBAIN** (1845-1924), French composer **5** 397-398

**FAUSET, JESSIE REDMON** (1882-1961), African American writer and editor **20** 135-138

**FAWCETT, MILLICENT GARRETT** (1847-1929), British feminist **5** 398-400

**FAYE, SAFI** (born 1943), Senegalese filmmaker and ethnologist **5** 400-401

**FECHNER, GUSTAV THEODOR** (1801-1887), German experimental psychologist **5** 401-402

**Federal Convention** (1787)  
see Constitutional Convention (1787; United States)

**Federalist party** (United States)  
supporters  
Ellsworth, Oliver **21** 115-117

**FEE, JOHN GREGG** (1816-1901), American abolitionist and clergyman **5** 402-403

**FEIFFER, JULES RALPH** (born 1929), American satirical cartoonist and playwright and novelist **5** 403-404

**FEIGENBAUM, MITCHELL JAY** (born 1944), American physicist **5** 404-405

**FEIGL, HERBERT** (born 1902), American philosopher **18** 135-137

**FEIJÓ, DIOGO ANTÔNIO** (1784-1843), Brazilian priest and statesman **5** 405-406

**FEININGER, LYONEL** (1871-1956), American painter **5** 406-407

**FEINSTEIN, DIANNE** (Goldman; born 1933), politician, public official, and San Francisco's first female mayor **5** 407-408

**FELA** (Fela Anikulapo Kuti; 1938-1997), Nigerian musician and activist **21** 127-129

**FELICIANO, JOSÉ** (born 1945), Hispanic American singer and guitarist **19** 109-110

**FELLER, BOB** (Robert William Andrew Feller; born 1918), American baseball player **21** 129-131

**FELLINI, FEDERICO** (1920-1993), Italian film director **5** 408-409

**FELTRE, VITTORINO DA** (1378-1446), Italian humanist and teacher **5** 409-410

**Feminist movement**  
see Women's rights

**FÉNELON, FRANÇOIS DE SALIGNAC DE LA MOTHE** (1651-1715), French archbishop and theologian **5** 410-411

**FENG KUEI-FEN** (1809-1874), Chinese scholar and official **5** 411-412

**FENG YŪ-HSIANG** (1882-1948), Chinese warlord **5** 412-413

**FERBER, EDNA** (1887-1968), American author **5** 413

**FERDINAND** (1865-1927), king of Romania 1914-1927 **5** 413-414

**FERDINAND I** (1503-1564), Holy Roman emperor 1555-1564, king of Hungary and Bohemia 1526-64 and of Germany 1531-1564 **5** 414-415

**FERDINAND II** (1578-1637), Holy Roman emperor 1619-1637, king of Bohemia 1617-1637 and of Hungary 1618-1637 **5** 415

**FERDINAND II** (1810-1859), king of the Two Sicilies 1830-1859 **5** 415-416

**FERDINAND III** (1608-1657), Holy Roman emperor 1637-1657, king of Hungary 1626-1657 and of Bohemia 1627-1657 **5** 416-417

**FERDINAND V** (1452-1516), king of Castile 1474-1504, of Sicily 1468-1516, and of Aragon 1479-1516 **5** 417-418  
Inquisition  
Torquemada, Tomas **21** 407-409

**FERDINAND VII** (1784-1833), king of Spain 1808 and 1814-1833 **5** 418-420

**Ferdinand, Franz** (?-1914), archduke Princip, Gavrilov **21** 353-355

**FERGUSON, ADAM** (1723-1816), Scottish philosopher, moralist, and historian **5** 420-421

**FERGUSON, HOWARD** (1908-1999), Irish musician and composer **18** 137-138

**FERMAT, PIERRE DE** (1601-1665), French mathematician **5** 421-422  
Germain, Sophie **21** 157-158

**FERMI, ENRICO** (1901-1954), Italian-American physicist **5** 422-424

**FERNÁNDEZ DE LIZARDI, JOSÉ JOAQUIN** (1776-1827), Mexican journalist and novelist **5** 424-425

**FERNEL, JEAN FRANÇOIS** (circa 1497-1558), French physician **5** 425-426

**FERRARO, GERALDINE** (born 1935), first woman candidate for the vice presidency of a major U.S. political party **5** 426-428

**FERRER, GABRIEL MIRÓ** (1879-1930), Spanish author **5** 428

**FERRER, JOSÉ FIGUÉRES** (born 1906), Costa Rican politician **5** 428-429

**FERRERO, GUGLIELMO** (1871-1942), Italian journalist and historian **5** 429-430

**FERRY, JULES FRANÇOIS CAMILLE** (1832-1893), French statesman **5** 430

**Fertilizers** (agriculture)  
Leblanc, Nicolas **21** 256-258

**FEUCHTWANGER, LION** (1884-1958), post-World War I German literary figure **5** 430-432

**FEUERBACH, LUDWIG ANDREAS** (1804-1872), German philosopher **5** 432

**FEYNMAN, RICHARD PHILLIPS** (1918-1988), American physicist **5** 432-434

**FIBIGER, JOHANNES** (Johannes Andreas Grib Fibiger; 1867-1928), Danish bacteriologist and pathologist **21** 131-133

**FIBONACCI, LEONARDO** (circa 1180-circa 1250), Italian mathematician **5** 434-435

**FICHTE, JOHANN GOTTLIEB** (1762-1814), German philosopher **5** 435-436

**FICINO, MARSILIO** (1433-1499), Italian philosopher and humanist **5** 436-437

**FIEDLER, ARTHUR** (1894-1979), American conductor of the Boston Pops **5** 437-438

**FIELD, CYRUS WEST** (1819-1892), American merchant **5** 438-439

**FIELD, DAVID DUDLEY** (1805-1894), American jurist **5** 439-440

**FIELD, MARSHALL** (1834-1906), American merchant **5** 440-441

**FIELD, STEPHEN JOHNSON** (1816-1899), American jurist **5** 441-442

**FIELDING, HENRY** (1707-1754), English novelist **5** 442-444

**FIELDS, W. C.** (stage name of William Claude Dukenfield; 1879-1946), American comedian **5** 444

**Fieschi, Sinibaldo de'**  
see Innocent IV

**FIGUEIREDO, JOÃO BATISTA DE OLIVEIRA** (born 1918), Brazilian army general and president (1979-1985) **5** 445-446

**FILLMORE, MILLARD** (1800-1874), American statesman, president 1850-1853 **5** 447-448

**FILMER, SIR ROBERT** (died 1653), English political theorist **5** 448

**FINK, ALBERT** (1827-1897), American railroad engineer and economist **21** 133-135

**FINKELSTEIN, RABBI LOUIS** (born 1895), American scholar and leader of Conservative Judaism **5** 448-450

**FINLAY, CARLOS JUAN** (1833-1915), Cuban biologist and physician **5** 450

**FINNEY, CHARLES GRANDISON** (1792-1875), American theologian and educator **5** 450-451

**FIRDAUSI** (934-1020), Persian poet **5** 451-452

**FIRESTONE, HARVEY SAMUEL** (1868-1938), American industrialist **5** 452-453

**FIRST, RUTH** (1925-1982), South African socialist, anti-apartheid activist, and scholar **5** 453-454

**First Triumvirate**  
see Roman Republic

**FISCHER, BOBBY** (born 1943), American chess player **5** 454-456

**FISCHER, EMIL** (1852-1919), German organic chemist **5** 456-457

**FISCHER, HANS** (1881-1945), German organic chemist **5** 457-459

**FISCHER VON ERLACH, JOHANN BERNHARD** (1656-1723), Austrian architect **5** 459-461

**FISH, HAMILTON** (1808-1893), American statesman **5** 461-462

**FISHER, ANDREW** (1862-1928), Australian statesman and labor leader **5** 462

**FISHER, IRVING** (1867-1947), American economist **5** 462-463

**FISHER, SIR RONALD AYLME** (1890-1962), English statistician **5** 463-464

**FISK, JAMES** (1834-1872), American financial speculator **5** 464-465

**Fisk University** (Nashville, Tennessee) Bontemps, Arna **21** 47-50

**FISKE, JOHN** (1842-1901), American philosopher and historian **5** 465-466

**FISKE, MINNIE MADDERN** (Mary Augusta Davey; 1865-1932), American "realistic" actress who portrayed Ibsen heroines **5** 466-467

**FITCH, JOHN** (1743-1798), American mechanic and inventor **5** 467-468

**FITZGERALD, ELLA** (1918-1996), American jazz singer **5** 468-469

**FITZGERALD, FRANCES** (born 1940), American author **5** 469-470

**FITZGERALD, FRANCIS SCOTT KEY** (1896-1940), American author **5** 470-472

**FITZGERALD, GARRET** (born 1926), Irish prime minister (1981-1987) **5** 472-474

**FITZHUGH, GEORGE** (1806-1881), American polemicist and sociologist **5** 474

**FITZPATRICK, THOMAS** (1799-1854), American trapper, guide, and Indian agent **5** 474-475

**FIZEAU, HIPPOLYTE ARMAND LOUIS** (1819-1896), French physicist **5** 475

**FLAGLER, HENRY** (1830-1913), American industrialist **21** 135-137

**FLAHERTY, ROBERT** (1884-1951), American documentary filmmaker **5** 476-477

**FLAMININUS, TITUS QUINCTIUS** (circa 228-174 B.C.), Roman general and diplomat **5** 477

**FLAMSTEED, JOHN** (1646-1719), English astronomer **5** 477-478

**FLANAGAN, HALLIE** (1890-1969), American director, playwright, and educator **5** 478-479

**FLANNAGAN, JOHN BERNARD** (1895-1942), American sculptor **5** 480

**FLAUBERT, GUSTAVE** (1821-1880), French novelist **5** 480-482

**FLEISCHMANN, GISI** (1894-1944), Czechoslovakian leader who rescued many Jews from the Nazi Holocaust **5** 482-483

**FLEMING, SIR ALEXANDER** (1881-1955), Scottish bacteriologist **5** 485-486

**FLEMING, SIR SANDFORD** (1827-1915), Scottish-born Canadian railway engineer **5** 485-486

**FLETCHER, ALICE CUNNINGHAM** (1838-1923), American anthropologist **5** 486-487

**FLETCHER, JOHN** (1579-1625), English playwright **5** 487

**FLETCHER, JOSEPH FRANCIS** (1905-1991), American philosopher who was the father of modern biomedical ethics **5** 488-489

**FLEXNER, ABRAHAM** (1866-1959), American educational reformer **5** 489-490

**FLINDERS, MATTHEW** (1774-1814), English naval captain and hydrographer **5** 490

**FLORES, CARLOS ROBERTO** (Carlos Roberto Flores Facussé; born 1950), Honduran politician **18** 138-140

**FLORES, JUAN JOSÉ** (1801-1864), South American general, president of Ecuador **5** 491

**FLOREY, HOWARD WALTER** (Baron Florey of Adelaide; 1898-1968), Australian pathologist **5** 491-492

**Florida** (state; United States) development  
Flagler, Henry **21** 135-137

**FLORY, PAUL** (1910-1985), American chemist and educator **5** 492-494

**FLOYD, CARLISLE** (born 1926), American composer of operas **5** 494-496

**FLYNN, ELIZABETH GURLEY** (1890-1964), American labor organizer **5** 496-497

**FLYNN, JOHN** (1880-1951), founder and superintendent of the Australian Inland Mission **5** 497-498

**FO, DARIO** (born 1926), Italian playwright and actor **18** 140-143

**FOCH, FERDINAND** (1851-1929), French marshal **5** 498-499

**FOLEY, TOM** (born 1929), Democratic representative from the state of Washington and Speaker of the U.S. House of Representatives (1989-1995) **5** 499-501

**FOLKS, HOMER** (1867-1963), American social reformer **21** 137-140

**FONDA, HENRY** (1905-1982), American actor and producer **20** 138-140

**FONDA, JANE** (born 1937), actress whose career included films, television, exercise videocassettes, and writing **5** 501-502

**FONG, HIRAM LEONG** (born 1907), American politician and businessman **18** 143-144

**FONSECA, RUBEM** (born 1925), Brazilian author **5** 502-504

**FONTANE, THEODOR** (1819-1898), German author **5** 504

**Fonteyn, Dame Margot** (Margaret "Peggy" Hookham; 1919-1991), classical ballerina who devoted her career to the Royal Ballet in England **5** 504-505

**Food preparation**  
Glasse, Hannah **21** 166-167

**FOOT, MICHAEL** (born 1913), left-wing journalist and British Labour Party member of Parliament **5** 505-507

**Football** (sport)  
Blanchard, Felix **21** 43-45  
Davis, Glenn **21** 101-103  
Graham, Otto **21** 174-176  
Nagurski, Bronko **21** 309-311

**Football Hall of Fame**  
Sayers, Gale **21** 377-379

**FOOTE, HENRY STUART** (1804-1880), American politician **18** 144-146

**FOOTE, SHELBY** (born 1916), American author **18** 146-148

**FORBES, JOHN** (1710-1759), British general **5** 507-508

**FORBES, MALCOLM** (1919-1990), American businessman and publisher **5** 508-509

**FORBES, ROBERT BENNET** (1804-1889), American merchant and shipowner **5** 509-510

**FORD, BETTY** (nee Elizabeth Ann Bloomer; born 1921), American first lady **20** 140-142

**FORD, BILL** (William Clay Ford, Jr.; born 1957), American businessman **19** 110-113

**FORD, EDESEL BRYANT** (1893-1943), American auto designer and industrialist **18** 148-150



**FORD, EILEEN** (Eileen Otte; born 1922), American businesswoman and author **19** 113-115

**FORD, FORD MADDOX** (1873-1939), English author and editor **6** 1-2

**FORD, GERALD** (Leslie Lynch King, Junior; born 1913), U.S. Republican vice president (1973) and president (1974-1976) **6** 2-5

**FORD, HENRY** (1863-1947), American industrialist **6** 5-6

**FORD, HENRY, II** (born 1917), American industrialist **6** 6-7

**FORD, JOHN** (1586-1639?), English playwright **6** 7-8

**FORD, JOHN SEAN O'FEENEY** (circa 1890-1973), American film director **6** 8-9  
Toland, Gregg **21** 405-407

**FORD, PAUL LEICESTER** (1865-1902), American bibliographer and novelist **6** 9-10

**Ford Motor Co.** (automobile firm)  
Drucker, Peter **21** 110-112

**FORMAN, JAMES** (born 1928), writer, journalist, political philosopher, and leader of the Student Nonviolent Coordinating Committee **6** 10-11

**FORMAN, MILOS** (Tomas Jan Forman, born 1932), American screenwriter and film director **20** 143-145

**FORREST, EDWIN** (1806-1872), American actor **6** 11-12

**FORREST, JOHN** (1st Baron Forrest of Bunbury; 1847-1918), Australian explorer and politician **6** 12-13

**FORREST, NATHAN BEDFORD** (1821-1877), American Confederate general **6** 13-14

**FORRESTAL, JAMES VINCENT** (1892-1949), American statesman **6** 14

**FORSSMANN, WERNER** (1904-1979), German physician **21** 140-141

**FORSTER, EDWARD MORGAN** (1879-1970), English novelist and essayist **6** 14-16

**FORTAS, ABE** (1910-1982), noted civil libertarian who served four years on the Supreme Court (1965-1969) **6** 16-17

**FORTEN, JAMES** (1766-1842), African American abolitionist and inventor **6** 17-18

**FORTUNE, TIMOTHY THOMAS** (1856-1928), African American journalist **6** 18-21

**FOSCOLO, UGO** (1778-1827), Italian author, poet, and patriot **6** 21

**FOSDICK, HARRY EMERSON** (1878-1969), American Presbyterian minister **6** 21-22

**FOSSE, BOB** (1927-1987), American director, choreographer, and dancer **6** 22-23

**FOSSEY, DIAN** (1932-1985), world's leading authority on the mountain gorilla **6** 23-24

**FOSTER, ABIGAIL KELLEY** (1810-1887), American reformer **6** 25

**FOSTER, NORMAN** (born 1935), British architect **19** 115-117

**FOSTER, STEPHEN COLLINS** (1826-1864), American composer **6** 25-27

**FOSTER, WILLIAM ZEBULON** (1881-1961), American Communist party leader **6** 27-28

**FOUCAULT, JEAN BERNARD LÉON** (1819-1868), French physicist **6** 28-29

**FOUCAULT, MICHEL** (1926-1984), French philosopher, critic, and historian **6** 29-30

**FOUCHÉ, JOSEPH** (1759-1820), French statesman **6** 30-31

**FOUQUET, JEAN** (ca. 1420- ca. 1480), French painter **6** 31

**FOURIER, FRANÇOIS CHARLES MARIE** (1772-1837), French socialist writer **6** 31-32

**FOURIER, BARON JEAN BAPTISTE JOSEPH** (1768-1830), French mathematical physicist **6** 32-33

**FOWLES, JOHN** (born 1926), English novelist **6** 33-35

**FOX, CHARLES JAMES** (1749-1806), English parliamentarian **6** 35-37

**FOX, GEORGE** (1624-1691), English spiritual reformer **6** 37-38

**FOX, VICENTE** (born 1942), Mexican president **21** 142-143

**FOX, WILLIAM** (1879-1952), American film producer **21** 143-144

**FRACASTORO, GIROLAMO** (Hieronymus Fracastorius; c. 1478-1553), Italian physician, poet, astronomer, and logician **21** 144-147

**FRAGONARD, JEAN HONORÉ** (1732-1806), French painter **6** 38-39

**FRANCE, ANATOLE** (1844-1924), French novelist **6** 39-40

**France** (French Republic; nation, Western Europe)  
• 987-1328 (CAPETIAN)

unification  
Blanche of Castile **21** 45-47

**Francia**  
see France

**FRANCIS I** (1494-1547), king of France 1515-1547 **6** 40-43  
religious affairs  
Clement VII **21** 81-83

**FRANCIS II** (1768-1835), Holy Roman emperor 1792-1806 and emperor of Austria 1804-1835 **6** 43-44

**FRANCIS FERDINAND** (1863-1914), archduke of Austria **6** 44

**FRANCIS JOSEPH** (1830-1916), emperor of Austria 1868-1916 and king of Hungary 1867-1916 **6** 45-46

**FRANCIS OF ASSISI, SAINT** (1182-1226), Italian mystic and religious founder **6** 46-47  
Anthony of Padua **21** 7-9  
Gregory IX **21** 180-183

**FRANCIS OF SALES, SAINT** (1567-1622), French bishop **6** 47

**FRANCIS XAVIER, SAINT** (1506-1552), Spanish Jesuit missionary **6** 48

**Franciscans** (Order of Friars Minor) in allegory  
foundation and theology  
Anthony of Padua **21** 7-9  
Bartholomaeus Anglicus **21** 24-25

**FRANCK, CÉSAR** (1822-1890), French composer **6** 48-49

**FRANCK, JAMES** (1882-1964), German physicist **6** 49-52

**FRANCO BAHAMONDE, FRANCISCO** (1892-1975), Spanish general and dictator **6** 52-54

**FRANCO OF COLOGNE** (Franco of Paris; flourished circa 1250-1260), French music theorist **6** 52

**FRANK, ANNE** (1929-1945), 16-year-old holocaust victim who kept a famous diary **6** 54-56

**FRANKENTHALER, HELEN** (born 1928), American painter **6** 56-57

**FRANKFURTER, FELIX** (1882-1965), American jurist **6** 57

**Frankish empire**  
see Holy Roman Empire

**FRANKLIN, ARETHA** (born 1942), African American singer and songwriter **6** 58-60

**FRANKLIN, BENJAMIN** (1706-1790), American statesman, diplomat, and inventor **6** 60-64

**FRANKLIN, SIR JOHN** (1786-1847), English explorer **6** 68-69

**FRANKLIN, JOHN HOPE** (born 1915), pioneer African American historian **6** 65-67

**FRANKLIN, MILES** (1879-1954), Australian novelist **6** 68-69

**FRANKLIN, ROSALIND ELSIE** (1920-1958), British physical chemist and molecular biologist **6** 67-68

**FRANKLIN, WILLIAM** (circa 1731-1813), American colonial administrator **6** 69-70

**FRASER (PINTER), LADY ANTONIA** (born 1932), popular British biographer, historian, and mystery novelist **6** 70-71

**FRASER, MALCOLM** (born 1930), prime minister of Australia (1975-1983) **6** 71-73

**FRASER, PETER** (1884-1950), New Zealand prime minister 1940-49 **6** 73-74

**FRASER, SIMON** (1776-1862), Canadian explorer and fur trader **6** 74-75

**FRASER-REID, BERT** (born 1934), Jamaican chemist **20** 145-146

**FRAUNHOFER, JOSEPH VON** (1787-1826), German physicist **6** 75-76

**FRAZER, SIR JAMES GEORGE** (1854-1941), Scottish classicist and anthropologist **6** 76

**FRAZIER, EDWARD FRANKLIN** (1894-1962), African American sociologist **6** 77

**FRÉCHETTE, LOUIS-HONORÉ** (1839-1908), French-Canadian poet **6** 77-78

**FREDEGUND** (Fredegunda, Fredegond; c. 550-597), Frankish queen **20** 146-149

**FREDERICK I** (1123-1190), Holy Roman emperor 1152-1190 **6** 78-79

**FREDERICK II** (1194-1250), Holy Roman emperor 1215-1250 **6** 79 and papacy Gregory IX **21** 180-183

**FREDERICK II** (1712-1786), king of Prussia 1740-1786 **6** 81-84

**FREDERICK III** (1415-1493), Holy Roman emperor and German king 1440-1493 **6** 84-85

**FREDERICK WILLIAM** (1620-1688), elector of Brandenburg 1640-1688 **6** 85-86

**FREDERICK WILLIAM I** (1688-1740), king of Prussia 1713-1740 **6** 86-87

**FREDERICK WILLIAM III** (1770-1840), king of Prussia 1797-1840 **6** 87

**FREDERICK WILLIAM IV** (1795-1861), king of Prussia 1840-1861 **6** 87-88

**Free French** (World War II) see France—1940-46

**FREED, JAMES INGO** (born 1930), American architect **6** 88-90

**FREEH, LOUIS J.** (born 1950), director of the Federal Bureau of Investigation (FBI) **6** 90-91

**FREEMAN, DOUGLAS SOUTHALL** (1886-1953), American journalist **6** 91-92

**FREEMAN, ROLAND L.** (born 1936), American photographer of rural and urban African Americans **6** 92-93

**FREGE, GOTTLÖB** (1848-1925), German mathematician and philosopher **6** 93-94

**FREI MONTALVA, EDUARDO** (born 1911), Chilean statesman **6** 94-95

**FREIRE, PAULO** (born 1921), Brazilian philosopher and educator **6** 95-96

**FRELINGHUYSEN, THEODORUS JACOBUS** (1691-circa 1748), Dutch Reformed clergyman and revivalist **6** 96-97

**FRÉMONT, JOHN CHARLES** (1813-1890), American explorer and politician **6** 97-98

**FRENCH, DANIEL CHESTER** (1850-1931), American sculptor **6** 98-99

**French architecture**  
Gothic  
William of Sens **21** 432-434

**French music**  
opera  
Philidor, François-André **21** 347-349

**French Sign Language**  
Epée, Charles-Michel de l' **21** 120-122

**FRENEAU, PHILIP MORIN** (1752-1832), American poet and journalist **6** 99-100

**FRERE, SIR HENRY BARTLE EDWARD** (1815-1884), English colonial administrator **6** 100-101

**FRESCOBALDI, GIROLAMO** (1583-1643), Italian composer and organist **6** 101-102

**FRESNEL, AUGUSTIN JEAN** (1788-1827), French physicist **6** 102-103

**FREUD, ANNA** (1895-1982), British psychoanalyst **18** 150-153

**FREUD, LUCIAN** (born 1922), British painter **20** 149-151

**FREUD, SIGMUND** (1856-1939), Viennese psychiatrist, founder of psychoanalysis **6** 103-106

**FREYRE, GILBERTO** (1900-1987), Brazilian sociologist and writer **6** 106-107

**FREYTAG, GUSTAV** (1816-1895), German novelist, dramatist, and critic **6** 107-108

**Friars Minor, Order of**  
see Franciscans

**FRICK, HENRY CLAY** (1849-1919), American industrialist and financier **6** 108-109

**FRIEDAN, BETTY** (Betty Naomi Goldstein; born 1921), women's rights activist and author **6** 109-111

**FRIEDMAN, MILTON** (born 1912), American economist **6** 111-112

**FRIEDRICH, CARL JOACHIM** (1901-1984), German-born educator who became a leading American political theorist **6** 113-114

**FRIEDRICH, CASPAR DAVID** (1774-1840), German romantic painter **6** 114-115

**FRIEL, BERNARD PATRICK** (born 1929), author, teacher, and playwright from Northern Ireland **6** 115-116

**FRIES, JAKOB FRIEDRICH** (1773-1843), German philosopher **6** 116-117

**FRISCH, KARL VON** (1886-1982), Austrian zoologist **6** 117-118

**FRISCH, MAX** (born 1911), Swiss novelist and dramatist **6** 118-119

**FRISCH, OTTO ROBERT** (1904-1979), Austrian-British nuclear physicist **6** 119-120

**FROBERGER, JOHANN JAKOB** (1616-1667), German composer and organist **6** 120-121

**FROBISHER, SIR MARTIN** (circa 1538-1594), English explorer **6** 121-122

**FROEBEL, FRIEDRICH WILHELM AUGUST** (1782-1852), German educator and psychologist **6** 122-123

**FROHMAN, CHARLES** (1860-1915), American theatrical producer **6** 123-124

**FROISSART, JEAN** (circa 1337-after 1404), French priest, poet, and chronicler. **6** 124-125

**FROMM, ERICH** (1900-1980), German writer in the fields of psychoanalysis, psychology, and social philosophy **6** 125-127

**FRONDIZI, ARTURO** (1908-1995), leader of the Argentine Radical Party and Argentine president (1958-1962) **6** 127-128

**FRONTENAC ET PALLUAU, COMTE DE** (Louis de Buade; 1622-1698), French colonial governor **6** 128-130

**Frontiersmen, American**  
folk heroes  
Chapman, John **21** 77-78

**FRONTINUS, SEXTUS JULIUS** (circa 35-circa 104), Roman magistrate, soldier, and writer **6** 130

**FROST, ROBERT LEE** (1874-1963), American poet **6** 130-133

**FROUDE, JAMES ANTHONY** (1818-1894), English historian **6** 133-134

**FRUNZE, MIKHAIL VASILIEVICH** (1885-1925), Soviet military leader **6** 134

**FRY, ELIZABETH** (1780-1845), British reformer **6** 134-136

**FRY, WILLIAM HENRY** (1813-1864), American composer **6** 136-137

**FRYE, NORTHPROP** (Herman Northrop Frye; born 1912), Canadian literary scholar **6** 137-139

**FUAD I** (1868-1936), king of Egypt 1922-1936 **6** 139

**FUCHS, LEONHARD** (1501-1566), German botanist **20** 152-152

**FUCHS, SIR VIVIAN** (1908-1999), English explorer and geologist **6** 140

**FUENTES, CARLOS** (born 1928), Mexican author and political activist **6** 141-142

**FUGARD, ATHOL** (born 1932), South African playwright **6** 142-143

**FUGGER, JAKOB** (Jacob Fugger; 1459-1525), German banker **21** 147-149

**Fugitive slaves**  
see African American history (United States)

**FUJIMORI, ALBERTO KEINYA** (born 1938), president of Peru **6** 143-145

**FUJIWARA KAMATARI** (614-669), Japanese imperial official **6** 145

**FUJIWARA MICHINAGA** (966-1027), Japanese statesman **6** 145-146

**FUKUYAMA, FRANCIS** (born 1952), American philosopher and foreign policy expert **6** 146-147

**FULBRIGHT, JAMES WILLIAM** (1905-1995), American statesman **6** 147-149

**FULLER, ALFRED** (1885-1973), American businessman and inventor **19** 117-118

**FULLER, MILLARD** (born 1935), American lawyer and social activist **18** 153-155

**FULLER, RICHARD BUCKMINSTER** (born 1895), American architect and engineer **6** 149-150

**FULLER, SARAH MARGARET** (1810-1850), American feminist **6** 150-151

**FULTON, ROBERT** (1765-1815), American inventor, engineer, and artist **6** 151-152

**FURPHY, JOSEPH** (1843-1912), Australian novelist **6** 152-153

**FUSELI, HENRY** (1741-1825), Swiss painter **6** 153-155

**FUSTEL DE COULANGES, NUMA DENIS** (1830-1889), French historian **6** 155

**FUX, JOHANN JOSEPH** (1660-1741), Austrian composer, conductor, and theoretician **6** 155-156

## G

**GABLE, WILLIAM CLARK** (1901-1960), American film actor **6** 157-158  
Canutt, Yakima **21** 71-72

**GABO, NAUM** (1890-1977), Russian sculptor and designer **6** 158-159

**GABOR, DENNIS** (1900-1979), Hungarian-British physicist who invented holographic photography **6** 159-160

**GABRIEL, ANGE JACQUES** (1698-1782), French architect **6** 160-161

**GABRIELI, GIOVANNI** (circa 1557-1612), Italian composer **6** 161-162

**GADAMER, HANS-GEORG** (born 1900), German philosopher, classicist, and interpretation theorist **6** 162-163

**GADDAFI, MUAMMAR AL-** (born 1942), head of the revolution that set up the Libyan Republic in 1969 **6** 163-165

**GADSDEN, JAMES** (1788-1858), American soldier and diplomat **6** 165-166

**GAGARIN, YURI ALEXEIVICH** (1934-1968), Russian cosmonaut **6** 166-167

**GAGE, MATILDA JOSLYN** (1826-1898), American reformer and suffragist **6** 167-169

**GAGE, THOMAS** (1719/20-1787), English general **6** 169-170

**GAGNÉ, ROBERT MILLS** (born 1916), American educator **6** 170

**GAINSBOROUGH, THOMAS** (1727-1788), English painter **6** 170-172

**GAISERIC** (died 477), king of the Vandals 428-477 **6** 172

**GAITÁN, JORGE ELÍECER** (1898-1948), Colombian politician **6** 172-173

**GAITSKELL, HUGH** (1906-1963), British chancellor of the exchequer (1950-1951) and leader of the Labour Party (1955-1963) **6** 173-174

**GALBRAITH, JOHN KENNETH** (born 1908), economist and scholar of the American Institutional school **6** 174-177

**GALDÓS, BENITO PÉREZ** (1843-1920), Spanish novelist and dramatist **6** 177-178

**GALEN** (130-200), Greek physician **6** 178-180

**GALILEO GALILEI** (1564-1642), Italian astronomer and physicist **6** 180-183

**GALLATIN, ALBERT** (1761-1849), Swiss-born American statesman, banker, and diplomat **6** 183-184

**GALLAUDET, THOMAS HOPKINS** (1787-1851), American educator **6** 185

**GALLEGOS FREIRE, RÓMULO** (1884-1969), Venezuelan novelist, president 1948 **6** 185-186

**GALLOWAY, JOSEPH** (circa 1731-1803), American politician **6** 186-187

**GALLUP, GEORGE** (1901-1984), pioneer in the field of public opinion polling and a proponent of educational reform **6** 187-189

**GALSWORTHY, JOHN** (1867-1933), English novelist and playwright **6** 189-190

**GALT, SIR ALEXANDER TILLOCH** (1817-1893), Canadian politician **6** 190-191

**GALT, JOHN** (1779-1839), Scottish novelist **18** 156-158

**GALTIERI, LEOPOLDO FORTUNATO** (born 1926), president of Argentina (1981-1982) **6** 191-193

**GALTON, SIR FRANCIS** (1822-1911), English scientist, biometrician, and explorer **6** 193-194

**GALVANI, LUIGI** (1737-1798), Italian physiologist **6** 194-195

**Galveston** (city; Texas)  
Robert, Henry Martyn **21** 367-370

**GÁLVEZ, BERNARDO DE** (1746-1786), Spanish colonial administrator **6** 195-196

**GÁLVEZ, JOSÉ DE** (1720-1787), Spanish statesman in Mexico **6** 196

**GALWAY, JAMES** (born 1939), Irish flutist **18** 158-160

**GAMA, VASCO DA** (circa 1460-1524), Portuguese navigator **6** 196-198

**GAMBETTA, LÉON** (1838-1882), French premier 1881-1882 **6** 198-199

**Games, rules for**

Hoyle, Edmond **21** 206-208  
Naismith, James **21** 311-313

**GAMOW, GEORGE** (1904-1968), Russian-American nuclear physicist, astrophysicist, biologist, and author of books popularizing science **6** 199-200

**GANDHI, INDIRA PRIYADARSHINI** (1917-1984), Indian political leader **6** 200-201

**GANDHI, MOHANDAS KARAMCHAND** (1869-1948), Indian political and religious leader **6** 201-204

**GANDHI, RAJIV** (1944-1991), Indian member of Parliament and prime minister **6** 204-205

**GARBO, GRETA** (1905-1990), Swedish-born American film star **6** 205-207

**GARCIA, CARLOS P.** (1896-1971), Philippine statesman, president 1957-61 **6** 207-208

**GARCIA, JERRY** (Jerome John Garcia; 1942-1995), American musician **21** 150-152

**GARCÍA MÁRQUEZ, GABRIEL** (born 1928), Colombian author **6** 208-209

**GARCÍA MORENO, GABRIEL** (1821-1875), Ecuadorian politician, president 1861-1865 and 1869-1875 **6** 209-210

**GARCILASO DE LA VEGA, INCA** (1539-1616), Peruvian chronicler **6** 210-211

**GARDINER, SAMUEL RAWSON** (1829-1902), English historian **6** 211

**GARDNER, ISABELLA STEWART** (1840-1924), American art patron and socialite **21** 152-155

**GARDNER, JOHN W.** (born 1912), American educator, public official, and political reformer **6** 211-213

**GARFIELD, JAMES ABRAM** (1831-1881), American general, president 1881 **6** 213-214

**GARIBALDI, GIUSEPPE** (1807-1882), Italian patriot **6** 215-217

**GARLAND, HANNIBAL HAMLIN** (1860-1940), American author **6** 217-218

**GARLAND, JUDY** (1922-1969), super star of films, musicals, and concert stage **6** 218-219

**GARNEAU, FRANÇOIS-XAVIER** (1809-1866), French-Canadian historian **6** 219-220

**GARNER, JOHN NANCE** ("Cactus Jack" Garner; 1868-1967), American vice president (1933-1941) **21** 155-157

**GARNIER, FRANCIS** (Marie Joseph François Garnier; 1839-1873), French naval officer **6** 220-221

**GARNIER, JEAN LOUIS CHARLES** (1825-1898), French architect **6** 221-222

**GARRETT, JOHN WORK** (1820-1884), American railroad magnate **6** 225

**GARRETT, THOMAS** (1789-1871), American abolitionist **6** 225-226

**GARRETT (ANDERSON), ELIZABETH** (1836-1917), English physician and women's rights advocate **6** 222-225

**GARRISON, WILLIAM LLOYD** (1805-1879), American editor and abolitionist **6** 226-228

**GARVEY, MARCUS MOSIAH** (1887-1940), Jamaican leader and African nationalist **6** 228-229

**GARY, ELBERT HENRY** (1846-1927), American lawyer and industrialist **6** 229-230

**GASCA, PEDRO DE LA** (circa 1496-1567), Spanish priest and statesman **6** 230-231

**GASKELL, ELIZABETH** (1810-1865), English novelist **6** 231-232

**GATES, WILLIAM HENRY, III** ("Bill"; born 1955), computer software company co-founder and executive **6** 232-234

**GATLING, RICHARD JORDAN** (1818-1903), American inventor of multiple-firing guns **6** 234-235

**GAUDÍ I CORNET, ANTONI** (1852-1926), Catalan architect and designer **6** 235-236

**GAUGUIN, PAUL** (1848-1903), French painter and sculptor **6** 236-238

**GAULLI, GIOVANNI BATTISTA** (1639-1709), Italian painter **6** 238-239

**GAULTIER, JEAN PAUL** (born 1952), French avant-garde designer **6** 239-240

**GAUSS, KARL FRIEDRICH** (1777-1855), German mathematician and astronomer **6** 240-242

**GAVIRIA TRUJILLO, CESAR AUGUSTO** (born 1947), president of Colombia **6** 242-243

**GAY, JOHN** (1685-1732), English playwright and poet **6** 243-244

**GAYLE, HELENE DORIS** (born 1955), African American epidemiologist and pediatrician **6** 244-245

**GAY-LUSSAC, JOSEPH LOUIS** (1778-1850), French chemist and physicist **6** 245-246

**GEDDES, SIR PATRICK** (1854-1932), Scottish sociologist and biologist **6** 246-247

**GEERTGEN TOT SINT JANS** (Geertgen van Haarlem; circa 1460/65-1490/95), Netherlandish painter **6** 248

**GEERTZ, CLIFFORD** (born 1926), American cultural anthropologist **6** 248-249

**GEHRIG, LOU** (Henry Louis Gehrig; 1903-1941), American baseball player **19** 119-121

**GEHRY, FRANK O.** (née Goldberg; born 1929), American architect **6** 250-251

**GEIGER, HANS** (born Johannes Wilhelm Geiger; 1882-1945), German physicist **6** 251-253

**GEISEL, ERNESTO** (1908-1996), Brazilian army general, president of Brazil's national oil company (Petrobras), and president of the republic (1974-1979) **6** 253-255

**GEISEL, THEODOR** (a.k.a. Dr. Seuss; 1904-1991), American author of children's books **6** 255-256

**GELLER, MARGARET JOAN** (born 1947), American astronomer **6** 256-257

**GELL-MANN, MURRAY** (born 1929), American physicist **6** 257-258

**GEMAYEL, AMIN** (born 1942), Lebanese nationalist and Christian political leader; president of the Republic of Lebanon (1982-1988) **6** 258-259

**GEMAYEL, PIERRE** (1905-1984), leader of the Lebanese Phalangist Party **6** 259-261

**General Motors Corporation**  
management practices  
Drucker, Peter **21** 110-112

**GENET, EDMOND CHARLES** (1763-1834), French diplomat **6** 261-262

**GENET, JEAN** (1910-1986), French novelist and playwright **6** 262-263

**GENGHIS KHAN** (1167-1227), Mongol chief, creator of the Mongol empire **6** 263-265

**GENSCHER, HANS-DIETRICH** (born 1927), leader of West Germany's liberal party (the FDP) and foreign minister **6** 265-266

**GENTILE, GIOVANNI** (1875-1944), Italian philosopher and politician **6** 267

**GENTILE DA FABRIANO** (Gentile di Niccolò di Giovanni di Massio; circa 1370-1427), Italian painter **6** 266-267

**Gentlemen Prefer Blondes** (book and film)  
Loos, Anita **21** 262-265

**GEOFFREY OF MONMOUTH** (circa 1100-1155), English pseudohistorian **6** 268

**GEORGE I** (1660-1727), king of Great Britain and Ireland 1714-1727 **6** 268-269

**GEORGE II** (1683-1760), king of Great Britain and Ireland and elector of Hanover 1727-1760 **6** 269-270

**GEORGE III** (1738-1820), king of Great Britain and Ireland 1760-1820 **6** 270-272  
influenced by  
Baring, Francis **21** 20-22

**GEORGE IV** (1762-1830), king of Great Britain and Ireland 1820-1830 **6** 272-273

**GEORGE V** (1865-1936), king of Great Britain and Northern Ireland and emperor of India 1910-1936 **6** 273-275

**GEORGE VI** (1895-1952), king of Great Britain and Northern Ireland 1936-1952 **6** 275

**GEORGE, HENRY** (1839-1897), American economist and social reformer **6** 276

**GEORGE, JAMES ZACHARIAH** (1826-1897), American politician and jurist **6** 276-277

**GEORGE, STEFAN** (1868-1933), German symbolist poet **6** 277-278

**George of the Jungle** (television cartoon)  
Ward, Jay **21** 421-423

**Georgium sidus**  
see Uranus (planet)

**GEPHARDT, RICHARD ANDREW** (born 1941), Democratic majority leader in the House of Representatives **6** 278-280

**GÉRICHAULT, JEAN LOIS ANDRÉ THÉODORE** (1791-1824), French painter **6** 280-281

**GERMAIN, SOPHIE** (Marie-Sophie Germain; 1776-1831), French mathematician **21** 157-158

**GERONIMO** (1829-1909), American Apache Indian warrior **6** 281-282

**GERRY, ELBRIDGE** (1744-1814), American patriot and statesman **6** 282-283

**GERSHOM BEN JUDAH** (circa 950-1028), German rabbi, scholar, and poet **6** 283-284

**GERSHWIN, GEORGE** (1898-1937), American composer **6** 284-285

**GERSHWIN, IRA** (Israel Gershwin; 1896-1983), American lyricist **20** 153-155

**GERSON, JOHN** (1363-1429), French theologian **6** 285-286

**GERSTNER, LOU** (Louis Vincent Gerstner, Jr.; born 1942), American businessman **19** 121-124

**GESELL, ARNOLD LUCIUS** (1880-1961), American psychologist and pediatrician **6** 286-287

**GESNER, KONRAD VON** (1516-1565), Swiss naturalist **6** 287

**GESUALDO, DON CARLO** (Prince of Venosa; circa 1560-1613), Italian composer **6** 287-288

**GETTY, JEAN PAUL** (1892-1976), billionaire independent oil producer **6** 288-290

**Gettysburg, battle of**  
Union forces  
Sickles, Daniel Edgar **21** 385-388

**GHAZALI, ABU HAMID MUHAMMAD AL-** (1058-1111), Arab philosopher and Islamic theologian **6** 290-291

**Ghiberti, Lorenzo** (circa 1381-1455), Italian sculptor, goldsmith, and painter **6** 291-292

**GHIRLANDAIO, DOMENICO** (1449-1494), Italian painter **6** 292-293

**GHOSE, AUROBINDO** (1872-1950), Indian nationalist and philosopher **6** 293-294

**GIACOMETTI, ALBERTO** (1901-1966), Swiss sculptor and painter **6** 294-295

**GIANNINI, A. P.** (Amadeo Peter; 1870-1949), Italian-American financier and banker **6** 295-297

**GIAP, VO NGUYEN** (born 1912), Vietnamese Communist general and statesman **6** 297-299

**GIBBON, EDWARD** (1737-1794), English historian **6** 299-300

**GIBBONS, CEDRIC** (1893-1960), American film production designer **21** 158-159

**GIBBONS, JAMES** (1834-1921), American Roman Catholic cardinal **6** 300-301

**GIBBS, JAMES** (1682-1754), British architect **6** 301-302

**GIBBS, JOSIAH WILLARD** (1839-1903), American mathematical physicist **6** 302-303

**GIBRAN, KAHLIL** (1883-1931), Lebanese writer and artist **6** 303-305

**GIBSON, ALTHEA** (born 1927), African American tennis player **6** 305-306

**GIBSON, BOB** (Robert Gibson; born 1935), American baseball player **21** 159-162

**GIBSON, WILLIAM** (born 1914), American author **6** 306-307

**GIDDINGS, FRANKLIN HENRY** (1855-1931), American sociologist **6** 307-308

**GIDE, ANDRÉ** (1869-1951), French author **6** 308-309

**GIELGUD, JOHN** (born 1904), English Shakespearean actor **6** 310-311

**GIERKE, OTTO VON** (1841-1921), German jurist **6** 311-312

**GIGLI, ROMEO** (born 1949), Italian designer **6** 312

**GILBERT, SIR HUMPHREY** (circa 1537-1583), English soldier and colonizer **6** 313

**GILBERT, WILLIAM** (1544-1603), English physician and physicist **6** 313-314

**GILBERT, SIR WILLIAM SCHWENCK** (1836-1911), English playwright and poet **6** 314-315

**GILBRETH, FRANK** (1868-1924), American engineer and management expert **21** 162-163

**GILBRETH, LILLIAN** (born Lillian Evelyn Moller; 1878-1972), American psychologist and industrial management consultant **6** 315-317  
Gilbreth, Frank **21** 162-163

**GILES, ERNEST** (1835-1897), Australian explorer **6** 317-318

**GILKEY, LANGDON BROWN** (born 1919), American ecumenical Protestant theologian **6** 318-319

**GILLESPIE, DIZZY** (born John Birks Gillespie; 1917-1993), African American jazz trumpeter, composer, and band leader **6** 320-322

**GILLETTE, KING CAMP** (1855-1932), American businessman and inventor **21** 163-166

**GILLIAM, SAM** (born 1933), American artist **6** 322-323

**GILMAN, CHARLOTTE ANNA PERKINS** (1860-1935), American writer and lecturer **6** 323-325

**GILMAN, DANIEL COIT** (1831-1908), educator and pioneer in the American university movement **6** 325-326

**GILPIN, LAURA** (1891-1979), American photographer **6** 326-327

**GILSON, ÉTIENNE HENRY** (1884-1978), French Catholic philosopher **6** 327-328

**GINASTERA, ALBERTO EVARISTO** (1916-1983), Argentine composer **6** 328-329

**GINGRICH, NEWT** (born 1943), Republican congressman from Georgia **6** 329-332

**GINSBERG, ALLEN** (1926-1997), American poet **6** 332-333

**GINSBURG, RUTH BADER** (born 1933), second woman appointed to the United States Supreme Court **6** 333-336

**GINZBERG, ASHER** (Ahad Ha-Am; means "one of the people;" 1856-1927), Jewish intellectual leader **6** 336-337

**GINZBERG, LOUIS** (1873-1953), Lithuanian-American Talmudic scholar **6** 337-338

**GINZBURG, NATALIA LEVI** (1916-1991), Italian novelist, essayist, playwright, and translator **6** 338-339

**GIOLITTI, GIOVANNI** (1842-1928), Italian statesman **6** 339-340

**GIORGIONE** (1477-1510), Italian painter **6** 340-341

**GIOTTO** (circa 1267-1337), Italian painter, architect, and sculptor **6** 342-345

**GIOVANNI, YOLANDE CORNELIA, JR.** (born 1943), African American poet **6** 346-347

**GIOVANNI DA BOLOGNA** (1529-1608), Italian sculptor **6** 345-346

**GIPP, GEORGE** (1895-1920), American football player **19** 124-126

**GIRARD, STEPHEN** (1750-1831), American merchant and philanthropist **6** 347-348

**GIRARDON, FRANÇOIS** (1628-1715), French sculptor **6** 348-349

**GIRAUDOUX, JEAN** (1882-1944), French novelist, playwright, and diplomat **6** 349-350

**GIRTY, SIMON** (1741-1818), American frontiersman **6** 350

**GISCARD D'ESTAING, VALÉRY** (born 1926), third president of the French Fifth Republic **6** 350-352

**GISH, LILLIAN** (1896-1993), American actress **20** 155-158

**GIST, CHRISTOPHER** (circa 1706-1759), American frontiersman **6** 352-353

**GIULIANI, RUDOLPH WILLIAM** (born 1944), mayor of New York City **6** 353-355

**GLACKENS, WILLIAM** (1870-1938), American painter **6** 355-356

**GLADDEN, WASHINGTON** (1836-1918), American clergyman **6** 356-357

**GLADSTONE, WILLIAM EWART** (1809-1898), English statesman **6** 357-360

**GLASGOW, ELLEN** (1873-1945), American novelist **6** 360-361

**GLASHOW, SHELDON LEE** (born 1932), American Nobel Prize winner in physics **6** 361-362

**GLASS, PHILIP** (born 1937), American composer of minimalist music **6** 362-364

**GLASSE, HANNAH** (Hannah Allgood; 1708-1770), English cookbook author **21** 166-167

**GLENDOWER, OWEN** (1359?-1415?), Welsh national leader **6** 364-365

**GLENN, JOHN HERSCHEL, JR.** (born 1921), military test pilot, astronaut, businessman, and United States senator from Ohio **6** 365-367

**GLIDDEN, JOSEPH** (1813-1906), American businessman and inventor **21** 167-170

**GLIGOROV, KIRO** (born 1917), first president of the Republic of Macedonia **6** 367-369

**GLINKA, MIKHAIL IVANOVICH** (1804-1857), Russian composer **6** 369-370

**Globe** (cartography)  
Behaim, Martin **21** 30-32

**GLOUCESTER, DUKE OF** (1391-1447), English statesman **6** 370-371

**GLUBB, SIR JOHN BAGOT** (1897-1986), British commander of the Arab Legion 1939-56 **6** 371-372

**GLUCK, CHRISTOPH WILLIBALD** (1714-1787), Austrian composer and opera reformer **6** 372-374

**GLUCKMAN, MAX** (1911-1975), British anthropologist **6** 374-375

**GM**  
see General Motors Corporation

**GOBINEAU, COMTE DE** (Joseph Arthur Gobineau; 1816-1882), French diplomat **6** 375-376

**GODARD, JEAN-LUC** (born 1930), French actor, film director, and screenwriter **19** 126-128

**GODDARD, ROBERT HUTCHINGS** (1882-1945), American pioneer in rocketry **6** 376-377

**GÖDEL, KURT** (1906-1978), Austrian-American mathematician **6** 377-379

**GODFREY OF BOUILLON** (circa 1060-1100), French lay leader of First Crusade **6** 379

**GODKIN, EDWIN LAWRENCE** (1831-1902), British-born American journalist **6** 380

**GODOLPHIN, SIDNEY** (1st Earl of Godolphin; 1645-1712), English statesman **6** 380-381

**GODOY Y ÁLVAREZ DE FARIA, MANUEL DE** (1767-1851), Spanish statesman **6** 381-382

**GODUNOV, BORIS FEODOROVICH** (circa 1551-1605), czar of Russia 1598-1605 **6** 382-383

**GODWIN, WILLIAM** (1756-1836), English political theorist and writer **6** 383-384

**GOEBBELS, JOSEPH PAUL** (1897-1945), German politician and Nazi propagandist **6** 384-385

**GOEPPERT-MAYER, MARIA** (1906-1972), American physicist **6** 385-387

**GOETHALS, GEORGE WASHINGTON** (1858-1928), American Army officer and engineer **6** 387-388

**GOETHE, JOHANN WOLFGANG VON** (1749-1832), German poet **6** 388-391

**GOGOL, NIKOLAI** (1809-1852), Russian author **6** 391-393

**GOH CHOK TONG** (born 1941), leader of the People's Action Party and Singapore's prime minister **6** 393-395

**GOIZUETA, ROBERTO** (1931-1997), Cuban American businessman and philanthropist **18** 160-162

**GÖKALP, MEHMET ZIYA** (1875/76-1924), Turkish publicist and sociologist **6** 395-396

**GOKHALE, GOPAL KRISHNA** (1866-1915), Indian nationalist leader **6** 396

**GOLD, THOMAS** (born 1920), American astronomer and physicist **18** 162-164

**GOLDBERG, ARTHUR JOSEPH** (1908-1990), U.S. secretary of labor, ambassador to the United Nations, and activist justice of the U.S. Supreme Court **6** 397-398

**GOLDBERG, WHOOP** (born Caryn E. Johnson; born 1949), African American actress **6** 398-402

**GOLDEN, HARRY** (1902-1981), Jewish-American humorist, writer, and publisher **6** 402-403

**GOLDIE, SIR GEORGE DASHWOOD TAUBMAN** (1846-1925), British trader and empire builder **6** 404

**GOLDING, WILLIAM** (1911-1993), English novelist and essayist **6** 404-406

**GOLDMAN, EMMA** (1869-1940), Lithuanian-born American anarchist **6** 406-407

**GOLDMARK, JOSEPHINE** (1877-1950), advocate of government assistance in improving the lot of women and children **6** 407-408

**GOLDMARK, PETER CARL** (1906-1977), American engineer and inventor **21** 170-172

**GOLDONI, CARLO** (1707-1793), Italian dramatist, poet, and librettist **6** 408-409

**GOLDSMITH, JAMES MICHAEL** (1933-1997), British-French industrialist and financier **6** 409-411

**GOLDSMITH, OLIVER** (1730-1774), British poet, dramatist, and novelist **6** 411-413

**GOLDSMITH, OLIVER** (1794-1861), Canadian poet **6** 411

**GOLDWATER, BARRY** (1909-1998), conservative Republican U.S. senator from Arizona (1952-1987) **6** 413-415

**GOLDWYN, SAMUEL** (1882-1974), Polish-born American film producer **6** 416  
Bray, John Randolph **21** 55-57  
Lasky, Jesse **21** 254-256  
Toland, Gregg **21** 405-407

**Golf**  
Hagen, Walter **21** 188-190  
Snead, Sam **21** 388-390

**GOMBERT, NICOLAS** (circa 1500-1556/57), Franco-Flemish composer **6** 416-417

**GÓMEZ, JUAN VICENTE** (1857-1935), Venezuelan dictator **6** 417-418

**GÓMEZ, MÁXIMO** (1836-1905), Dominican-born Cuban general and independence hero **6** 418-419

**GÓMEZ CASTRO, LAUREANO ELEUTERIO** (1889-1965), Colombian statesman, president **6** 419-420

**GOMPERS, SAMUEL** (1850-1924), American labor leader **6** 420-422

**GOMULKA, WLADISLAW** (1905-1982), Polish politician **6** 422-424

**GONCHAROV, IVAN ALEKSANDROVICH** (1812-1891), Russian novelist **6** 424

**GONCHAROVA, NATALIA** (1881-1962), Russian painter and theatrical scenery designer **6** 424-426

**GONCOURT BROTHERS** (19th-century French writers) **6** 426-427

**Gone with the Wind** (film)  
Canutt, Yakima **21** 71-72  
Kalmus, Natalie **21** 233-235  
Menziess, William Cameron **21** 291-293

**GÓNGORA Y ARGOTE, LUIS DE** (1561-1627), Spanish poet **6** 427-428

**GONNE, MAUD** (c. 1866-1953), Irish nationalist **20** 158-160

**GONZÁLEZ, JULIO** (1876-1942), Spanish sculptor **6** 428-429

**GONZÁLEZ MARQUEZ, FELIPE** (born 1942), Socialist leader of Spain **6** 429-431

**GONZÁLEZ PRADA, MANUEL** (1848-1918), Peruvian essayist and poet **6** 431

**GONZALO DE BERCIO** (circa 1195-after 1252), Spanish author **6** 431-432

**GOOCH, GEORGE PEABODY** (1873-1968), British historian and political journalist **6** 432-433

**GOODALL, JANE** (born 1934), British scientist who studied primates **6** 433-434

**GOODLAD, JOHN INKSTER** (born 1917), American education researcher and prophet **6** 434-436

**GOODMAN, BENNY** (Benjamin David Goodman; 1909-1986), jazz clarinetist and big band leader (1935-1945) **6** 436-438

**GOODMAN, ELLEN HOLTZ** (born 1941), American journalist **6** 438-439

**GOODNIGHT, CHARLES** (1836-1926), American cattleman **6** 439

**GOODPASTER, ANDREW JACKSON** (born 1915), American Army officer active in organizing NATO forces in Europe and adviser to three presidents **6** 439-441

**GOODYEAR, CHARLES** (1800-1860), American inventor **6** 441

**GORBACHEV, MIKHAIL SERGEEVICH** (born 1931), former president of the Union of Soviet Socialist Republics. **6** 441-444

**GORBACHEV, RAISA MAXIMOVNA** (née Titorenko; 1932-1999), first lady of the Soviet Union **6** 444-446

**GORDEEVA, EKATERINA** (born 1971), Russian ice skater and author **18** 164-166

**GORDIMER, NADINE** (born 1923), South African author of short stories and novels **6** 446-447

**GORDON, AARON DAVID** (1856-1922), Russian-born Palestinian Zionist **6** 447-448

**GORDON, CHARLES GEORGE** (1833-1885), English soldier and adventurer **6** 448-449

**GORDON, JOHN BROWN** (1832-1904), American businessman and politician **6** 449-450

**GORDON, PAMELA** (born 1955), Bermudan politician **18** 166-167

**GORDY, BERRY, JR.** (born 1929), founder of the Motown Sound **6** 450-451

**CORE, ALBERT, JR.** (born 1948), Democratic U.S. representative, senator, and 45th vice president of the United States **6** 452-453

**GORGAS, JOSIAH** (1818-1883), American soldier and educator **6** 453-454

**GORGAS, WILLIAM CRAWFORD** (1854-1920), American general and sanitarian **6** 454-455

**GORGES, SIR FERDINANDO** (1568-1647), English colonizer and soldier **6** 455-456

**GORGAS, WILLIAM CRAWFORD** (1854-1920), American general and sanitarian **6** 454-455

**GÖRING, HERMANN WILHELM** (1893-1946), German politician and air force commander **6** 457-458

**GORKY, ARSHILE** (1905-1948), American painter **6** 458

**GORKY, MAXIM** (1868-1936), Russian author **6** 458-460

**GORRIE, JOHN** (1803-1855), American physician and inventor **21** 172-174

**GORTON, SAMUELL** (circa 1592-1677), English colonizer **6** 460

**GOSHIRAKAWA** (1127-1192), Japanese emperor **6** 460-461

**Gospels**  
see Bible—New Testament

**Gothic art and architecture**  
England  
William of Sens **21** 432-434  
France  
William of Sens **21** 432-434

**GOTTFRIED VON STRASSBURG** (circa 1165-circa 1215), German poet and romancer **6** 461-462

**GOTTLIEB, ADOLPH** (1903-1974), American Abstract Expressionist painter **6** 462-463

**GOTTSCALK, LOUIS MOREAU** (1829-1869), American composer **6** 463-464

**GOTTWALD, KLEMENT** (1896-1953), first Communist president of Czechoslovakia (1948-1953) **6** 464-466

**GOUDIMEL, CLAUDE** (circa 1514-1572), French composer **6** 466

**GOUJON, JEAN** (circa 1510-1568), French sculptor **6** 466-467

**GOULART, JOÃO** (1918-1976), Brazilian statesman **6** 467-469

**GOULD, GLENN** (1932-1982), Canadian musician **6** 469-470

**GOULD, JAY** (1836-1892), American financier and railroad builder **6** 470-472

**GOULD, STEPHEN JAY** (born 1941), American paleontologist **6** 472-473

**GOUNOD, CHARLES FRANÇOIS** (1818-1893), French composer **6** 473-474

**GOURLAY, ROBERT** (1778-1863), British reformer in Canada **6** 474

**GOURMONT, REMY DE** (1858-1915), French author, critic, and essayist **6** 475

**GOWER, JOHN** (circa 1330-1408), English poet **6** 475-476

**GOYA Y LUCIENTES, FRANCISCO DE PAULA JOSÉ DE** (1746-1828), Spanish painter and printmaker **6** 476-478

**GOYEN, JAN VAN** (1596-1656), Dutch painter **6** 478-479

**GRACCHUS, GAIUS SEMPRONIUS** (ca. 154-121 B.C.) member of a Roman plebeian family referred to as the Gracchi; flourished 3rd-2nd century B.C. **6** 479-480

**GRACCHUS, TIBERIUS SEMPRONIUS** (ca. 163-133 B.C.) member of a Roman plebeian family referred to as the Gracchi; flourished 3rd-2nd century B.C. **6** 479-480

**GRACE, WILLIAM RUSSELL** (1832-1904), Irish-born American entrepreneur and politician **6** 480-481

**GRACIÁN Y MORALES, BALASAR JERÓNIMO** (1601-1658), Spanish writer **6** 481-482

**GRADY, HENRY WOODFIN** (1850-1889), American editor and orator **6** 482-483

**GRAETZ, HEINRICH HIRSCH** (1817-1891), German historian and biblical exegete **6** 483

**GRAHAM, KATHARINE MEYER** (born 1917), publisher who managed *The Washington Post* **6** 483-485

**GRAHAM, MARTHA** (1894-1991), American dancer and choreographer **6** 485-486

**GRAHAM, OTTO** (born 1921), American football player and coach **21** 174-176

**GRAHAM, SYLVESTER** (1794-1851), American reformer and temperance minister **6** 486-487

**GRAHAM, WILLIAM FRANKLIN, JR.** ("Billy"; born 1918), American evangelist **6** 487-488

**GRAMSCI, ANTONIO** (1891-1937), Italian writer and Communist leader **6** 488-489

**GRANADOS, ENRIQUE** (1867-1916), Spanish composer and pianist **6** 489-490

**GRANGE, RED** (Harold Edward Grange; 1903-1991), American football player **19** 128-130

**GRANT, CARY** (born Archibald Alexander Leach; 1904-1986), English actor **6** 490-492

**GRANT, ULYSSES SIMPSON** (1822-1885), American general, president 1869-1877 **6** 492-494

**GRANVILLE, EVELYN BOYD** (born 1924), African American mathematician **6** 494-496

**Grapes of Wrath, The** (film and novel) Toland, Gregg **21** 405-407

**GRASS, GÜNTER** (born 1927), German novelist, playwright, and poet **6** 496-497

**GRASELLI, CAESAR AUGUSTIN** (1850-1927), third generation to head the Grasselli Chemical Company **6** 497-498

**Grateful Dead** (musical group) Garcia, Jerry **21** 150-152

**GRATIAN** (died circa 1155), Italian scholar, father of canon law **6** 498-499

**GRATTAN, HENRY** (1746-1820), Irish statesman and orator **6** 499

**GRAU SAN MARTIN, RAMÓN** (1887-1969), Cuban statesman and physician **6** 499-500

**GRAUNT, JOHN** (1620-1674), English merchant and civil servant **21** 176-178

**GRAVES, MICHAEL** (born 1934), American Post-Modernist architect **6** 500-502

**GRAVES, NANCY STEVENSON** (1940-1995), American sculptor **6** 502-504

**GRAVES, ROBERT RANKE** (1895-1985), English author **6** 504-506

**GRAY, ASA** (1810-1888), American botanist **6** 506-507

**GRAY, HANNAH HOLBORN** (born 1930), university administrator **6** 507-508

**GRAY, ROBERT** (1755-1806), American explorer **6** 508-509

**GRAY, THOMAS** (1716-1771), English poet **6** 509-510

**GRAY, WILLIAM H., III** (born 1941), first African American to be elected House Whip for the U.S. House of Representatives **6** 510-511

**Great Britain** (United Kingdom of Great Britain and Northern Ireland; island kingdom; northwestern Europe)  
• 1714-1901 (HANOVER)  
1760-1820 (George III)  
Baring, Francis **21** 20-22

**Greater New York**  
see New York City (New York State)

**GRECO, EL** (1541-1614), Greek-born Spanish painter **6** 511-514

**Greed** (film)  
von Stroheim, Erich **21** 418-420

**Greek literature** (classical)  
early publishing of  
Aldus Manutius **21** 3-5

**GREELEY, ANDREW M.** (born 1928), American Catholic priest, sociologist, and author **6** 514-515

**GREELEY, HORACE** (1811-1872), American editor and reformer **6** 515-517

**GREELY, ADOLPHUS WASHINGTON** (1844-1935), American soldier, explorer, and writer **6** 517-518

**GREEN, CONSTANCE McLAUGHLIN** (1897-1975), American author and historian **6** 518-519

**GREEN, EDITH STARRETT** (1910-1987), United States congresswoman from Oregon (1954-1974) **6** 519-520

**GREEN, THOMAS HILL** (1836-1882), British philosopher **6** 520-521

**GREEN, WILLIAM R.** (1872-1952), American labor union leader **6** 521

**GREENAWAY, KATE** (Catherine; 1846-1901), English author and illustrator **18** 168-169



**GREENBERG, CLEMENT** (1909-1994), American art critic **6** 521-523

**GREENE, GRAHAM** (born 1904), English novelist and dramatist **6** 523-524

**GREENE, GRAHAM** (born ca. 1952), Canadian-Native American actor **6** 524-525

**GREENE, NATHANAEL** (1742-1786), American Revolutionary War general **6** 525-526

**GREENSPAN, ALAN** (born 1926), American economist **6** 526-528

**GREER, GERMAINE** (born 1939), author and authoritative commentator on women's liberation and sexuality **6** 528-530

**GREGG, JOHN ROBERT** (1867-1948), American inventor of system of shorthand writing **21** 178-180

**GREGG, WILLIAM** (1800-1867), American manufacturer **6** 530-531

**GREGORY I, SAINT** (circa 540-604), pope 590-604 **6** 531-532

**GREGORY VII** (circa 1020-1085), pope 1073-85 **6** 532-534

**GREGORY IX** (Ugo [Ugolino] di Segni; 1145-1241), Roman Catholic pope (1227-1241) **21** 180-183

**GREGORY XII** (Angelo Corrarío; c. 1327-1417), pope 1406-1415 **18** 169-171

**GREGORY XIII** (1502-1585), pope 1572-1585 **6** 534

**GREGORY, LADY AUGUSTA** (1852-1932), Irish dramatist **6** 535-536

**GREGORY, DICK** (Richard Claxton Gregory; born 1932), comedian and civil rights and world peace activist **6** 536-537

**GREGORY OF TOURS, SAINT** (538-594), Frankish bishop and historian **6** 534-535

**GRETZKY, WAYNE** (born 1961), Canadian hockey star **6** 537-539

**GREUZE, JEAN BAPTISTE** (1725-1805), French painter **6** 539

**GREY, CHARLES** (2nd Earl Grey; 1764-1845), English statesman, prime minister 1830-1834 **6** 539-540

**GREY, SIR GEORGE** (1812-1898), English explorer and colonial governor **6** 540-541

**GREY, ZANE** (Pearl Zane Gray; 1872-1939), American author **20** 160-162

**GRIBEAUVAL, JEAN BAPTISTE VAQUETTE DE** (1715-1789), French army officer **20** 162-163

**GRIEG, EDVARD HAGERUP** (1843-1907), Norwegian composer **6** 541-542

**GRIERSON, JOHN** (1898-1972), Canadian and British filmmaker **6** 542-543

**GRIFFES, CHARLES TOMLINSON** (1884-1920), American composer **6** 543-544

**GRIFFITH, DAVID WARK** (1875-1948), American film maker **6** 544-545  
Bitzer, Billy **21** 36-38

**GRIFFITH, SIR SAMUEL WALKER** (1845-1920), Australian statesman and jurist **6** 545-546

**GRIFFITH JOYNER, FLORENCE** (1959-1998), American athlete **19** 130-133

**GRILLPARZER, FRANZ** (1791-1872), Austrian playwright **6** 546-547

**GRIMKÉ, ANGELINA EMILY (1805-1879) AND SARAH MOORE** (1792-1873), American abolitionists and women's rights agitators **7** 1-2

**GRIMKÉ, ARCHIBALD HENRY** (1849-1930), American editor, author, and diplomat **7** 1-2

**GRIMM, JAKOB KARL (1785-1863) AND WILHELM KARL** (1786-1859), German scholars, linguists, and authors **7** 3-4

**GRIMMELSHAUSEN, HANS JAKOB CHRISTOFFEL VON** (1621/22-1676), German author **7** 4-5

**GRIS, JUAN** (1887-1927), Spanish painter **7** 5-6

**GRISHAM, JOHN** (born 1955), American author and attorney **7** 6-8

**GROMYKO, ANDREI ANDREEVICH** (1909-1988), minister of foreign affairs and president of the Union of Soviet Socialist Republic (1985-1988) **7** 9-11

**GROOMS, RED** (born 1937), American artist **7** 11-12

**GROOTE, GERARD** (1340-1384), Dutch evangelical preacher **7** 12-13

**GROPIUS, WALTER** (1883-1969), German-American architect, educator, and designer **7** 13-14

**GROS, BARON** (Antoine Jean Gros; 1771-1835), French romantic painter **7** 14-15

**GROSS, SAMUEL DAVID** (1805-1884), American surgeon, author, and educator **21** 183-185

**GROSSETESTE, ROBERT** (1175-1253), English bishop and statesman **7** 15

**GROSSINGER, JENNIE** (1892-1972), American hotel executive and philanthropist **7** 15-17

**GROSZ, GEORGE** (1893-1959), German-American painter and graphic artist **7** 17-18

**GROTIUS, HUGO** (1583-1645), Dutch jurist, statesman, and historian **7** 18-19

**GROTOWSKI, JERZY** (born 1933), founder of the experimental Laboratory Theatre in Wrocław, Poland **7** 19-20

**GROVE, ANDREW** (András Gróf; born 1936), American businessman **18** 171-174

**GROVE, FREDERICK PHILIP** (circa 1871-1948), Canadian novelist and essayist **7** 20-21

**GROVES, LESLIE** (1896-1970), military director of the Manhattan Project (atom bomb) during World War II **7** 21-22

**GRÜNEWALD, MATTHIAS** (circa 1475-1528), German painter **7** 23-24

**GUARDI, FRANCESCO** (1712-1793), Italian painter **7** 24-25

**GUARINI, GUARINO** (1624-1683), Italian architect, priest, and philosopher **7** 25-26

**GUCCIONE, BOB, JR.** (born ca. 1956), American publisher **7** 26

**GUDERIAN, HEINZ** (1888-1953), German military leader **20** 163-165

**GÜEMES, MARTÍN** (1785-1821), Argentine independence fighter **7** 26-27

**GUERCINO** (Giovanni Francesco Barbieri; 1591-1666), Italian painter **7** 27

**GUERICKE, OTTO VON** (1602-1686), German physicist **7** 27-28

**GUERIN, VERONICA** (1959-1996), Irish investigative reporter and journalist **18** 174-176

**GUERRERO, VICENTE** (1783-1831), Mexican independence fighter, president 1829 **7** 28-30

**GUEVARA, ERNESTO** ("Che"; 1924-1967) Argentine revolutionary and guerrilla theoretician **7** 30-31

**GUEYE, LAMINE** (1891-1968), Senegalese statesman **7** 31

**GUGGENHEIM, DANIEL** (1856-1930), American industrialist and philanthropist **21** 185-187

**GUGGENHEIM, MEYER** (1828-1905), Swiss-born American industrialist **7** 31-32

**GUICCIARDINI, FRANCESCO** (1483-1540), Italian historian and statesman **7** 32-33

**GUIDO D'AREZZO** (circa 995-circa 1050), Italian music theorist **7** 33

**GUILLAUME DE LORRIS** (circa 1210-1237), French poet **7** 33-34

**GUILLÉN, NICOLÁS** (born 1902), Cuban author **7** 34-35

**GUILLÉN Y ALVAREZ, JORGE** (1893-1984), Spanish poet **7** 35-36

**GUINIZZELLI, GUIDO** (1230/40-1276), Italian poet **7** 36-37

**GUINNESS, ALEC** (born 1914), British actor of the stage, films, and television **7** 37-38

**GÜIRÁLDEZ, RICARDO** (1886-1927), Argentine poet and novelist **7** 38-39

**GUISCARD, ROBERT** (1016-1085), Norman adventurer **7** 39-40

**GUISEWITE, CATHY** (born 1950), American cartoonist and author **18** 176-177

**GUIZOT, FRANÇOIS PIERRE GUILLAUME** (1787-1874), French statesman and historian **7** 40-41

**GUMPOWICZ, LUDWIG** (1838-1909), Polish-Austrian sociologist and political theorist **7** 41

**GUNN, THOM** (born 1929), English poet **18** 177-178

**GÜNTHER, IGNAZ** (1725-1775), German sculptor **7** 41-42

**GUSTAVUS I** (Gustavus Eriksson; 1496-1560), king of Sweden 1523-1560 **7** 42-43

**GUSTAVUS II** (Gustavus Adolphus; 1594-1632), king of Sweden 1611-1632 **7** 43-45

**GUSTAVUS III** (1746-1792), king of Sweden 1771-1792 **7** 45-46

**GUSTON, PHILIP** (1913-1980), American painter and a key member of the New York School **7** 47-48

**GUTENBERG, JOHANN** (circa 1398-1468), German inventor and printer **7** 48-49

**GUTHRIE, EDWIN RAY** (1886-1959), American psychologist **7** 49-50

**GUTHRIE, TYRONE** (1900-1971), English theater director **7** 50-51

**GUTHRIE, WOODROW WILSON** ("Woody"; 1912-1967), writer and performer of folk songs **7** 51-52

**GUTIÉRREZ, GUSTAVO** (born 1928), Peruvian who was the father of liberation theology **7** 52-53

**GUY DE CHAULIAC** (circa 1295-1368), French surgeon **7** 54

## H

**HABASH, GEORGE** (born 1926), founder of the Arab Nationalists' Movement (1952) and of the Popular Front for the Liberation of Palestine (PFLP; 1967) **7** 55-56

**HABER, FRITZ** (1868-1934), German chemist **7** 56-58

**HABERMAS, JÜRGEN** (born 1929), German philosopher and sociologist **7** 58-60

**HABIBIE, BACHARUDDIN JUSUF** (born 1936), president of Indonesia **19** 134-136

**HADRIAN** (76-138), Roman emperor 117-138 **7** 60-61

**HAECKEL, ERNST HEINRICH PHILIPP AUGUST** (1834-1919), German biologist and natural philosopher **7** 61-62

**HAFIZ, SHAMS AL-DIN** (circa 1320-1390), Persian mystical poet and Koranic exegete **7** 63

**HAGEN, UTA THYRA** (born 1919), American actress **18** 179-180

**HAGEN, WALTER** (1892-1969), American golfer **21** 188-190

**HAGUE, FRANK** (1876-1956), American politician **7** 63-64

**HAHN, OTTO** (1879-1968), German chemist **7** 64-65

**HAHNEMANN, SAMUEL** (Christian Friedrich Samuel Hahnemann; 1755-1843), German physician and chemist **21** 190-193

**HAIDAR ALI** (1721/22-1782), Indian prince, ruler of Mysore 1759-1782 **7** 65-66

**HAIG, ALEXANDER M., JR.** (born 1924), American military leader, diplomat, secretary of state, and presidential adviser **7** 66-67

**HAIG, DOUGLAS** (1st Earl Haig; 1861-1928), British field marshal **7** 67-68

**HAILE SELASSIE** (1892-1975), emperor of Ethiopia **7** 68-70

**HAKLUYT, RICHARD** (1552/53-1616), English geographer and author **7** 70

**HALBERSTAM, DAVID** (born 1934), American journalist, author and social historian **18** 180-183

**HALDANE, JOHN BURDON SANDERSON** (1892-1964), English biologist **7** 70-71

**HALE, CLARA** (nee Clara McBride; 1905-1992), American humanitarian and social reformer **20** 166-168

**HALE, EDWARD EVERETT** (1822-1909), American Unitarian minister and author **7** 71-72

**HALE, GEORGE ELLERY** (1868-1938), American astronomer **7** 72-74

**HALE, SARAH JOSEPHA** (née Buell; 1788-1879), American editor **7** 74-75

**HALES, STEPHEN** (1677-1761), English scientist and clergyman **7** 75

**HALÉVY, ÉLIE** (1870-1937), French philosopher and historian **7** 76

**HALEY, ALEX** (1921-1992), African American journalist and author **7** 76-78

**HALEY, MARGARET A.** (1861-1939), American educator and labor activist **7** 78-79

**HALFFTER, CHRISTÓBAL** (born 1930), Spanish composer **7** 79-80

**HALIBURTON, THOMAS CHANDLER** (1796-1865), Canadian judge and author **7** 80

**HALIDE EDIP ADIVAR** (1884-1964), Turkish woman writer, scholar, and public figure **7** 80-82

**HALIFAX, 1ST EARL OF** (Edward Frederick Lindley Wood; 1881-1959), English statesman **7** 82-83

**HALL, ASAPH** (1829-1907), American astronomer **7** 83-84

**HALL, DONALD** (born 1928), New England memoirist, short story writer, essayist, dramatist, critic, and anthologist as well as poet **7** 84-85

**HALL, GRANVILLE STANLEY** (1844-1924), American psychologist and educator **7** 85-86

**HALL, RADCLIFFE** (Marguerite Radclyffe Hall; 1880-1943), British author **20** 168-170

**HALLAJ, AL-HUSAYN IBN MANSUR AL** (857-922), Persian Moslem mystic and martyr **7** 86-87

**HALLAM, LEWIS, SR. AND JR.** (Lewis Sr. ca. 1705-55; Lewis Jr. 1740-1808), American actors and theatrical managers **7** 87

**HALLER, ALBRECHT VON** (1708-1777), Swiss physician **7** 87-88

**HALLEY, EDMUND** (1656-1742), English astronomer **7** 88-89

**HALS, FRANS** (1581/85-1666), Dutch painter 7 89-91

**HALSEY, WILLIAM FREDERICK** (1882-1959), American admiral 7 91-92

**HAMANN, JOHANN GEORG** (1730-1788), German philosopher 7 92

**HAMER, FANNIE LOU** (born Townsend; 1917-1977), American civil rights activist 7 93-94

**HAMILCAR BARCA** (circa 285-229/228 B.C.), Carthaginian general and statesman 7 94-95

**HAMILTON, ALEXANDER** (1755-1804), American statesman 7 95-98

**HAMILTON, ALICE** (1869-1970), American physician 7 98-99

**HAMILTON, SIR WILLIAM ROWAN** (1805-1865), Irish mathematical physicist 7 99-100

**HAMMARSKJÖLD, DAG** (1905-1961), Swedish diplomat 7 100-101

**HAMM-BRÜCHER, HILDEGARD** (born 1921), Free Democratic Party's candidate for the German presidency in 1994 7 101-103

**HAMMER, ARMAND** (1898-1990), American entrepreneur and art collector 7 103-104

**HAMMERSTEIN, OSCAR**  
**CLENDENNING II** (1895-1960), lyricist and librettist of the American theater 7 104-106

**HAMMETT, (SAMUEL) DASHIELL** (1894-1961), American author 7 106-108

**HAMMOND, JAMES HENRY** (1807-1864), American statesman 7 108-109

**HAMMOND, JOHN LAWRENCE LE BRETON** (1872-1952), English historian 7 108-109

**HAMMOND, LUCY BARBARA** (1873-1961), English historian 7 109

**HAMMURABI** (1792-1750 B.C.), king of Babylonia 7 109-110

**HAMPDEN, JOHN** (1594-1643), English statesman 7 110-111

**HAMPTON, WADE** (circa 1751-1835), American planter 7 111-112

**HAMPTON, WADE III** (1818-1902), American statesman and Confederate general 7 112

**HAMSUN, KNUT** (1859-1952), Norwegian novelist 7 113-114

**HAN FEI TZU** (circa 280-233 B.C.), Chinese statesman and philosopher 7 124-125

**HAN WU-TI** (157-87 B.C.), Chinese emperor 7 136

**HAN YÜ** (768-824), Chinese author 7 136-137

**HANAFI, HASSAN** (born 1935), Egyptian philosopher 7 114

**HANCOCK, JOHN** (1737-1793), American statesman 7 114-116

**HAND, BILLINGS LEARNED** (1872-1961), American jurist 7 116

**HANDEL, GEORGE FREDERICK** (1685-1759), German-born English composer and organist 7 116-119

**HANDKE, PETER** (born 1942), Austrian playwright, novelist, screenwriter, essayist, and poet 7 119-121

**HANDLIN, OSCAR** (born 1915), American historian 7 121-122

**HANDSOME LAKE** (a.k.a. Hadawa' Ko; ca. 1735-1815), Seneca spiritual leader 7 122-123

**HANDY, WILLIAM CHRISTOPHER** (1873-1958), African American songwriter 7 123-124

**HANKS, NANCY** (1927-1983), called the "mother of a million artists" for her work in building federal financial support for the arts and artists 7 126-127

**HANNA, MARCUS ALONZO** (1837-1904), American businessman and politician 7 127-128

**HANNIBAL BARCA** (247-183 B.C.), Carthaginian general 7 128-130

**Hanover dynasty** (Great Britain)  
see Great Britain—1714-1901 (Hanover)

**HANSBERRY, LORRAINE VIVIAN** (1930-1965), American writer and a major figure on Broadway 7 130-131

**HANSEN, ALVIN** (1887-1975), American economist 7 131-132

**HANSEN, JULIA BUTLER** (1907-1988), American politician 7 132-133

**HANSON, DUANE** (1925-1990), American super-realist sculptor 7 133-135

**HANSON, HOWARD** (1896-1981), American composer and educator 7 135-136

**HAPGOOD, NORMAN** (1868-1937), American author and editor 7 137-138

**HARA, KEI** (1856-1921), Japanese statesman and prime minister 1918-1921 7 138

**HARAND, IRENE** (born Irene Wedl; 1900-1975), Austrian political and human rights activist 7 139-145

**HARAWI, ILYAS AL-** (Elias Harawi; born 1930), president of Lebanon 7 145-146

**HARDENBERG, PRINCE KARL AUGUST VON** (1750-1822), Prussian statesman 7 146-147

**HARDIE, JAMES KEIR** (1856-1915), Scottish politician 7 147-148

**HARDING, WARREN GAMALIEL** (1865-1923), American statesman, president 1921-1923 7 148-149

**HARDY, HARRIET** (1905-1993), American pathologist 7 150

**HARDY, THOMAS** (1840-1928), English novelist, poet, and dramatist 7 150-152

**HARE, ROBERT** (1781-1858), American chemist 7 152-153

**HARGRAVES, EDWARD HAMMOND** (1816-1891), Australian publicist 7 153-154

**HARING, KEITH** (1958-1990), American artist tied to New York graffiti art of the 1980s 7 154-155

**HARINGTON, JOHN** (1560-1612), English author and courtier 21 193-195

**HARJO, SUZAN SHOWN** (born 1945), Native American activist 18 183-185

**HARKNESS, GEORGIA** (1891-1974), American Methodist and ecumenical theologian 7 155-156

**HARLAN, JOHN MARSHALL** (1833-1911), American jurist 7 156-157

**HARLAN, JOHN MARSHALL** (1899-1971), U.S. Supreme Court justice 7 157-159

**Harlem renaissance** (American literature)  
Bontemps, Arna 21 47-50

**HARLEY, ROBERT** (1st Earl of Oxford and Earl Mortimer; 1661-1724), English statesman 7 159-160

**HARNACK, ADOLF VON** (1851-1930), German theologian 7 160

**HARNETT, WILLIAM MICHAEL** (1848-1892), American painter 7 160-161

**HAROLD I** (circa 840-933), king of Norway 860-930 7 161-162

**HAROLD II** (Harold Godwinson; died 1066), Anglo-Saxon king of England of 1066 7 162

**HAROLD III** (1015-1066), king of Norway 1047-1066 7 163

**HARPER, FRANCES** (Frances Ellen Watkins Harper; 1825-1911), African American author, abolitionist and women's rights activist **18** 185-187

**HARPER, WILLIAM RAINERY** (1856-1906), American educator and biblical scholar **7** 163-164

**Harpsichord** (musical instrument) Cristofori, Bartolomeo **21** 94-96

**HARRIMAN, EDWARD HENRY** (1848-1909), American railroad executive **7** 164-165

**HARRIMAN, PAMELA** (1920-1997), American ambassador and patrician **18** 187-189

**HARRIMAN, W. AVERELL** (1891-1986), American industrialist, financier, and diplomat **7** 165-166

**HARRINGTON, JAMES** (1611-1677), English political theorist **7** 166-167

**HARRINGTON, MICHAEL** (1928-1989), American political activist and educator **7** 167-169

**HARRIS, ABRAM LINCOLN, JR.** (1899-1963), African American economist **7** 169-171

**HARRIS, BARBARA CLEMENTINE** (born 1930), African American activist and Anglican bishop **7** 171-172

**HARRIS, FRANK** (1856-1931), Irish-American author and editor **7** 172-173

**HARRIS, JOEL CHANDLER** (1848-1908), American writer **7** 173-174

**HARRIS, LADONNA** (born 1931), Native American activist **18** 189-191

**HARRIS, PATRICIA ROBERTS** (1924-1985), first African American woman in the U.S. Cabinet **7** 174-175

**HARRIS, ROY** (1898-1979), American composer **7** 175-176

**HARRIS, TOWNSEND** (1804-1878), American merchant and diplomat **7** 176-177

**HARRIS, WILLIAM TORREY** (1835-1909), American educator and philosopher **7** 177-178

**HARRISON, BENJAMIN** (1833-1901), American statesman, president 1889-1893 **7** 178-179

**HARRISON, PETER** (1716-1775), American architect and merchant **7** 179-180

**HARRISON, WILLIAM HENRY** (1773-1841), American statesman, president 1841 **7** 180-181

**HARSHA** (Harshavardhana; circa 590-647), king of Northern India 606-612 **7** 181-182

**HART, GARY W.** (born 1936), American political campaign organizer, U.S. senator, and presidential candidate **7** 182-184

**HARTE, FRANCIS BRET** (1837-1902), American poet and fiction writer **7** 184-185

**HARTLEY, DAVID** (1705-1757), British physician and philosopher **7** 185

**HARTLEY, MARSDEN** (1877-1943), American painter **7** 186

**HARTSHORNE, CHARLES** (born 1897), American theologian **7** 186-187

**HARUN AL-RASHID** (766-809), Abbasid caliph of Baghdad 786-809 **7** 188

**HARUNOBU, SUZUKI** (ca. 1725-1770), Japanese painter and printmaker **7** 188-189

**HARVARD, JOHN** (1607-1638), English philanthropist **21** 195-197

**Harvard College**  
see Harvard University

**Harvard University** (Cambridge, Massachusetts)  
endowments  
Harvard, John **21** 195-197  
observatory  
Peirce, Benjamin **21** 340-342

**HARVEY, WILLIAM** (1578-1657), English physician **7** 189-190

**HASAN, IBN AL-HAYTHAM** (ca. 966-1039), Arab physicist, astronomer, and mathematician **7** 190-191

**HASKINS, CHARLES HOMER** (1870-1937), American historian **7** 191-192

**HASSAM, FREDERICK CHILDE** (1859-1935), American impressionist painter **7** 192

**HASSAN, MOULEY** (King Hassan II; 1929-1999), inherited the throne of Morocco in 1961 **7** 194-195

**HASSAN, MUHAMMAD ABDILLE** (1864-1920), Somali politico-religious leader and poet **7** 194-195

**HASTINGS, WARREN** (1732-1818), English statesman **7** 195-196

**HATCH, WILLIAM HENRY** (1833-1896), American reformer and politician **7** 196

**HATSHEPSUT** (ruled 1503-1482 B.C.), Egyptian queen **7** 196-197

**HATTA, MOHAMMAD** (1902-1980), a leader of the Indonesian nationalist movement (1920s-1945) and a

champion of non-alignment and of socialism grounded in Islam **7** 197-199

**HAUPTMANN, GERHART JOHANN ROBERT** (1862-1946), German dramatist and novelist **7** 199-201

**Hausaland** (region; northern Nigeria) Amina of Zaria **21** 5-7

**HAUSHOFER, KARL** (1869-1946), German general and geopolitician **7** 201

**HAUSSMANN, BARON GEORGES EUGÈNE** (1809-1891), French prefect of the Seine **7** 201-202

**HAVEL, VACLAV** (born 1936), playwright and human rights activist who became the president of Czechoslovakia **7** 202-205

**HAWKE, ROBERT JAMES LEE** (born 1929), Australian Labor prime minister **7** 205-206

**HAWKING, STEPHEN WILLIAM** (born 1942), British physicist and mathematician **7** 206-208

**HAWKINS, COLEMAN** (1904-1969), American jazz musician **7** 208-210

**HAWKINS, SIR JOHN** (1532-1595), English naval commander **7** 210-211

**HAWKSMOOR, NICHOLAS** (1661-1736), English architect **7** 211-212

**HAWTHORNE, NATHANIEL** (1804-1864), American novelist **7** 212-215

**HAY, JOHN** (1838-1905), American statesman **7** 215-216

**HAYA DE LA TORRE, VICTOR RAUL** (born 1895), Peruvian political leader and theorist **7** 216-217

**HAYDEN, THOMAS EMMET** (born 1939), American writer and political activist **7** 217-219

**HAYDN, FRANZ JOSEPH** (1732-1809), Austrian composer **7** 219-221

**HAYEK, FRIEDRICH A. VON** (1899-1992), Austrian-born British free market economist, social philosopher, and Nobel Laureate **7** 221-223

**HAYES, HELEN** (1900-1993), American actress **7** 223-224

**HAYES, CARDINAL PATRICK JOSEPH** (1867-1938), American cardinal **7** 224-225

**HAYES, ROLAND** (1887-1977), African American classical singer **7** 225-227

**HAYES, RUTHERFORD BIRCHARD** (1822-1893), American statesman, president 1877-1881 **7** 227-228

**HAYFORD, J. E. CASELY** (1866-1903), Gold Coast politician, journalist, and educator **7** 228-230

**HAYKAL, MUHAMMAD HUSAIN** (born 1923), Egyptian journalist and editor of *al-Ahram* (1957-1974) **7** 230-231

**HAYNE, ROBERT YOUNG** (1791-1839), American politician **7** 231-232

**HAYS, WILL** (William Harrison Hays; 1879-1954), American film censor **21** 197-199

**HAYWOOD, WILLIAM DUDLEY** (1869-1928), American labor leader **7** 232-233

**HAYWORTH, RITA** (born Margarita Carmen Cansino; 1918-1987), American actress **7** 233-235

**Hazelwood School** (Birmingham, England)  
Hill, Rowland **21** 202-204

**HAZLITT, WILLIAM** (1778-1830), English literary and social critic **7** 235-236

**HEAD, EDITH** (1898-1981), American costume designer **18** 191-193

**HEADE, MARTIN JOHNSON** (1819-1904), American painter **7** 236

**Health and beauty aids**  
Pinkham, Lydia **21** 351-353

**HEALY, BERNADINE** (born 1944)  
American physician and administrator **7** 237-238

**HEANEY, SEAMUS JUSTIN** (born 1939), Irish poet, author, and editor **7** 238-240

**HEARN, LAFCADIO** (1850-1904), European-born American author **7** 240

**HEARNE, SAMUEL** (1745-1792), English explorer **7** 241-242

**HEARST, GEORGE** (1820-1891), American publisher and politician **7** 242

**HEARST, PATRICIA** (born 1954), kidnapped heiress who became a bank robber **7** 242-243

**HEARST, WILLIAM RANDOLPH** (1863-1951), American publisher and politician **7** 243-244  
Garner, John Nance **21** 155-157  
McKay, Winsor **21** 288-291

**Heart disease**  
Forssmann, Werner **21** 140-141

**HEATH, EDWARD RICHARD GEORGE** (born 1916), prime minister of Great Britain (1970-1974) **7** 244-246

**HEAVYSEGE, CHARLES** (1816-1876), Canadian poet and dramatist **7** 246

**HEBBEL, FRIEDRICH** (1813-1863), German poet and playwright **7** 247

**HEBERT, JACQUES RENÉ** (1757-1794), French journalist and revolutionist **7** 247-248

**HECHT, BEN** (1894-1964), American journalist, playwright, and Hollywood scriptwriter **7** 248-250

**HECKER, ISAAC THOMAS** (1819-1888), American Catholic religious founder **7** 250-251

**HECKLER, MARGARET MARY O'SHAUGHNESSY** (born 1931), American attorney, congressional representative, secretary of health and human services, and ambassador **7** 251-252

**HEDIN, SVEN ANDERS** (1865-1952), Swedish explorer and geographer **7** 252-253

**HEFNER, HUGH** (born 1926), founder and publisher of *Playboy* magazine **7** 253-254

**HEGEL, GEORG WILHELM FRIEDRICH** (1770-1831), German philosopher and educator **7** 254-256

**HEIDEGGER, MARTIN** (1889-1976), German philosopher **7** 257-258

**HEIDENSTAM, CARL GUSTAF VERNER VON** (1859-1940), Swedish author **7** 258-259

**HEIFETZ, JASCHA** (1901-1987), American violinist **20** 170-172

**HEINE, HEINRICH** (1797-1856), German poet and essayist **7** 259-260

**HEINRICH, ANTHONY PHILIP** (1781-1861), American composer **7** 261

**HEINZ, HENRY JOHN** (H.J. Heinz; 1844-1919), American businessman **19** 136-138

**HEISENBERG, WERNER KARL** (born 1901), German physicist **7** 261-263

**HELLER, JOSEPH** (1923-1999), American author **7** 263-265

**HELLER, WALTER** (1915-1987), chairman of the Council of Economic Advisors (1961-1964) and chief spokesman of the "New Economics" **7** 265-266

**HELLMAN, LILLIAN FLORENCE** (born 1905), American playwright **7** 267-268

**HELMHOLTZ, HERMANN LUDWIG FERDINAND VON** (1821-1894), German physicist and physiologist **7** 268-269

**HELMONT, JAN BAPTISTA VAN** (1579-1644), Flemish chemist and physician **7** 269-271

**HELMS, JESSE** (born 1921), United States Senator from North Carolina **7** 271-272

**HELPER, HINTON ROWAN** (1829-1909), American author and railroad promoter **7** 272-273

**HELVÉTIUS, CLAUDE ADRIEN** (1715-1771), French philosopher **7** 273-274

**HEMINGWAY, ERNEST MILLER** (1898-1961), American novelist and journalist **7** 274-277

**HÉMON, LOUIS** (1880-1913), French-Canadian novelist **7** 277

**HENDERSON, ARTHUR** (1863-1935), British statesman **7** 277-278

**HENDERSON, RICHARD** (1735-1785), American jurist and land speculator **7** 278-279

**HENDRIX, JIMI** (born Johnny Allen Hendrix; 1942-1970), African American guitarist, singer, and composer **7** 279-283

**HENG SAMRIN** (born 1934), Cambodian Communist leader who became president of the People's Republic of Kampuchea (PRK) in 1979 **7** 283-285

**HENIE, SONJA** (1912-1969), Norwegian figure skater **20** 172-173

**HENRY I** (876-936), king of Germany 919-936 **7** 285-286

**HENRY I** (1068-1135), king of England 1100-1135 **7** 286-287

**HENRY II** (1133-1189), king of England 1154-1189 **7** 287-289

**HENRY III** (1017-1056), Holy Roman emperor and king of Germany 1039-1056 **7** 290

**HENRY III** (1207-1272), king of England 1216-1272 **7** 290-292  
Bracton, Henry **21** 54-55

**HENRY IV** (1050-1106), Holy Roman emperor and king of Germany 1056-1106 **7** 292

**HENRY IV** (1367-1413), king of England 1399-1413 **7** 292-293

**HENRY IV** (1553-1610), king of France 1589-1610 **7** 293-295

**HENRY V** (1081-1125), Holy Roman emperor and king of Germany 1106-1125 **7** 295-296

**HENRY V** (1387-1422), king of England 1413-1422 **7** 296-297

**HENRY VI** (1421-1471), king of England 1422-61 and 1470-1471 **7** 298-299

**HENRY VII** (1274-1313), Holy Roman emperor and king of Germany 1308-1313 **7** 299-300

**HENRY VII** (1457-1509), king of England 1485-1509 **7** 300-302

**HENRY VIII** (1491-1547), king of England 1509-1547 **7** 302-305  
Church and state  
Clement VII **21** 81-83

**HENRY, AARON** (born 1922), African American civil rights activist **7** 306-307

**HENRY, JOSEPH** (1797-1878), American physicist and electrical experimenter **7** 307-308

**HENRY, MARGUERITE** (Margurite Breithaupt; 1902-1997), American author **19** 138-140

**HENRY, O.** (pseudonym of William Sydney Porter; 1862-1910), American short-story writer **7** 308-309

**HENRY, PATRICK** (1736-1799), American orator and revolutionary **7** 309-311

**HENRY THE NAVIGATOR** (1394-1460), Portuguese prince **7** 305-306

**HENSON, JIM** (James Maury Henson, 1936-1990), American puppeteer, screenwriter, and producer **19** 140-142

**HENSON, JOSIAH** (1789-1883), African American preacher and former slave **7** 311-312

**HENSON, MATTHEW A.** (1866-1955), African American Arctic explorer **7** 312-314

**HENZE, HANS WERNER** (born 1926), German composer **7** 314

**HEPBURN, AUDREY** (born Edda Van Heemstra Hepburn-Ruston; 1929-1993), Swiss actress and humanitarian **7** 314-316

**HEPBURN, KATHARINE** (born 1907), American actress on the stage and on the screen **7** 316-317

**HEPPLEWHITE, GEORGE** (died 1786), English furniture designer **7** 317-318

**HEPWORTH, BARBARA** (1903-1975), English sculptor **7** 318-319

**HERACLIDES OF PONTUS** (circa 388-310 B.C.), Greek philosopher **7** 319-320

**HERACLITUS** (flourished 500 B.C.), Greek philosopher **7** 320

**HERACLIUS** (circa 575-641), Byzantine emperor 610-641 **7** 320-321

**HERBART, JOHANN FRIEDRICH** (1776-1841), German philosopher-psychologist and educator **7** 321-322

**HERBERG, WILL** (1906-1977), Jewish theologian, social thinker, and biblical exegete **7** 322-323

**HERBERT, EDWARD** (1st Baron Herbert of Cherbury; 1583-1648), English philosopher, poet, diplomat, and historian **7** 324

**HERBERT, GEORGE** (1593-1633), English metaphysical poet and Anglican priest **7** 324-326

**HERDER, JOHANN GOTTFRIED VON** (1744-1803), German philosopher, theologian, and critic **7** 327-328

**HERMAN, JERRY** (born 1931), American composer and lyricist **20** 173-175

**HERNÁNDEZ, JOSÉ** (1834-1886), Argentine poet **7** 328-329

**HERNÁNDEZ COLÓN, RAFAEL** (born 1936), Puerto Rican governor **7** 329-330

**HEROD THE GREAT** (circa 73-4 B.C.), king of Judea **7** 333-334

**HERODOTUS** (circa 484-circa 425 B.C.), Greek historian **7** 330-333

**HERON OF ALEXANDRIA** (flourished circa 60), Greek engineer, mathematician, and inventor **7** 334-335

**HERRERA, JUAN DE** (circa 1530-1597), Spanish architect **7** 335

**HERRERA LANE, FELIPE** (1922-1996), Chilean banker and economist **7** 336

**HERRICK, ROBERT** (1591-1674), English poet and Anglican parson **7** 336-339

**HERRIOT, ÉDOUARD** (1872-1957), French statesman and author **7** 339-340

**HERRMANN, BERNARD** (Benny Herrmann; 1911-1975), American composer **21** 199-202

**HERSCHEL, CAROLINE** (1750-1848), German/English astronomer and mathematician **20** 175-176

**HERSCHEL, SIR JOHN FREDERICK WILLIAM** (1792-1871), English astronomer **7** 340-341

**HERSCHEL, SIR WILLIAM** (1738-1822), German-born English astronomer **7** 341-343

**HERSHEY, ALFRED DAY** (1908-1997), American microbiologist **7** 343-345

**HERSHEY, MILTON** (1857-1945), American businessman and philanthropist **19** 142-144

**HERSKOVITS, MELVILLE JEAN** (1895-1963), American anthropologist **7** 345

**HERTZ, HEINRICH RUDOLF** (1857-1894), German physicist **7** 346-347

**HERTZOG, JAMES BARRY MUNNIK** (1866-1942), South African prime minister 1924-39 **7** 347-348

**HERUY WÄLDÄ-SELLASÉ** (1878-1938), Ethiopian writer and government press director **7** 348-349

**HERZBERG, GERHARD** (born 1904), German-born Canadian chemist/physicist **7** 349-350

**HERZEN, ALEKSANDR IVANOVICH** (1812-1870), Russian author and political agitator **7** 351-352

**HERZL, THEODOR** (1860-1904), Hungarian-born Austrian Zionist author **7** 352-354

**HERZOG, CHAIM** (1918-1997), president of the state of Israel **7** 354-355

**HERZOG, ROMAN** (born 1934), president of the German Federal Constitutional Court (1987-1994) and president of Germany **7** 355-357

**HESBURGH, THEODORE MARTIN** (born 1917), activist American Catholic priest who was president of Notre Dame (1952-1987) **7** 357-358

**HESCHEL, ABRAHAM JOSHUA** (1907-1972), Polish-American Jewish theologian **7** 358-359

**HESELTINE, MICHAEL** (born 1933), British Conservative politician **7** 359-361

**HESIOD** (flourished circa 700 B.C.), Greek poet **7** 361-362

**HESS, VICTOR FRANCIS** (1883-1964), Austrian-American physicist **7** 362-363

**HESS, WALTER RICHARD RUDOLF** (1894-1987), deputy reichsführer for Adolf Hitler (1933-1941) **7** 363-365

**HESS, WALTER RUDOLF** (1881-1973), Swiss neurophysiologist **7** 365

**HESSE, EVA** (1936-1970), American sculptor **7** 365-367

**HESSE, HERMANN** (1877-1962), German novelist **7** 367-369

**HESSE, MARY B.** (born 1924), British philosopher **7** 369-371

**HEVESY, GEORGE CHARLES DE** (1885-1966), Hungarian chemist **7** 371

**HEWITT, ABRAM STEVENS** (1822-1903), American politician and manufacturer **7** 371-372

**HEYDRICH, REINHARD** (1904-1942), German architect of the Holocaust **20** 176-178

**HEYERDAHL, THOR** (born 1914), Norwegian explorer, anthropologist and author **18** 194-196

**HEYSE, PAUL JOHANN LUDWIG** (1830-1914), German author **7** 372-373

**HEYWOOD, THOMAS** (1573/1574-1641), English playwright **7** 373-374

**HICKOK, JAMES BUTLER** ("Wild Bill"; 1837-1876), American gunfighter, scout, and spy **7** 374-375

**HICKS, EDWARD** (1780-1849), American folk painter **7** 375

**HIDALGO Y COSTILLA, MIGUEL** (1753-1811), Mexican revolutionary priest **7** 375-377

**HIDAYAT, SADIQ** (1903-1951), Persian author **7** 377-378

**HIGGINS, MARGUERITE** (1920-1966), American journalist **7** 378-380

**HIGGINSON, THOMAS WENTWORTH** (1823-1911), American reformer and editor **7** 380

**High Noon** (film)  
Cooper, Gary **21** 85-87

**HILDEBRANDT, JOHANN LUCAS VON** (1663-1745), Austrian architect **7** 380-381

**HILDRETH, RICHARD** (1807-1865), American historian and political theorist **7** 382

**HILFIGER, TOMMY** (born 1952), American fashion designer **19** 144-146

**HILL, ANITA** (born 1956), African American lawyer and professor **7** 382-385

**HILL, ARCHIBALD VIVIAN** (1886-1977), English physiologist **7** 385-386

**HILL, BENJAMIN HARVEY** (1823-1882), American politician **7** 386-387

**HILL, HERBERT** (born 1924), American scholar and civil rights activist **7** 387-388

**HILL, JAMES JEROME** (1838-1916), American railroad builder **7** 388-389

**HILL, ROWLAND** (1795-1879), British educator, postal reformer, and administrator **21** 202-204

**HILLARY, EDMUND** (born 1919), New Zealander explorer and mountaineer **7** 389-390

**HILLEL I** (circa 60 B.C. -circa 10 A.D.), Jewish scholar and teacher **7** 390-391

**HILLIARD, NICHOLAS** (circa 1547-1619), English painter **7** 391-392

**HILLMAN, SIDNEY** (1887-1946), Lithuanian-born American labor leader **7** 392-393

**HILLQUIT, MORRIS** (1869-1933), Russian-born American lawyer and author **7** 393-394

**HILLS, CARLA ANDERSON** (born 1934), Republican who served three presidents as lawyer, cabinet member, and U.S. trade representative **7** 394-396

**HILTON, BARRON** (William Barron Hilton; born 1927), American businessman **19** 146-148

**HILTON, CONRAD** (1887-1979), American hotelier **20** 178-180

**HIMMELFARB, GERTRUDE** (born 1922), American professor, writer, and scholar **7** 396-398

**HIMMLER, HEINRICH** (1900-1945), German Nazi leader **7** 398-399

**HINDEMITH, PAUL** (1895-1963), German composer **7** 399-400

**HINDENBURG, PAUL LUDWIG HANS VON BENECKENDORFF UND VON** (1847-1934), German field marshal, president 1925-1934 **7** 400-401

**Hinduism** (religion)  
and Vaishnavism  
Ramanuja **21** 361-362

**HINES, GREGORY OLIVER** (born 1946), American dancer and actor **7** 401-403

**HINOJOSA, ROLANDO** (born 1929), Hispanic-American author **7** 403-405

**HINSHELWOOD, SIR CYRIL NORMAN** (1897-1967), English chemist **7** 405-406

**HINTON, SUSAN ELOISE** (born 1950), American novelist and screenwriter **7** 406-407

**HIPPARCHUS** (flourished 162-126 B.C.), Greek astronomer **7** 407-408

**HIPPOCRATES** (circa 460-circa 377 B.C.), Greek physician **7** 408-410

**HIROHITO** (1901-1989), emperor of Japan **7** 410-412

**HIROSHIGE, ANDO** (1797-1858), Japanese painter and printmaker **7** 412-413

**HISS, ALGER** (1904-1996), U.S. State Department official convicted of having provided classified documents to an admitted Communist **7** 413-415

**HITCHCOCK, ALFRED** (1899-1980), English-born film director **7** 415-416  
Herrmann, Bernard **21** 199-202

**HITCHCOCK, GILBERT MONELL** (1859-1934), American publisher and politician **7** 416-417

**HITLER, ADOLF** (1889-1945), German dictator, chancellor-president 1933-1945 **7** 417-420

**HO CHI MINH** (1890-1969), Vietnamese revolutionary and statesman **7** 426-428

**HOBART, JOHN HENRY** (1775-1830), American Episcopal bishop **7** 420-421

**HOBBS, THOMAS** (1588-1679), English philosopher and political theorist **7** 421-423

**HOBBY, OVETA CULP** (1905-1995), American government official and businesswoman **7** 423-425

**HOBHOUSE, LEONARD TRELAWNY** (1864-1929), English sociologist and philosopher **7** 425-426

**HOBSON, WILLIAM** (1793-1842), British naval commander and colonial governor **7** 426

**HOCKING, WILLIAM ERNEST** (1873-1966), American philosopher **7** 428-429

**HOCKNEY, DAVID** (born 1937), English photographer and artist **7** 429-431

**HODGKIN, ALAN LLOYD** (born 1914), English physiologist **7** 431-432

**HODGKIN, DOROTHY CROWFOOT** (1910-1964), English chemist **7** 432-434

**HODLER, FERDINAND** (1853-1918), Swiss painter **7** 434-435

**HOE, RICHARD MARCH** (1812-1886), American inventor and manufacturer **7** 435-436

**HOFFA, JAMES R.** ("Jimmy"; 1913-1975) American union leader **7** 436-437

**HOFFMAN, ABBIE** (1936-1989), American writer, activist, and leader of the Youth International Party **7** 437-439

**HOFFMANN, ERNST THEODOR AMADEUS** (1776-1822), German author, composer, and artist **7** 439-440

**HOFFMANN, JOSEF** (1870-1956), Austrian architect and decorator **7** 440-441

**HOFHAIMER, PAUL** (1459-1537), Austrian composer, and organist **7** 441

**HOFMANN, AUGUST WILHELM VON** (1818-1892), German organic chemist **7** 441-442

**HOFMANN, HANS** (1880-1966), German-American painter **7** 442-443

**HOFMANNSTHAL, HUGO VON** (1874-1929), Austrian poet and dramatist **7** 443-444

**HOFSTADTER, RICHARD** (1916-1970), American historian **7** 444-445

**HOGAN, BEN** (1912-1997), American golfer **19** 148-150

**HOGARTH, WILLIAM** (1697-1764), English painter and engraver **7** 446-447

**HOKUSAI, KATSUSHIKA** (1760-1849), Japanese painter and printmaker **7** 447-448

**HOLBACH, BARON D'** (Paul Henri Thiry; 1723-1789), German-born French encyclopedist and philosopher **7** 448-449

**HOLBEIN, HANS, THE YOUNGER** (1497/98-1543), German painter and graphic artist **7** 449-450

**HOLBROOK, JOSIAH** (1788-1854), American educator **7** 450-451

**HÖLDERLIN, JOHANN CHRISTIAN FRIEDRICH** (1770-1843), German poet **7** 451-452

**HOLIDAY, BILLIE** (1915-1959), American jazz vocalist **7** 452-453

**HOLLAND, JOHN PHILIP** (1840-1914), Irish-American inventor **7** 453-454

**HOLLERITH, HERMAN** (1860-1929), American inventor and businessman **19** 151-152

**HOLM, HANYA** (née Johanna Eckert; born 1893), German-American dancer and teacher **7** 454-455

**HOLMES, ARTHUR** (1890-1965), English geologist and petrologist **7** 455-456

**HOLMES, JOHN HAYNES** (1879-1964), American Unitarian clergyman **7** 456-457

**HOLMES, OLIVER WENDELL** (1809-1894), American physician and author **7** 457-458

**HOLMES, OLIVER WENDELL, JR.** (1841-1935), American jurist **7** 458-459

**HOLST, GUSTAV** (1874-1934), English composer **7** 459-460

**Holy Office, Congregation of the** see Inquisition, Holy Roman and Universal

**Holy Roman Empire** 1519-1556 (Charles V) financing of Fugger, Jakob **21** 147-149 papal relations Gregory IX **21** 180-183

**HOLYOAKE, KEITH JACKA** (1904-1983), New Zealand prime minister and leader of the National Party **7** 460-462

**HOLZER, JENNY** (born 1950), American Neo-Conceptualist artist **7** 462-463

**HOMANS, GEORGE CASPAR** (1910-1989), American sociologist **7** 463-465

**Homeopathy** (medicine) Hahnemann, Samuel **21** 190-193 Pinkham, Lydia **21** 351-353

**HOMER** (ancient Greek epic poet) **7** 468-469

**HOMER, WINSLOW** (1836-1910), American painter **7** 468-469

**HONDA, SOICHIRO** (1906-1991), Japanese automaker **7** 469-470

**HONECKER, ERICH** (1912-1994), German Communist Party leader and head of the German Democratic Republic (1971-80s) **7** 471-472

**HONEGGER, ARTHUR** (1892-1955), Swiss composer identified with France **7** 472-473

**HONEN** (1133-1212), Japanese Buddhist monk **7** 473

**HOOCH, PIETER DE** (1629-after 1684), Dutch artist **7** 473-474

**HOOK, SIDNEY** (1902-1989), American philosopher and exponent of classical American pragmatism **7** 474-475

**HOOKE, ROBERT** (1635-1703), English physicist **7** 475

**HOOKER, RICHARD** (1554-1600), English theologian and Church of England clergyman **7** 475-476

**HOOKER, THOMAS** (1586-1647), English Puritan theologian, founder of Connecticut Colony **7** 476-477

**HOOKS, BELL** (born Gloria Jean Watkins, born 1952) African American social activist, feminist, and author **7** 477-481

**HOOKS, BENJAMIN LAWSON** (born 1925), executive director of the NAACP and first African American commissioner of the FCC **7** 481-483

**HOOVER, HERBERT CLARK** (1874-1964), American statesman, president 1929-1933 **7** 483-485 domestic policy Curtis, Charles Brent **21** 99-100

**HOOVER, JOHN EDGAR** (1895-1972), American lawyer, criminologist, and FBI director **7** 485-487

**HOPE, BOB** (born Leslie Townes Hope; born 1903), entertainer in vaudeville, radio, television, and movies **7** 487-489

**HOPE, JOHN** (1868-1936), African American educator and religious leader **7** 489-490

**HOPKINS, ANTHONY** (Philip Anthony Hopkins; born 1937), Welsh actor **18** 196-198

**HOPKINS, ESEK** (1718-1802), American Revolutionary patriot **7** 490-491

**HOPKINS, SIR FREDERICK GOWLAND** (1861-1947), English biochemist **7** 496

**HOPKINS, GERARD MANLEY** (1844-1889), English Jesuit poet **7** 492-494

**HOPKINS, HARRY LLOYD** (1890-1946), American statesman **7** 494-495

**HOPKINS, MARK** (1802-1887), American educator **7** 495-496

**HOPKINS, SAMUEL** (1721-1803), American clergyman and theologian **7** 496

**HOPKINSON, FRANCIS** (1737-1791), American politician, writer, and composer **7** 496-497

**HOPPER, EDWARD** (1882-1967), American realist painter **7** 497-498

**HOPPER, GRACE** (born Grace Brewster Murray; 1906-1992), American computer scientist **7** 498-500

**HORACE** (Quintus Horatius Flaccus; 65-8 B.C.), Roman poet and satirist **7** 500-503

**HORNE, HERMAN HARRELL** (1874-1946), American philosopher and educator **7** 503-504

**HORNE, LENA** (born 1917), popular entertainer **7** 504-506

**HORNER, MATINA SOURETIS** (born 1939), American scholar and administrator **7** 506-508

**HORNEY, KAREN DANIELSEN** (1885-1952), German-born American psychoanalyst **7** 508-509

**HORNSBY, ROGERS** (1896-1963), American baseball player and manager **21** 204-206

**HOROWITZ, VLADIMIR** (1904-1989), American pianist **7** 509-510

**Horse racing/breeding** Shoemaker, Willie **21** 381-383

**HORTHY DE NAGYBÁNYA, NICHOLAS** (1868-1957), Hungarian admiral and statesman, regent 1920-44 **7** 510-512

**HOSEA** (flourished 750-722 B.C.), Hebrew prophet of the kingdom of Israel **7** 512

**HO-SHEN** (1750-1799), Manchu official in China **7** 512-513 Chien-lung **21** 78-79



**HOSTOS, EUGENIO MARÍA DE** (1839-1903), Puerto Rican philosopher, educator, and writer **7** 513-514

**HOUDINI, HARRY** (born Erich Weiss; 1874-1926), American magician and illusionist **7** 514-516

**HOUDON, ANTOINE** (1741-1828), French sculptor **7** 516-517

**HOUNSFIELD, GODFREY** (born 1919), English biomedical engineer **7** 517-519

**HOUPHOUËT-BOIGNY, FELIX** (1905-1993), Ivorian statesman 1960 **7** 519-520

**HOUSE, EDWARD MANDELL** (1858-1938), American diplomat **7** 520-521

**House of Representatives, U.S.**  
see U.S. House of Representatives

**HOUSMAN, ALFRED EDWARD** (1859-1936), English poet **7** 521-522

**HOUSSAY, BERNARDO ALBERTO** (1887-1971), Argentine physiologist **7** 522-523

**HOUSTON, CHARLES HAMILTON** (1895-1950), African American lawyer and civil rights leader **7** 523-526

**HOUSTON, SAMUEL** (1793-1863), American statesman and soldier **7** 526-527

**HOUSTON, WHITNEY** (born 1963), American singer and actress **19** 152-155

**HOVLAND, CARL I.** (1912-1961), American psychologist **7** 527-528

**HOWARD, JOHN WINSTON** (born 1939), Australian prime minister **18** 198-200

**HOWARD, OLIVER OTIS** (1830-1909), American Union general **7** 528-529

**HOWARD, RON** (born 1954), American actor, director, and producer **19** 155-158

**HOWE, EDGAR WATSON** (1853-1937), American author and editor **7** 529

**HOWE, ELIAS** (1819-1867), American inventor **7** 529-530

**HOWE, FLORENCE ROSENFELD** (born 1929), feminist American author, publisher, literary scholar, and historian **7** 530-531

**HOWE, GEOFFREY** (Richard Edward; born 1926), British foreign secretary **7** 531-532

**HOWE, GORDIE** (born 1928), Canadian hockey player **7** 532-534

**HOWE, JOSEPH** (1804-1873), Canadian journalist, reformer, and politician **7** 534-535

**HOWE, JULIA WARD** (1819-1910), American author and reformer **7** 535-536

**HOWE, RICHARD** (Earl Howe; 1726-1799), English admiral **7** 536-537

**HOWE, SAMUEL GRIDLEY** (1801-1876), American physician and reformer **7** 537

**HOWE, WILLIAM** (5th Viscount Howe; 1729-1814), British general **7** 538-539

**HOWELLS, WILLIAM DEAN** (1837-1920), American writer **7** 539-541

**HOWELLS, WILLIAM WHITE** (born 1908), American anthropologist **7** 541-542

**HOXHA, ENVER** (1908-1985), leader of the Communist Party of Albania from its formation in 1941 until his death **8** 1-3

**HOYLE, EDMOND** (1672-1769), English authority on card games **21** 206-208

**HOYLE, FRED** (born 1915), English astronomer and author **18** 200-202

**HRDLÍČKA, ALEŠ** (1869-1943), American physical anthropologist **8** 3-4

**HSIA KUEI** (flourished 1190-1225), Chinese painter **8** 4-5

**HSIEH LING-YÜN** (385-433), duke of K'ang-lo, Chinese poet **8** 5-6

**HSÜAN TSANG** (circa 602-664), Chinese Buddhist in India **8** 6-7

**HSÜAN-TSUNG, T'ANG** (685-762), Chinese emperor **8** 7-8

**HSÜN-TZU** (Hsün Ch'ing; circa 312-circa 235 B.C.), Chinese philosopher **8** 8

**HU SHIH** (1891-1962), Chinese philosopher **8** 63-65

**HUANG CH'AO** (died 884), Chinese rebel leader **8** 8-9

**HUANG TSUNG-HSI** (1610-1695), Chinese scholar and philosopher **8** 9-10

**HUBBARD, L. RON** (1911-1986), American author and founder of Scientology **18** 202-204

**HUBBLE, EDWIN POWELL** (1889-1953), American astronomer **8** 10-11

**HUBLEY, JOHN** (1914-1977), American animator and filmmaker **21** 208-210

**HUCH, RICARDA** (1864-1947), German novelist, poet, and historian **8** 11-12

**HUDSON, HENRY** (flourished 1607-1611), English navigator **8** 12-13

**HUERTA, DOLORES** (born 1930), Hispanic American labor activist **18** 204-207

**HUERTA, VICTORIANO** (1854-1916), Mexican general and politician **8** 13-14

**HUGGINS, SIR WILLIAM** (1824-1910), English astronomer **8** 14-15

**HUGHES, CHARLES EVANS** (1862-1948), American jurist and statesman **8** 15-16

**HUGHES, HOWARD ROBARD** (1905-1976), flamboyant American entrepreneur **8** 16-17

**HUGHES, JOHN JOSEPH** (1797-1864), Irish-American Catholic archbishop **8** 17-18

**HUGHES, LANGSTON** (1902-1967), African American author **8** 18-19  
Bontemps, Arna **21** 47-50

**HUGHES, RICHARD** (1900-1976), English author **19** 158-160

**HUGHES, TED** (1930-1998), English poet laureate **8** 19-21

**HUGHES, WILLIAM MORRIS** (1864-1952), Australian prime minister 1915-1923 **8** 21-22

**HUGO, VICOMTE VICTOR MARIE** (1802-1885), French author **8** 22-25

**HUI-TSUNG** (1082-1135), Chinese emperor and artist **8** 25

**HUI-YÜAN** (334-416), Chinese Buddhist monk **8** 25-26

**HUIZINGA, JOHAN** (1872-1945), Dutch historian **8** 26-27

**HULAGU KHAN** (Hüle'ü; circa 1216-1265), Mongol ruler in Persia **8** 27-28

**HULL, BOBBY** (Robert Marvin Hull; born 1939), Canadian hockey player **20** 181-183

**HULL, CLARK LEONARD** (1884-1952), American psychologist **8** 28

**HULL, CORDELL** (1871-1955), American statesman **8** 28-29

**HULL, WILLIAM** (1753-1825), American military commander **8** 29-30

**Humanitarians**  
Julia, Raul **21** 230-232

**HUMAYUN** (1508-1556), Mogul emperor 1530-1556 **20** 183-185

**HUMBOLDT, BARON FRIEDRICH HEINRICH ALEXANDER VON** (1769-1859), German naturalist and explorer **8** 30-31

**HUMBOLDT, BARON WILHELM VON** (1767-1835), German statesman and philologist **8** 31

**HUME, DAVID** (1711-1776), Scottish philosopher **8** 31-34

**HUMPHREY, HUBERT HORATIO, JR.** (1911-1978), mayor of Minneapolis, U.S. senator from Minnesota, and vice-president of the U.S. **8** 34-36

**HUN SEN** (born 1951), Cambodian prime minister **8** 39-42

**HUNDERTWASSER, FRIEDENSREICH** (Friedrich Stowasser; 1928-2000), Austrian-born visionary painter and spiritualist **8** 36-37

**HUNG HSIU-CH'ÜAN** (1814-1864), Chinese religious leader, founder of Taiping sect **8** 37-38

**Hunger Project, the** (humanitarian organization)  
Julia, Raul **21** 230-232

**HUNG-WU** (1328-1398), Chinese Ming emperor 1368-98 **8** 38-39

**HUNT, H. L.** (1889-1974), American entrepreneur **8** 42-44

**HUNT, RICHARD MORRIS** (1827-1895), American architect **8** 44

**HUNT, WALTER** (1796-1859), American inventor **21** 210-212

**HUNT, WILLIAM HOLMAN** (1827-1910), English painter **8** 44-45

**HUNTER, FLOYD** (born 1912), American social worker and administrator, community worker, professor, and author **8** 45-46

**HUNTER, MADELINE CHEEK** (1916-1994), American educator **8** 47-48

**HUNTER, WILLIAM** (1718-1783), Scottish anatomist **8** 48-49

**HUNTINGTON, COLLIS POTTER** (1821-1900), American railroad builder **8** 49

**HUNTLEY AND BRINKLEY** (1956-1970), American journalists and radio and television news team **8** 49-51

**HUNYADI, JOHN** (1385-1456), Hungarian military leader, regent 1446-1452 **8** 51-52

**HURD, DOUGLAS** (born 1930), English Conservative Party politician and foreign secretary **8** 52-55

**HURSTON, ZORA NEALE** (1903-1960), African American folklorist and novelist **8** 55-56

**HUS, JAN** (a.k.a. John Hus; ca.1369-1415), Bohemian religious reformer **8** 56-59

**HUSÁK, GUSTÁV** (born 1913), president of the Czechoslovak Socialist Republic (1975-1987) **8** 59-61

**HUSAYN, TAHA** (1889-1973), Egyptian author, educator, and statesman **8** 61-62

**HUSAYNI, AL-HAJJ AMIN AL-** (1895-1974), Moslem scholar/leader and mufti of Jerusalem (1922-1948) **8** 62-63

**HUSEIN IBN ALI** (circa 1854-1931), Arab nationalist, king of Hejaz 1916-1924 **8** 63

**HUSSEIN IBN TALAL** (1935-1999), king of the Hashemite Kingdom of Jordan (1953-80s) **8** 65-67

**HUSSEINI, FAISAL** (born 1940), Palestinian political leader **19** 160-162

**HUSSERL, EDMUND** (1859-1938), German philosopher **8** 67-68

**HUTCHINS, ROBERT MAYNARD** (1899-1977), American educator **8** 68-69

**HUTCHINSON, ANNE MARBURY** (1591-1643), English-born American religious leader **8** 69-71

**HUTCHINSON, THOMAS** (1711-1780), American colonial governor **8** 71-72

**HUTTEN, ULRICH VON** (1488-1523), German humanist **8** 72-73

**HUTTON, JAMES** (1726-1797), Scottish geologist **8** 73-74

**HUXLEY, ALDOUS LEONARD** (1894-1963), English novelist and essayist **8** 74-75

**HUXLEY, JULIAN** (1887-1975), English biologist and author **8** 75-77

**HUXLEY, THOMAS HENRY** (1825-1895), English biologist **8** 77-79

**HUYGENS, CHRISTIAAN** (1629-1695), Dutch mathematician, astronomer, and physicist **8** 79-81

**HUYSMANS, JORIS KARL** (1848-1907), French novelist **8** 81-82

**Hybridization**  
see Plant breeding

**HYDE, DOUGLAS** (1860-1949), Irish author, president 1938-45 **8** 82-83

**HYMAN, LIBBIE HENRIETTA** (1888-1969), American zoologist **8** 83-84

**HYPATIA OF ALEXANDRIA** (370-415), Greek mathematician and philosopher **8** 85

## I

**I Love Lucy**  
Arnaz, Desi **21** 12-14

**IACOCCA, LIDO (LEE) ANTHONY** (born 1924), American automobile magnate **8** 86-88

**IBÁÑEZ DEL CAMPO, CARLOS** (1877-1960), Chilean general and president **8** 88

**ÍBARRURI GÓMEZ, DOLORES** (1895-1989), voice of the Republican cause in the Spanish Civil War **8** 88-90

**IBERVILLE, SIEUR D'** (Pierre le Moyne; 1661-1706), Canadian soldier, naval captain, and adventurer **8** 90-91

**IBN AL-ARABI, MUHYI AL-DIN** (1165-1240), Spanish-born Moslem poet, philosopher, and mystic **8** 91

**IBN BATTUTA, MUHAMMAD** (1304-1368/69), Moslem traveler and author **8** 91-92

**IBN GABIROL, SOLOMON BEN JUDAH** (circa 1021-circa 1058), Spanish Hebrew poet and philosopher **8** 92

**IBN HAZM, ABU MUHAMMAD ALI** (994-1064), Spanish-born Arab theologian and jurist **8** 93

**IBN KHALDUN, ABD AL-RAHMAN IBN MUHAMMAD** (1332-1406), Arab historian, philosopher, and statesman **8** 93-94

**IBN SAUD, ABD AL-AZIZ** (1880-1953), Arab politician, founder of Saudi Arabia **8** 94-95

**IBN TASHUFIN, YUSUF** (died 1106), North African Almoravid ruler **8** 95-96

**IBN TUFAYL, ABU BAKR MUHAMMAD** (circa 1110-1185), Spanish Moslem philosopher and physician **8** 96

**IBN TUMART, MUHAMMAD** (circa 1080-1130), North African Islamic theologian **8** 96-97

**IBRAHIM PASHA** (1789-1848), Turkish military and administrative leader **8** 97-98

**IBSEN, HENRIK** (1828-1906), Norwegian playwright **8** 98-100

**ICKES, HAROLD LECLAIRE** (1874-1952), American statesman **8** 100-101

**ICTINUS** (flourished 2nd half of 5th century B.C.), Greek architect **8** 101

**IDRIS I** (1889-1983), king of Libya 1950-69 **8** 102

**IDRISI, MUHAMMAD IBN MUHAMMAD AL-** (1100-1165?), Arab geographer **8** 102-103

**IGLESIAS, ENRIQUE V.** (born 1930), Uruguayan economist, banker, and public official **8** 106-107

**IGNATIUS OF ANTIOCH, SAINT** (died circa 115), Early Christian bishop and theologian **8** 107-108

**IGNATIUS OF LOYOLA, SAINT** (1491-1556), Spanish soldier, founder of Jesuits **8** 108-109

**IKEDA, DAISAKU** (born 1928), Japanese Buddhist writer and religious leader **8** 109-110

**IKHNATON** (ruled 1379-1362 B.C.), pharaoh of Egypt **8** 110-111

**ILIESCU, ION** (born 1930), president of Romania (1990-) **8** 111-112

**ILITCH, MIKE** (born 1929), American businessman **19** 163-165

**ILLICH, IVAN** (born 1926), theologian, educator, and social critic **8** 112-114

**IMAM, ALHADJI ABUBAKAR** (1911-1981), Nigerian writer and teacher **8** 114-115

**IMAOKA, SHINICHIRO** (1881-1988), progressive and liberal religious leader in Japan **8** 115

**IMHOTEP** (ca. 3000 B.C. - ca. 2950 B.C.), Egyptian vizier, architect, priest, astronomer, and magician-physician **8** 116-117

**Immigrants to the United States**  
from China  
Lee, Rose **21** 258-260  
from Ireland (19th-20th century)  
Mallon, Mary **21** 266-268

**Immunology** (medicine)  
and organ transplants  
Starzl, Thomas **21** 393-395

**Impressionism** (art)  
France (19th century)  
Morisot, Berthe **21** 303-305

**INCE, THOMAS** (1882-1924), American film producer and director **21** 213-215

**Inceville** (film studio)  
Ince, Thomas **21** 213-215

**Indian Ocean**  
Kidd, William **21** 242-244

**Indians** (North American)  
assimilation of  
Curtis, Charles Brent **21** 99-100  
authors  
Boudinot, Elias **21** 52-54  
interpreters  
Boudinot, Elias **21** 52-54  
opponents of removals  
Captain Jack **21** 72-74  
treaties with  
Boudinot, Elias **21** 52-54

**Industrial revolution**  
factory system  
Taylor, Frederick Winslow **21** 400-402

**Industrialization** (mass production)  
Maudslay, Henry **21** 286-288

**INGE, WILLIAM RALPH** (1860-1954), Church of England clergyman, scholar, social critic, and writer **8** 118-119

**INGENHOUSZ, JAN** (1730-1799), Dutch physician, chemist, and engineer **8** 119-120

**INGERSOLL, ROBERT GREEN** (1833-1899), American lawyer and lecturer **8** 120-121

**INGRES, JEAN AUGUSTE DOMINIQUE** (1780-1867), French painter **8** 121-123

**INNESS, GEORGE** (1825-1894), American painter **8** 123-124

**INNIS, HAROLD ADAMS** (1894-1952), Canadian political economist **8** 124-125

**INNOCENT III** (Lothar of Segni; 1160/1161-1216), pope 1198-1216 **8** 125-127  
Langton, Stephen **21** 249-251

**Innocent IV** (Sinibaldo de' Fieschi; died 1254), pope 1243-1254  
Gregory IX **21** 180-183

**INÖNÜ, ISMET** (1884-1973), Turkish military man, statesman, and second president **8** 127-129

**Inquisition, Holy Roman and Universal** (now Congolese for the Doctrine of the Faith)  
foundations  
Gregory IX **21** 180-183

**Inquisition, Spanish** (1478-1834)  
commissioners  
Torquemada, Tomas **21** 407-409

**INSULL, SAMUEL** (1859-1938), English-born American entrepreneur **8** 130

**Insurance** (business)  
Perkins, George Walbridge **21** 344-347

**Integration** (racial, United States)  
see African American history

**International Boxing Hall of Fame**  
Armstrong, Henry **21** 9-11

**International Harvester Co.** (established 1902)  
Perkins, George Walbridge **21** 344-347

**International Tennis Hall of Fame**  
Budge, Don **21** 57-59

**Interstate Commerce Commission** (United States)  
Taylor, Frederick Winslow **21** 400-402

**INUKAI, TSUYOSHI** (1855-1932), Japanese journalist and statesman **8** 130-131

**IONESCO, EUGÈNE** (1912-1994), Franco-Romanian author **8** 131-132

**IQBAL, MUHAMMAD** (1877?-1938), Indian Moslem poet and philosopher **8** 132-133

**IRELAND, JOHN** (1838-1918), American Catholic archbishop **8** 133-134

**IRELAND, PATRICIA** (born 1945), president of the National Organization for Women (NOW) **8** 134-135

**IRENE OF ATHENS** (ca. 752-803), Byzantine empress 797-802 **8** 135-138

**IRIGOYEN, HIPÓLITO** (circa 1850-1933), Argentine statesman, twice president **8** 139-140

**IRVING, KENNETH COLIN** ("K. C."; 1899-1992), Canadian industrialist, the "Paul Bunyan of New Brunswick" **8** 140-141

**IRVING, WASHINGTON** (1783-1859), American author and journalist **8** 141-143

**ISAAC, HEINRICH** (circa 1450-1517), Flemish composer **8** 143-144

**ISAACS, JORGE** (1837-1895), Colombian novelist **8** 144

**ISABELLA I** (1451-1504), queen of Castile 1474-1504 **8** 144-145  
Torquemada, Tomas **21** 407-409

**ISABELLA II** (1830-1904), queen of Spain 1833-1868 **8** 145-146

**ISAIAH** (flourished circa 740-701 B.C.), Hebrew prophet **8** 146-147

**ISHERWOOD, CHRISTOPHER** (1904-1986), British-born American writer of fiction, drama, film, travel, and autobiography **8** 147-149

**ISIDORE OF SEVILLE, SAINT** (560-636), Spanish cleric and encyclopedist **8** 149-150

**ISMAIL PASHA** (1830-1895), khedive of Egypt 1863-1879 **8** 150-151

**ISOCRATES** (436-338 B.C.), Athenian orator **8** 151

**Isolationism** (United States politics)  
Nye, Gerald **21** 320-323

**ISOZAKI, ARATA** (born 1931), Japanese architect **8** 152-153

**Italian literature**  
mythological tales  
Fracastoro, Girolamo **21** 144-147

**Italian music**  
instrument makers  
Cristofori, Bartolomeo **21** 94-96

**ITO, HIROBUMI** (1841-1909), Japanese statesman **8** 153-155

**ITURBIDE, AGUSTÍN DE** (1783-1824), Mexican military leader **8** 155-156

**IVAN III** (1440-1505), grand duke of Moscow 1462-1505 **8** 156-157

**IVAN IV** (1530-1584), grand duke of Moscow, czar of Russia 1547-1584 **8** 157-159

**IVES, CHARLES EDWARD** (1874-1954), American composer **8** 159-160

**IVORY, JAMES** (born 1928), American film director and producer **20** 186-188

**IWAKURA, TOMOMI** (1825-1883), Japanese statesman **8** 160-161

**IZETBEGOVIC, ALIJA** (born 1926), president of the eight-member presidency of the Republic of Bosnia-Herzegovina **8** 161-163

## J

**JA JA OF OPOBO** (ca. 1820-1891), Nigerian politician **8** 201-204

**JABBAR, KAREEM ABDUL** (Ferdinand Lewis Alcinor, Junior; born 1947), American basketball player **8** 164-165

**JABER AL-SABAH, JABER AL-AHMAD AL-** (born 1926), amir of Kuwait **8** 166-167

**JABIR IBN HAYYAN** (flourished latter 8th century), Arab scholar and alchemist **8** 167

**JABOTINSKY, VLADIMIR EVGENEVICH** (1880-1940), Russian Zionist **8** 167-168

**JACKSON, ANDREW** (1767-1845), American president 1829-1837 **8** 168-172

**JACKSON, HELEN HUNT** (1830-1885), American novelist **8** 172

**JACKSON, HENRY MARTIN** (Scoop; 1912-1983), United States senator and proponent of anti-Soviet foreign policy **8** 172-174

**JACKSON, JESSE LOUIS** (born 1941), U.S. civil rights leader and presidential candidate **8** 174-176

**JACKSON, MAHALIA** (1911-1972), American singer **19** 166-168

**JACKSON, MAYNARD HOLBROOK, JR.** (born 1938), first African American mayor of Atlanta, Georgia (1973-81 and 1989-1993) **8** 176-178

**JACKSON, MICHAEL JOE** (born 1958), one of the most popular singers in history **8** 178-180

**JACKSON, REGINALD "REGGIE" MARTINEZ** (born 1946), African American baseball player **8** 180-182

**JACKSON, ROBERT HOUGHWOUT** (1892-1954), American jurist **8** 182-183

**JACKSON, SHIRLEY ANN** (born 1946), African American physicist **8** 183-184

**JACKSON, THOMAS JONATHAN** ("Stonewall"; 1824-1863), American Confederate general **8** 184-185

**JACOB, JOHN EDWARD** (born 1934), African American activist and president of the National Urban League **8** 185-188

**JACOBI, ABRAHAM** (1830-1919), American physician **8** 188-189

**JACOBI, DEREK** (born 1938), British actor **19** 168-170

**JACOBI, FRIEDRICH HEINRICH** (1743-1819), German philosopher **8** 189-190

**JACOBI, MARY PUTNAM** (1834-1906), American physician **8** 188-189

**JACOBS, HARRIET A.** (1813-1897), runaway slave and abolitionist **8** 190-193

**JACOBSEN, JENS PETER** (1847-1885), Danish author **8** 193-194

**JACOPONE DA TODI** (circa 1236-1306), Italian poet and mystic **8** 194

**JACQUARD, JOSEPH MARIE** (1752-1834), French inventor **21** 216-218

**JAGGER, MICHAEL PHILIP** ("Mick"; born 1944), lead singer for the Rolling Stones **8** 194-196

**JAHANGIR** (1569-1627), fourth Mughal emperor of India **8** 196-199

**JAHN, HELMUT** (born 1940), German-American architect **8** 199-201

**JAMES I** (1394-1437), king of Scotland 1406-1437 **8** 206-207

**JAMES I** (James VI of Scotland; 1566-1625), king of England 1603-1625 **8** 204-206

**JAMES II** (1633-1701), king of England, Scotland, and Ireland 1685-1688 **8** 207-208

**JAMES III** (1451-1488), king of Scotland 1460-1488 **8** 208-209

**JAMES, DANIEL, JR.** ("Chappie"; 1920-1978), first African American man in the U.S. to become a four star general **8** 209-211

**JAMES, HENRY** (1843-1916), American novelist **8** 211-212

**JAMES, JESSE WOODSON** (1847-1882), American outlaw **8** 212-213

**JAMES, P. D.** (born 1920), British crime novelist **8** 213-215

**JAMES, WILLIAM** (1842-1910), American philosopher and psychologist **8** 215-217

**JAMESON, SIR LEANDER STARR** (1853-1917), British colonial administrator **8** 218

**JAMI** (Maulana Nur al-Din Abd al-Rahman; 1414-1492), Persian poet **8** 218-219

**JANÁČEK, LEOŠ** (1854-1928), Czech composer **8** 219

**JANET, PIERRE MARIE FÉLIX** (1859-1947), French psychologist **8** 220

**JANSEN, CORNELIS** (1585-1638), Dutch Roman Catholic theologian **8** 220-221

**JAQUES-DALCROZE, EMILE** (1865-1950), Swiss teacher and composer who developed eurhythmics **8** 221-222

**JARRELL, RANDALL** (1914-1965), American poet and critic **8** 222-223

**JARUZELSKI, WOJCIECH WITOLD** (born 1923), career soldier who became Poland's head of state (1981-1990) **8** 223-225

**JASPERS, KARL** (1883-1969), German philosopher **8** 225-226

**JAURÈS, JEAN** (1859-1914), French Socialist and politician **8** 226-227

**JAWARA, SIR DAUDA KAIRABA** (born 1924), Gambian statesman **8** 227-228

**JAWLENSKY, ALEXEJ VON** (1864-1941), Russian Expressionist painter **8** 228-229

**JAWORSKI, LEON** (1905-1982), American lawyer and independent prosecutor of Watergate **8** 229-230

**JAY, JOHN** (1745-1829), American diplomat and jurist **8** 230-232

**JAY, WILLIAM** (1789-1858), American reformer **8** 232-233

**JAYEWARDENE, JUNIUS RICHARD (JR;** 1906-1996), leader of the nationalist movement in Ceylon and president of Sri Lanka **8** 233-234

**JEAN DE MEUN** (circa 1240-1305), French author **8** 234-235

**JEANS, SIR JAMES HOPWOOD** (1877-1946), English mathematician, physicist, and astronomer **8** 235-236

**JEFFERS, JOHN ROBINSON** (1887-1962), American poet **8** 236-237

**JEFFERSON, JOSEPH** (1829-1905), American actor **8** 237

**JEFFERSON, THOMAS** (1743-1826), American philosopher and statesman, president 1801-1809 **8** 238-241

**JEFFREYS, SIR HAROLD** (1891-1989), English mathematician, astronomer, and philosopher **8** 241-242

**JELlicoe, JOHN RUSHWORTH** (1859-1935), English admiral **8** 242-243

**JEMISON, MAE C.** (born 1956), African American physician and astronaut **8** 243-244

**JENKINS, ROY HARRIS** (born 1920), British Labour politician and author **8** 244-245

**JENNER, BRUCE** (born 1949), American track and field athlete and motivational speaker **21** 218-221

**JENNER, EDWARD** (1749-1823), English physician **8** 245-246

**JENNEY, WILLIAM LE BARON** (1832-1907), American architect and engineer **21** 221-223

**JENNINGS, ROBERT YEWDALL** (born 1913), British judge who was president of the International Court of Justice **8** 246-247

**JEREMIAH** (flourished late 7th-early 6th century B.C.), Hebrew priest and prophet **8** 247-248

**JEROBOAM I** (ruled circa 931-circa 910 B.C.), king of the northern kingdom of Israel **8** 248-249

**JEROME, ST.** (circa 345-420), Early Christian biblical scholar **8** 249

**JESSEL, GEORGE** (1898-1981), American screen, stage, radio, and television actor and comedian and film director, composer, and screenwriter **8** 249-251

**JESUS BEN SIRA** (Sirach; flourished circa 170 B.C.), Jewish sage and author **8** 251

**JESUS OF NAZARETH** (circa 4 B.C. - 29/30 A.D.), founder of the Christian faith **8** 251-255

**JEVONS, WILLIAM STANLEY** (1835-1882), English economist, logician, and statistician **8** 255-256

**JEWETT, SARAH ORNE** (1849-1909), American novelist **8** 256

**JHABVALA, RUTH PRAWER** (born 1927), English screenwriter and novelist **18** 208-210

**JIANG QING** (Madame Mao Zedong; 1914-1991), Chinese revolutionary and leader of the Great Proletarian Cultural Revolution **8** 256-260

**JIANG ZEMIN** (born 1927), general secretary of the Chinese Communist Party Central Committee **8** 260-261

**JIMÉNEZ, JUAN RAMÓN** (1881-1958), Spanish symbolist poet **8** 261-262

**JIMÉNEZ DE QUESADA, GONZALO** (1509-1579), Spanish conquistador **12** 509-510

**JINNAH, MOHAMMAD ALI** (1876-1948), Pakistani governor general 1947-1948 **8** 262-263

**JOACHIM OF FIORE** (circa 1132-1202), Italian mystic **8** 263-264

**JOAN OF ARC** (1412?-1431), French national heroine **8** 264-265

**JOBS, STEVEN** (born 1955), American computer designer and co-founder of Apple Computers **8** 265-267

**JODL, ALFRED** (1892?-1946), German general **18** 210-212

**JOFFRE, JOSEPH JACQUES CÉSAIRE** (1852-1931), French marshal **8** 267-268

**JOFFREY, ROBERT** (born Abdullah Jaffa Anver Bey Khan; 1930-1988), American dancer and choreographer **8** 268-270

**JOQUES, ST. ISAAC** (1607-1646), French Jesuit missionary and martyr **8** 270-271

**JOHANAN BEN ZAKKAI** (flourished circa 70 A.D.), Jewish teacher **8** 271-272

**JOHANNES IV** (1836-1889), Ethiopian emperor 1872-1889 **8** 272-273

**JOHN** (1167-1216), king of England 1199-1216 **8** 274-275  
Langton, Stephen **21** 249-251

**JOHN II** (1319-1364), king of France 1350-1364 **8** 275-276

**JOHN II** (1455-1495), king of Portugal 1481-1495 **21** 223-225  
Behaim, Martin **21** 30-32

**JOHN III** (John Sobieski; 1629-1696), king of Poland **8** 276-277

**JOHN XXIII** (Angelo Giuseppe Roncalli; 1881-1963), pope 1958-1963 **8** 277-280

**JOHN, AUGUSTUS EDWIN** (1878-1961), Welsh painter **8** 291

**JOHN, ELTON HERCULES** (Reginald Kenneth Dwight; born 1947), English singer, songwriter and humanitarian **18** 212-214

**JOHN, ST.** (flourished 1st century A.D.), Christian Apostle and Evangelist **8** 273-274

**JOHN CHRYSOSTOM, ST.** (circa 347-407), bishop of Constantinople **8** 280-281

**JOHN MAURICE OF NASSAU** (1604-1679), Dutch governor general of Netherlands Brazil **8** 281-282

**JOHN OF AUSTRIA** (1547-1578), Spanish general **20** 189-192

**JOHN OF DAMASCUS, ST.** (circa 680-750), Syrian theologian **8** 282

**JOHN OF GAUNT** (5th Duke of Lancaster; 1340-1399), English soldier-statesman **8** 282-283

**JOHN OF LEIDEN** (1509-1536), Dutch Anabaptist **8** 283

**JOHN OF PIANO CARPINI** (circa 1180-1252), Italian Franciscan monk **8** 284

**JOHN OF SALISBURY** (1115/20-1180), English bishop and humanist **8** 284-285

**JOHN OF THE CROSS, ST.** (1542-1591), Spanish Carmelite mystic **8** 285

**JOHN PAUL I** (Albino Luciani; 1912-1978), Roman Catholic pope (August 26-September 28, 1978) **8** 286-287

**JOHN PAUL II** (Karol Wojtyła; born 1920), cardinal of Krakow, Poland, and later Roman Catholic pope **8** 287-290

**JOHN THE BAPTIST, ST.** (flourished circa 29 A.D.), New Testament figure, forerunner of Jesus of Nazareth **8** 290

**JOHNS, JASPER** (born 1930), American painter and sculptor **8** 291-293

**Johns Hopkins University** (Baltimore, Maryland)  
archeology  
Albright, William **21** 1-3

**JOHNSON, ALVIN SAUNDERS** (1874-1971), American economist and editor **8** 293-294

**JOHNSON, ANDREW** (1808-1875), American statesman, president 1865-1869 **8** 294-295

**JOHNSON, BETSEY** (born 1941?), American fashion designer **8** 295-296

**JOHNSON, CHARLES SPURGEON** (1893-1956), African American educator and sociologist **8** 296-297

**JOHNSON, EARVIN, JR.** ("Magic"; born 1959), popular African American star of the Los Angeles Lakers basketball team **8** 297-299

**JOHNSON, GUY BENTON** (1901-1991), sociologist, social anthropologist, and archaeologist who was a student of African American culture and an advocate of racial equality **8** 299-300

**JOHNSON, HIRAM WARREN** (1866-1945), American politician **8** 300-301

**JOHNSON, JACK** (1878-1946), African American boxer **8** 301-304

**JOHNSON, JAMES WELDON** (1871-1938), African American author and lawyer **8** 304-305

**JOHNSON, SIR JOHN** (1742-1830), American loyalist in the American Revolution **8** 305-306

**JOHNSON, JOHN HAROLD** (born 1918), American entrepreneur and founder of the Johnson Publishing Company **8** 306-308

**JOHNSON, JONATHAN EASTMAN** (1824-1906), American painter **8** 308

**JOHNSON, LYNDON BAINES** (1908-1973), American statesman, president 1963-1969 **8** 308-312

**JOHNSON, MARIETTA LOUISE PIERCE** (1864-1938), founder and 30-year teacher of an Alabama experimental school **8** 312-313

**JOHNSON, PHILIP** (born 1906), American architect, critic, and historian **8** 313-314

**JOHNSON, RAFER** (born 1935), American decathlete and goodwill ambassador **21** 225-227

**JOHNSON, SAMUEL** (1696-1772), American clergyman and educator **8** 314-315

**JOHNSON, SAMUEL** (1709-1784), English author and lexicographer **8** 315-317

**JOHNSON, TOM LOFTIN** (1854-1911), American entrepreneur and politician **8** 317

**JOHNSON, VIRGINIA E.** (born 1925), American psychologist and sex therapist **8** 317-319

**JOHNSON, WALTER** ("Big Train"; 1887-1946), American baseball player and manager **21** 228-230

**JOHNSON, SIR WILLIAM** (1715-1774), British colonial administrator **8** 319-320

**JOHNSON, WILLIAM H.** (1901-1970), African American painter of the Black experience **8** 320-322

**JOHNSTON, HENRY HAMILTON** (Sir Harry Johnston; 1858-1927), English administrator, explorer, and author **8** 322-323

**JOHNSTON, JOSEPH EGGLESTON** (1807-1891), American Confederate general **8** 323

**JOHNSTON, JOSHUA** (a.k.a. Joshua Johnson; ca. 1765 - ca 1830), African American portrait artist **8** 323-325

**JOHNSTON, LYNN** (born 1947), Canadian cartoonist and artist **18** 214-216

**JOINVILLE, JEAN DE** (1224/25-1317), French author **8** 325

**JOLIOT-CURIE, IRÈNE** (1897-1956), French chemist and physicist **8** 325-327

**JOLIOT-CURIE, JEAN FRÉDÉRIC** (1900-1958), French physicist **8** 327-328

**JOLLIET, LOUIS** (1645-1700), French-Canadian explorer, hydrographer, and fur trader **8** 328-329

**JOLSON, AL** (Asa Yoelson; 1886-1950), American vaudeville, theater, and radio singing performer and film actor **8** 329-330

**JONATHAN, CHIEF JOSEPH LEABUA** (1914-1987), Lesothoan statesman **8** 330-331

**JONES, ERNEST ALFRED** (1879-1958), British psychologist **8** 331-332

**JONES, FAY** (born 1921), American architect **8** 332-333

**JONES, FREDERICK MCKINLEY** (1893(?)-1961), African American inventor **20** 192-194

**JONES, INIGO** (1573-1652), English architect and designer **8** 333-334

**JONES, JAMES EARL** (born 1931), African American actor **8** 334-337

**JONES, JOHN PAUL** (1747-1792), American Revolutionary War naval officer **8** 337-338

**JONES, LOIS MAILOU** (1905-1998), African American artist **20** 194-196

**JONES, MARY HARRIS** ("Mother"; 1830-1930), Irish immigrant who devoted her life to improving conditions of the working class **8** 338-339

**JONES, QUINCY DELIGHT, JR.** (born 1933), African American musician-composer-arranger-producer-film and television executive **8** 339-341

**JONES, ROBERT EDMOND** (1887-1954), American designer of scenes for the theater **8** 341-342

**JONES, ROBERT TYRE** (Bobby; 1902-1971), American golf great **8** 342

**JONES, SAMUEL MILTON** (1846-1904), American manufacturer and political reformer **8** 342-343

**JONG, ERICA** (born 1942), American author **18** 216-219

**JONSON, BEN** (1572-1637), English playwright and poet **8** 343-345

**JOPLIN, SCOTT** (1868-1917), African American composer and instrumental musician **8** 345-347

**JORDAENS, JACOB** (1593-1678), Flemish painter **8** 347-349

**JORDAN, BARBARA CHARLINE** (1936-1996), attorney and U.S. congresswoman from Texas **8** 349-350

**JORDAN, DAVID STARR** (1851-1931), American scientist and educator **8** 350-351

**JORDAN, JUNE** (born 1936), Jamaican-American poet and activist **8** 351-353

**JORDAN, LOUIS** (1908-1975), African American bandleader, singer, and instrumentalist **8** 353-355

**JORDAN, MICHAEL** (born 1963), African American basketball superstar of the Chicago Bulls **8** 355-357

**JORDAN, VERNON** (born 1935), American civil rights leader **8** 357-358

**JOSEPH** (circa 1840-1904), American Nez Percé Indian chief **8** 358-359

**JOSEPH II** (1741-1790), Holy Roman emperor 1765-1790 **8** 359-360

**JOSEPHUS FLAVIUS** (circa 37-100), Jewish historian, diplomat, and military leader **8** 360-361

**JOSQUIN DES PREZ** (circa 1440-1521), Franco-Flemish composer **8** 361-363

**JOULE, JAMES PRESCOTT** (1818-1889), English physicist **8** 363-364

**Journalists, American**  
19th century  
Croly, Jane **21** 96-96  
19th-20th century  
Parsons, Louella **21** 336-338

**JOWETT, BENJAMIN** (1817-1893), English educator and Greek scholar **8** 364-365

**JOYCE, JAMES** (1882-1941), Irish author **8** 365-367

**JOYNER-KERSEE, JACKIE** (born 1962), American track and field athlete **19** 170-173

**JUAN CARLOS I** (born 1938), king of Spain **8** 368-369

**JUANA INÉS DE LA CRUZ, SISTER** (1651-1695), Mexican nun, poet, and savant **8** 367-368

**JUÁREZ, BENITO** (1806-1872), Mexican statesman, president 1857-1872 **8** 369-372

**JUDAEUS, PHILO** (circa 20 B.C. -circa A.D. 45), Hellenistic Jewish philosopher **12** 282-283

**JUDAH I** (circa 135-circa 220), Jewish scholar **8** 372-373

**JUDAH, THEODORE DEHONE** (1826-1863), American engineer and railroad promoter **8** 373-374

**JUDAH HALEVI** (circa 1085-circa 1150), Spanish Hebrew poet **8** 373

**JUDAS MACCABEUS** (died 160 B.C.), Jewish patriot and revolutionary **8** 374-375

**JUDD, CHARLES HUBBARD** (1873-1946), psychologist and education reformer **8** 375-376

**JUDD, DONALD** (1928-1994), American sculptor and art writer **8** 376-377

**Judicial review**  
see Supreme Court (United States)—  
judicial review

**JUDSON, ADONIRAM** (1788-1850), American Baptist missionary in Burma **8** 377-378

**JULIA, RAUL** (Julia y Arcelay, Raul Rafael Carlos; 1940-1994), American acotr and humanitarian **21** 230-232

**JULIAN** (The Apostate; Flavius Claudius Julianus; 331-363), Roman emperor 361-363 **8** 378-379

**JULIAN, PERCY LAVON** (1899-1975), African American chemist and civil rights activist **18** 219-221

**JULIAN OF NORWICH** (1342-after 1416), English mystic **8** 381

**JULIANA** (born 1909), queen of the Netherlands (1948-1980) **8** 379-380

**JULIAS OF ROME, THE** (Julia Domna, ca. 169-ca. 217; Julia Maesa, ca. 164-225; Julia Soamias, died 222; and Julia Mamaea, died 234), empresses of the so-called Severan Dynasty of Rome **8** 381-384

**JULIUS II** (Giuliano della Rovere; 1443-1513), pope 1503-1513 **8** 384-386

**July Monarchy** (France)  
see France—1830-1848

**JUMBLATT, KAMAL** (1917-1977), Lebanese ideologue and Druze leader **8** 386-387

**JUNAYD, ABU AL-QASIM IBN MUHAMMAD AL** (circa 830-910), Islamic mystic **8** 388

**JUNG, CARL GUSTAV** (1875-1961), Swiss psychologist and psychiatrist **8** 388-389

**JUNG, LEO** (1892-1987), American Orthodox Jewish Rabbi **8** 390-391

**JÜNGER, ERNST** (1895-1998), German author **8** 391-392

**Jurists**  
English  
Bracton, Henry **21** 54-55

**Jurists, American**  
• **JUDGES**  
chief justices (United States Supreme Court)  
Ellsworth, Oliver **21** 115-117  
• **LAWYERS**  
19th century  
Rock, John **21** 370-372

**JUST, ERNEST** (1883-1941), American marine biologist **8** 392-393

**JUSTIN MARTYR**, (circa 100-circa 165), Early Christian apologist **8** 395-396

**JUSTINIAN I** (circa 482-565), Byzantine emperor 527-565 **8** 393-395

**JUSTO, AGUSTIN PEDRO** (1876-1943), Argentine general, president 1932-1938 **8** 396

**JUVARA, FILIPPO** (1678-1736), Italian architect and designer **8** 396-397

**JUVENAL** (Decimus Junius Juvenalis; died after 127), Roman satirist **8** 397-399

## K

**KABALEVSKY, DMITRI** (1904-1987), Soviet composer, pianist, and conductor **8** 400-401

**KABILA, LAURENT** (born 1939), Congolese revolutionary and president **18** 222-224

**KADALIE, CLEMENTS** (circa 1896-1951), South Africa's first Black national trade union leader **8** 401-402

**KÁDÁR, JÁNOS** (born 1912), Hungarian statesman **8** 402-403

**KAFKA, FRANZ** (1883-1924), Czech-born German novelist and short-story writer **8** 403-406

**KAHANAMOKU, DUKE** (1890-1968), Hawaiian swimmer **20** 197-199

**KAHLO, FRIDA** (1907-1954), Mexican painter **8** 406-407

**KAHN, ALBERT** (1869-1942), American architect **8** 407-408

**KAHN, LOUIS I.** (1901-1974), American architect **8** 408-410

**KAIFU TOSHIKI** (born 1931), Japanese prime minister (1989-1991) **8** 410-411

**KAISER, GEORG** (1878-1945), German playwright **8** 411-412

**KAISER, HENRY JOHN** (1882-1967), American industrialist **8** 412-413

**KALAKAUA, DAVID** (1836-1891), king of Hawaiian Islands 1874-1891 **8** 413-414

**KALIDASA** (flourished 4th-5th century), Indian poet and dramatist **8** 414-415

**KALMUS, NATALIE** (Natalie Mabelle Dunfee; 1883?-1965), American inventor and cinematographer **21** 233-235

**KAMARAJ, KUMARASWAMI** (1903-1975), Indian political leader **8** 415

**KAMEHAMEHA I** (circa 1758-1819), king of the Hawaiian Islands 1795-1819 **8** 416

**KAMEHAMEHA III** (circa 1814-1854), king of the Hawaiian Islands 1825-1854 **8** 416-417

**KAMENEV, LEV BORISOVICH** (1883-1936), Russian politician **8** 417-418

**KAMERLINGH ONNES, HEIKE** (1853-1926), Dutch physicist **8** 418-420

**KAMMU** (737-806), Japanese emperor 781-806 **8** 420

**KANDER, JOHN** (born 1927), American composer and lyricist **21** 235-237  
Ebb, Fred **21** 113-115

**KANDINSKY, WASSILY** (1866-1944), Russian painter **8** 420-422

**KANE, JOHN** (1860-1934), Scottish-born American primitive painter **8** 422

**KANE, PAUL** (1810-1871), Canadian painter and writer **8** 422-423

**K'ANG YU-WEI** (1858-1927), Chinese scholar and philosopher **8** 426-428

**K'ANG-HSI** (1654-1722), Chinese emperor 1661-1722 **8** 423-426  
Chien-lung **21** 78-79

**KANISHKA** (ca. 78- ca. 103), Kashan ruler **8** 428-429

**Kansa Indians** (United States)  
Curtis, Charles Brent **21** 99-100

**KANT, IMMANUEL** (1724-1804), German philosopher **8** 430-432

**KAO-TSUNG** (1107-1187), Chinese emperor **8** 433

**KAPITSA, PYOTR LEONIDOVICH** (born 1894), Soviet physicist **8** 433-435

**KAPLAN, MORDECAI MENAHEM** (1881-1983), American Jewish theologian and educator **8** 435-436

**KAPP, WOLFGANG** (1858-1922), German nationalist politician **8** 436

**KAPTEYN, JACOBUS CORNELIS** (1851-1922), Dutch astronomer **8** 436-437

**KARADZIC, RADOVAN** (born 1945), leader of the Serbian Republic **8** 437-440

**KARAMANLIS, CONSTANTINE** (1907-1998), Greek member of parliament, prime minister (1955-1963; 1974-1980), and president (1980-1985) **8** 440-441

**KARAMZIN, NIKOLAI MIKHAILOVICH** (1766-1826), Russian historian and author **8** 441-442

**KARAN, DONNA** (born 1948), American fashion designer and businesswoman **8** 442-444

**KARENGA, MAULANA** (born Ronald McKinley Everett; born 1941), African American author, educator, and proponent of black culturalism **8** 444-447

**KARIM KHAN ZAND** (died 1779), Iranian ruler, founder of Zand dynasty **8** 447

**KARLE, ISABELLA** (born 1921), American chemist and physicist **8** 447-449

**KARLSTADT, ANDREAS BODENHEIM VON** (circa 1480-1541), German Protestant reformer **8** 449

**KARMAL, BABRAK** (born 1929), Afghan Marxist and Soviet puppet ruler of the Democratic Republic of Afghanistan (1979-1986) **8** 449-451

**KÁRMÁN, THEODORE VON** (1881-1963), Hungarian-born American physicist **8** 451-452

**KARUME, SHEIKH ABEID AMANI** (1905-1972), Tanzanian political leader **8** 452-453

**KASAVUBU, JOSEPH** (circa 1913-1969), Congolese statesman **8** 453-455

**KASSEBAUM, NANCY** (born 1932), Republican senator from Kansas **8** 455-457

**KATAYAMA, SEN** (1860-1933), Japanese labor and Socialist leader **8** 457

**KAUFMAN, GEORGE S.** (1889-1961), American playwright **8** 457-458

**KAUFMAN, GERALD BERNARD** (born 1930), foreign policy spokesman of the British Labour Party **8** 458-460

**KAUFMANN, EZEKIEL** (1889-1963), Jewish philosopher and scholar **8** 460

**KAUNDA, KENNETH DAVID** (born 1924), Zambian statesman **8** 460-461

**KAUTILYA** (4th century B.C.), Indian statesman and author **8** 462

**KAUTSKY, KARL JOHANN** (1854-1938), German-Austrian Socialist **8** 462-463

**KAWABATA, YASUNARI** (1899-1972), Japanese novelist **8** 463-464

**KAWAWA, RASHIDI MFAUME** (born 1929), Tanzanian political leader **8** 464-465

**KAZAN, ELIA** (born 1909), American film and stage director **8** 465-466

**KAZANTZAKIS, NIKOS** (1883-1957), Greek author, journalist, and statesman **8** 466-468

**KEAN, EDMUND** (1789-1833), English actor **21** 237-239

**KEARNEY, DENIS** (1847-1907), Irish-born American labor agitator **8** 468

**KEARNY, STEPHEN WATTS** (1794-1848), American general **8** 468-469

**KEATON, BUSTER** (Joseph Frank Keaton; 1895-1966), American comedian **20** 199-201

**KEATING, PAUL JOHN** (born 1944), federal treasurer of Australia (1983-1991) **8** 469-470

**KEATS, JOHN** (1795-1821), English poet **8** 470-472

**KEFAUVER, CAREY ESTES** (1903-1963), U.S. senator and influential Tennessee Democrat **8** 472-474

**KEITA, MODIBO** (1915-1977), Malian statesman **8** 474-475

**KEITEL, WILHELM** (1882-1946), German general **18** 224-226

**KEITH, SIR ARTHUR** (1866-1955), British anatomist and physical anthropologist **8** 475-476

**KEITH, MINOR COOPER** (1848-1929), American entrepreneur **8** 476-477

**KEKULÉ, FRIEDRICH AUGUST** (1829-1896), German chemist **8** 477-478

**KELLER, GOTTFRIED** (1819-1890), Swiss short-story writer, novelist, and poet **8** 478-479

**KELLER, HELEN ADAMS** (1880-1968), American lecturer and author **8** 479-480

**KELLEY, FLORENCE** (1859-1932), American social worker and reformer **8** 483-484

**KELLEY, HALL JACKSON** (1790-1874), American promoter **8** 480

**KELLEY, OLIVER HUDSON** (1826-1913), American agriculturalist **8** 480-481

**KELLOGG, FRANK BILLINGS** (1856-1937), American statesman **8** 481

**KELLOGG, JOHN HARVEY** (1852-1943), American health propagandist and cereal manufacturer **21** 239-242

**KELLOR, FRANCES** (1873-1952), American activist and politician **8** 481-482

**KELLY, ELLSWORTH** (born 1923), American artist **8** 482-483

**KELLY, GENE** (born Eugene Curran Kelly; 1912-1996), American actor, dancer, and choreographer **8** 484-486

**KELLY, GRACE** (Grace, Princess; 1929-1982), princess of Monaco **19** 174-176

**KELLY, PETRA** (born 1947), West German pacifist and politician **8** 486-487

**KELLY, WILLIAM** (1811-1888), American iron manufacturer **8** 487-488

**KELSEY, HENRY** (circa 1667-1724), English-born Canadian explorer **8** 488

**KELVIN OF LARCS, BARON** (William Thomson; 1824-1907), Scottish physicist **8** 488-489

**KEMAL, YASHAR** (born 1922), Turkish novelist **8** 489-491

**Kemble, Charles** (1775-1854), English actor  
Kean, Edmund **21** 237-239

**KEMBLE, FRANCES ANNE** (Fanny Kemble; 1809-1893), English actress **8** 491

**KEMP, JACK FRENCH, JR.** (born 1935), Republican congressman from New York and secretary of housing and urban development **8** 491-493

**KEMPIS, THOMAS À** (circa 1380-1471), German monk and spiritual writer **8** 493-494

**KENDALL, AMOS** (1789-1869), American journalist **8** 494

**KENDALL, EDWARD CALVIN** (1886-1972), American biochemist **8** 495

**KENDREW, JOHN C.** (1917-1997), English chemist and Nobel Prize winner **8** 495-496

**KENEALLY, THOMAS MICHAEL** (born 1935), Australian author **18** 226-228

**KENNAN, GEORGE F.** (born 1904), American diplomat, author, and scholar **8** 496-498

**KENNEDY, ANTHONY M.** (born 1936), United States Supreme Court justice **8** 498-500



**KENNEDY, EDWARD M.** (Ted; born 1932), U.S. senator from Massachusetts **8** 500-502

**KENNEDY, JOHN FITZGERALD** (1917-1963), American statesman, president 1960-1963 **8** 502-506  
assassination of  
Oswald, Lee Harvey **21** 328-330

**KENNEDY, JOHN PENDLETON** (1795-1870), American author and politician **8** 506-507

**KENNEDY, JOHN STEWART** (1830-1909), American financier and philanthropist **8** 507-508

**KENNEDY, JOSEPH** (1888-1969), American financier, ambassador, and movie producer **19** 176-178

**KENNEDY, ROBERT FRANCIS** (1925-1968), American statesman **8** 508-509  
Johnson, Rafer **21** 225-227

**KENNEDY, WILLIAM** (born 1928), American author **19** 178-180

**KENNY, ELIZABETH** (Sister Kenny; 1886-1952), Australian nursing sister **8** 509-510

**KENT, JAMES** (1763-1847), American jurist **8** 510-511

**KENT, ROCKWELL** (1882-1971), American painter and illustrator **8** 511

**KENYATTA, JOMO** (circa 1890-1978), Kenyan statesman **8** 512-514

**KEOHANE, NANNERL OVERHOLSER** (born 1940), American feminist activist and university chancellor **18** 229-230

**KEPLER, JOHANNES** (1571-1630), German astronomer **8** 514-516

**KERENSKY, ALEKSANDR FEDOROVICH** (1881-1970), Russian revolutionary and politician **8** 516-517

**KERN, JEROME DAVID** (1885-1945), American composer **8** 517-518

**KEROUAC, JEAN-LOUIS LEBRIS DE** (Jack; 1922-69), American writer of autobiographical fiction **8** 518-519

**KERR, CLARK** (born 1911), American economist, labor/management expert, and university president **8** 519-521

**KERREY, J. ROBERT** (born 1943), Democratic senator from Nebraska and 1992 presidential candidate **8** 521-522

**KESSELING, ALBERT** (1885-1960), German field marshal **8** 522-523

**KESSLER, DAVID A.** (born 1951), commissioner of the Food and Drug Administration **8** 523-524

**KETTERING, CHARLES F.** (1876-1958), American engineer, industrial pioneer, and apostle of progress **8** 524-525

**KEVORKIAN, JACK** (born 1928), American pathologist who practiced assisted suicide **19** 180-182

**KEY, FRANCIS SCOTT** (1779-1843), American poet and attorney **8** 525-527

**KEY, VLADIMIR ORLANDO, JR.** (1908-1963), American political scientist **8** 527-528

**KEYNES, JOHN MAYNARD** (1st Baron Keynes of Tilton; 1883-1946), English economist **8** 528-530

**KHACHATURIAN, ARAM ILICH** (or Khachaturov; 1903-1978), Russian composer **8** 530-531

**KHALIL, SAYYID ABDULLAH** (1892-1970), Sudanese general, prime minister 1956-1958 **8** 531-532

**KHAMA, SIR SERETSE M.** (born 1921), Botswana political leader **8** 532-533

**KHAMENEI, AYATOLLAH SAYYID ALI** (born 1939), supreme spiritual and political leader of the Islamic Republic of Iran **8** 533-535

**KHOMEINI, AYATOLLAH RUHOLLAH MUSAVI** (born 1902), founder and supreme leader of the Islamic Republic of Iran **8** 535-537

**KHORANA, HAR GOBIND** (born 1922), Indian organic chemist **8** 537-538

**KHOSROW I** (died 579), Sassanid king of Persia 531-576 **8** 538-539

**KHRUSHCHEV, NIKITA SERGEEVICH** (1894-1971), Soviet political leader **8** 539-540

**KHUFU** (ruled 2590-2568 B.C.), Egyptian king **8** 540-541

**KHWARIZMI, MUHAMMAD IBN MUSA AL-** (died circa 850), Arab mathematician, astronomer, and geographer **8** 541

**Kid, The** (film)  
Coogan, Jackie **21** 83-85

**KIDD, WILLIAM** (c. 1645-1701), Scottish pirate **21** 242-244

**KIDDER, ALFRED VINCENT** (1885-1963), American archeologist **8** 541-542

**KIDMAN, SIDNEY** (1857-1935), "The Cattle King" of Australia **8** 542-544

**Kidney** (anatomy)  
Starzl, Thomas **21** 393-395

**KIEFER, ANSELM** (born 1945), German artist **8** 544-546

**KIENHOLZ, EDWARD** (born 1927), American Pop artist **8** 546-547

**KIERKEGAARD, SØREN AABYE** (1813-1855), Danish philosopher **8** 547-549

**KILPATRICK, WILLIAM H.** (1871-1965), American educator, college president, and philosopher of education **9** 1-3

**KIM DAE-JUNG** (born 1925), worked for the restoration of democracy and human rights in South Korea after 1971 **9** 3-4

**KIM IL-SUNG** (born 1912), North Korean political leader **9** 4-6

**KIM JONG IL** (born 1941), heir-apparent of Kim Il-sung, the founder and leader of the Democratic People's Republic of Korea **9** 6-7

**KIM OK-KYUN** (1851-1894), Korean politician **9** 7-8

**KIM PUSIK** (1075-1151), Korean statesman, historian, and general **9** 8-9

**KIM YOUNG SAM** (born 1927), South Korean statesman **9** 9-10

**KINDI, ABU-YUSUF YAQUB IBN-ISHAQ AL-** (died 873), Arab philosopher **9** 10-11

**KING, B. B.** (born Riley B. King; born 1925), African American blues musician, singer, and songwriter **9** 11-14

**KING, BILLIE JEAN** (born 1943), international tennis star **9** 14-15

**KING, CLARENCE** (1842-1901), American geologist and mining engineer **9** 15-16

**KING, CORETTA SCOTT** (born 1929), American advocate of civil rights, nonviolence, international peace, full employment, and equal rights for women **9** 16-17

**KING, ERNEST JOSEPH** (1878-1956), American admiral **9** 17-18

**KING, FREDERIC TRUBY** (1858-1938), New Zealand doctor and founder of the Plunket Society **9** 18-19

**King Kong** (film)  
O'Brien, Willis **21** 324-326

**KING, MARTIN LUTHER, JR.** (1929-1968), African American minister and civil rights leader **9** 20-22

**KING, MARY-CLAIRE** (born 1946), American geneticist **19** 182-183

**KING, RUFUS** (1755-1827), American statesman and diplomat **9** 22-23

**KING, STEPHEN** (a.k.a. Richard Bachman and John Swithen; born

1947), American horror novelist **9** 23-25

**KING, WILLIAM LYON MACKENZIE** (1874-1950), Canadian statesman **9** 25-26

**King and I, The** (musical)  
Bennett, Robert Russell **21** 32-34

**KINGSFORD SMITH, SIR CHARLES** ("Smithy"; 1897-1935), Australian long-distance aviator **9** 26-28

**KINGSLEY, CHARLES** (1819-1875), English author and Anglican clergyman **9** 28

**KINGSLEY, MARY** (1862-1900), English explorer and author **20** 201-204

**KINGSTON, MAXINE HONG** (Maxine Ting Ting Hong; born 1940), Asian-American feminist author **18** 231-232

**KINNOCK, NEIL** (born 1942), British Labour Party politician **9** 29-30

**KINO, EUSEBIO FRANCISCO** (1645-1711), Spanish missionary, explorer, and cartographer **9** 30-31

**KINSEY, ALFRED C.** (1894-1956), American zoologist **9** 31-32

**KIPLING, JOSEPH RUDYARD** (1865-1936), British poet and short-story writer **9** 32-33

**KIRCH, MARIA WINCKELMANN** (1670-1720), German astronomer **20** 204-205

**KIRCHHOFF, GUSTAV ROBERT** (1824-1887), German physicist **9** 33-34

**KIRCHNER, ERNST LUDWIG** (1880-1938), German expressionist painter **9** 34-35

**KIRKLAND, JOSEPH LANE** (1922-1999), American labor union movement leader **9** 35-37

**KIRKLAND, SAMUEL** (1741-1808), American Congregationalist missionary **9** 37

**KIRKPATRICK, JEANE J.** (born 1926), professor and first woman U.S. ambassador to the United Nations **9** 37-39

**KIRSTEIN, LINCOLN** (1906-1996), a founder and director of the New York City Ballet **9** 39-41

**KISHI, NOBUSUKE** (1896-1987), Japanese politician **9** 41-43

**KISSINGER, HENRY ALFRED** (born 1923), U.S. secretary of state and co-winner of the Nobel Peace prize **9** 43-45

**KITCHENER, HORATIO HERBERT** (1850-1916), British field marshal and statesman **9** 45-46

**KIWANUKA, BENEDICTO KAGIMA MUGUMBA** (1922-1972), Ugandan politician **9** 46-47

**KLEE, PAUL** (1879-1940), Swiss painter and graphic artist **9** 47-49

**KLEIN, A. M.** (1909-1972), Canadian journalist, lawyer, novelist, and poet **9** 49-50

**KLEIN, CALVIN** (born 1942), American fashion designer **9** 50-52

**KLEIN, MELANIE** (1882-1960), Austrian psychotherapist **9** 52

**KLEIST, HEINRICH VON** (1777-1811), German author **9** 52-53

**KLEMPERER, OTTO** (1885-1973), German conductor **20** 205-207

**KLIMA, VIKTOR** (born 1947), Austrian chancellor **18** 232-234

**KLIMT, GUSTAV** (1862-1918), controversial Austrian painter **9** 53-55

**KLINE, FRANZ** (1910-1962), American painter **9** 55

**KLOPSTOCK, FRIEDRICH GOTTLIEB** (1724-1803), German poet **9** 55-56

**KLUCKHOHN, CLYDE** (1905-1960), American anthropologist **9** 56-57

**KLYUCHEVSKY, VASILY OSIPOVICH** (1841-1911), Russian historian **9** 57-58

**KNAPP, SEAMAN ASAH** (1833-1911), American educator and agricultural pioneer **9** 58

**KNIGHT, FRANK HYNEMAN** (1885-1972), American economist **9** 58-59

**KNIGHT, PHIL** (born 1938), American businessman **19** 183-186

**KNIPLING, EDWARD FRED** (1909-2000), American entomologist **9** 59-60

**KNOPF, ALFRED A.** (1892-1984), American publisher **9** 60-61

**KNOPF, BLANCHE WOLF** (1894-1966), American publisher **9** 61-62

**KNOWLES, MALCOLM SHEPHERD** (1913-1997), American adult education theorist and planner **9** 62-64

**KNOX, HENRY** (1750-1806), American Revolutionary War general **9** 64

**KNOX, JOHN** (circa 1505-1572), Scottish religious reformer **9** 65-66

**KNOX, PHILANDER CHASE** (1853-1921), American statesman **9** 66-67

**KNUDSEN, WILLIAM S.** (1879-1948), American auto industry leader **9** 67-68

**KOCH, EDWARD I.** (born 1924), New York City mayor **9** 68-69

**KOCH, ROBERT HEINRICH HERMANN** (1843-1910), German physician and bacteriologist **9** 69-70

**KODÁLY, ZOLTÁN** (1882-1967), Hungarian composer **9** 71

**KOESTLER, ARTHUR** (1905-1983), author of political novels **9** 71-73

**KOHL, HELMUT** (born 1930), chancellor of West Germany (1982-1990) and first chancellor of a united Germany since World War II **9** 73-74

**KOJONG** (1852-1919), Korean king **9** 74-75

**KOKOSCHKA, OSKAR** (1886-1980), Austrian painter, graphic artist, and author **9** 75-76

**KOLAKOWSKI, LESZEK** (born 1927), philosopher who wrote on broad themes of ethics, metaphysics, and religion **9** 76-77

**KOLCHAK, ALEKSANDR VASILIEVICH** (1873-1920), Russian admiral **9** 77-78

**KOLLONTAI, ALEKSANDRA MIKHAILOVNA** (1872-1952), Soviet diplomat **9** 79

**KOLLWITZ, KÄTHE** (1867-1945), German expressionist graphic artist and sculptor **9** 79-81

**KONEV, IVAN STEFANOVICH** (1897-1973), Soviet marshal **9** 81-82

**KONOE, PRINCE FUMIMARO** (or Konoye; 1891-1945), Japanese premier 1937-1939 and 1940-1941 **9** 82-83

**KOONS, JEFF** (born 1955), American artist **9** 83-84

**KOOP, C. EVERETT** (born 1916), American surgeon general **18** 235-237

**KÖPRÜLÜ, AHMED** (Köprülüzaade Fazıl Ahmed Pasha; 1635-76), Turkish statesman and general **9** 84-85

**KORNBERG, ARTHUR** (born 1918), American biochemist **9** 85-87

**KORNILOV, LAVR GEORGIEVICH** (1870-1918), Russian general **9** 87-88

**KOSCIUSZKO, TADEUSZ ANDRZEJ BONAWENTURA** (1746-1817), Polish patriot, hero in the American Revolution **9** 88

**KOSSUTH, LOUIS** (1802-1894), Hungarian statesman **9** 88-90

**KOSYGIN, ALEKSEI NIKOLAEVICH** (1904-1980), chairman of the U.S.S.R. Council of Ministers and head of the

- Soviet government (1964-1980) **9** 90-91
- KOTZEBUE, OTTO VON** (1787-1846), Russian explorer **9** 91-92
- KOUFAX, SANDY** (Sanford Braun; born 1945), American baseball player **20** 208-210
- KOVACS, ERNIE** (1919-1962), American comedian **19** 186-188
- KOZYREV, ANDREI VLADIMIROVICH** (born 1951), Russian minister of foreign affairs and a liberal, pro-Western figure in Boris Yeltsin's cabinet **9** 92-93
- KRAMER, LARRY** (born 1935), American AIDS activist and author **20** 210-212
- KRASNER, LEE** (Lenore; 1908-1984), American painter and collage artist **9** 93-94
- KRAVCHUK, LEONID MAKAROVYCH** (born 1934), president of the Ukraine (1991-1994) **9** 94-95
- KREBS, SIR HANS ADOLF** (1900-1981), German-British biochemist **9** 95-97
- KREISKY, BRUNO** (1911-1983), chancellor of Austria (1970-1983) **9** 97-98
- KRENEK, ERNST** (born 1900), Austrian composer **9** 98-99
- KREPS, JUANITA MORRIS** (born 1921), economist, university professor, United States secretary of commerce (1977-1979), and author **9** 99-101
- KRIEGHOFF, CORNELIUS** (1815-1872), Dutch-born Canadian painter **9** 101
- KRISHNAMURTI, JIDDU** (1895-1986), Indian mystic and philosopher **9** 101-103
- KROC, RAYMOND ALBERT** (1902-1984), creator of the McDonald's chain **9** 103-104
- KROCHMAL, NACHMAN KOHEN** (1785-1840), Austrian Jewish historian **9** 104-105
- KROEBER, ALFRED LOUIS** (1876-1960), American anthropologist **9** 105-106
- KROGH, SCHACK AUGUST STEENBERG** (1874-1949), Danish physiologist **9** 106
- KROPOTKIN, PETER ALEKSEEVICH** (1842-1921), Russian prince, scientist, and anarchist **9** 107-108
- KRUGER, STEPHANUS JOHANNES PAULUS** ("Paul"; 1825-1904), South African statesman **9** 108-109
- KRUPP FAMILY** (19th-20th century), German industrialists **9** 109-111
- KU CHIEH-KANG** (born 1893), Chinese historian **9** 120-121
- KUHN, MAGGIE** (1905-1995), American activist and founder of the Gray Panthers **19** 188-190
- KU K'AI-CHIH** (circa 345-circa 406), Chinese painter **9** 125-126
- KUANG-HSÜ** (1871-1908), emperor of China 1875-1908 **9** 111-112
- KUANG-WU-TI** (6 B.C. - 57 A.D.), Chinese emperor ca. 25-57 **9** 112-113
- KUBITSCHKE DE OLIVEIRA, JUSCELINO** (1902-1976), president of Brazil 1956-1961 **9** 113-115
- KUBLAI KHAN** (1215-1294), Mongol emperor **9** 115-118
- KÜBLER-ROSS, ELISABETH** (born 1926), Swiss-born American psychiatrist **9** 118-120
- KUBRICK, STANLEY** (1928-1999), American filmmaker **18** 237-239
- KUCAN, MILAN** (born 1941), President of the Republic of Slovenia **18** 239-242
- KUHN, THOMAS SAMUEL** (1922-1996), American historian and philosopher of science **9** 121-123
- KUK, ABRAHAM ISAAC** (1865-1935), Russian-born Jewish scholar **9** 123-124
- KUKAI** (774-835), Japanese Buddhist monk **9** 124-125
- KUKRIT PRAMOJ, MOMRAJAWONG** (M.R.; born 1911), literary figure and prime minister of Thailand (1975-1976) **9** 126-127
- KUMARAJIVA** (344/350-409/413), Indian Buddhist monk **9** 127
- KUNDERA, MILAN** (born 1929), Czech-born author **9** 128-129
- KÜNG, HANS** (born 1928), Swiss-born Roman Catholic theologian **9** 129-130
- KUNIN, MADELEINE MAY** (born 1933), first woman governor of Vermont **9** 130-131
- KUNSTLER, WILLIAM M.** (1919-1995), American civil rights attorney and author **9** 131-133
- KUO MO-JO** (born 1892), Chinese author **9** 133-134
- KUPKA, FRANTISEK** (Frank; 1871-1957), Czech painter and illustrator **9** 134-135
- KUROSAWA, AKIRA** (1910-1998), Japanese film director **9** 135-137
- KUTUZOV, MIKHAIL ILARIONOVICH** (1745-1813), Russian field marshal **9** 137-138
- KUZNETS, SIMON** (1901-1985), American economist, researcher, and author **9** 138-139
- KWANGGAET'O** (375-413), Korean statesman, king of Koguryo **9** 139-140
- KWANGJONG** (925-975), Korean statesman, king of Koryo **9** 140
- KYD, THOMAS** (1558-1594), English dramatist **9** 140-141
- KYPRIANOU, SPYROS** (born 1932), president of the Republic of Cyprus **9** 141-143

## L

- LA BRUYÈRE, JEAN DE** (1645-1696), French man of letters and moralist **9** 145
- LA FARGE, JOHN** (1835-1910), American artist and writer **9** 149-150
- LA FAYETTE, COMTESSE DE** (Marie Madeleine Pioche de la Vergne; 1634-93), French novelist **9** 150-151
- LA FLESCHE, FRANCIS** (1857-1932), Native American ethnologist **9** 152-154
- LA FLESCHE, SUSETTE** (1854-1903), Native American activist and reformer **9** 152-154
- LA FOLLETTE, ROBERT MARION** (1855-1925), American statesman **9** 155-156
- LA FONTAINE, JEAN DE** (1621-1695), French poet **9** 156-157
- LA GUARDIA, FIORELLO HENRY** (1882-1947), American politician, New York City mayor **9** 166-167
- LA METTRIE, JULIEN OFFRAY DE** (1709-1751), French physician and philosopher **9** 179-180
- LA ROCHEFOUCAULD, FRANÇOIS, DUC DE** (1613-1680), French moralist **9** 208-209
- LA SALLE, SIEUR DE** (René Robert Cavelier; 1643-1687), French explorer and colonizer **9** 210-211
- LA TOUR, GEORGE DE** (1593-1652), French painter **9** 222
- LA VERENDRYE, SIEUR DE** (Pierre Gaultier de Varennes; 1685-1749), French-Canadian soldier, explorer, and fur trader **9** 239-240
- Labor law** (United States) wage-and-hour laws Ely, Richard **21** 117-120

**LABROUSTE, PIERRE FRANÇOIS HENRI** (1801-1875), French architect-engineer **9** 144

**LACAN, JACQUES** (1901-1981), French psychoanalyst **9** 145-147

**LACHAISE, GASTON** (1882-1935), French-born American sculptor **9** 147

**LACHAPELLE, MARIE** (1769-1821), French obstetrician and teacher **21** 245-247

**LACOMBE, ALBERT** (1827-1916), Canadian missionary priest **9** 147-148

**LACORDAIRE, JEAN BAPTISTE HENRI** (1802-1861), French Dominican preacher **9** 148

**LADD, WILLIAM** (1778-1841), American pacifist **9** 149

**LAENNEC, RENÉ** (René-Théophile-Hyacinthe Laënnec; 1781-1826), French physician and inventor **21** 247-249

**LAFAYETTE, MARQUIS DE** (Marie Joseph Paul Yves Roch Gilbert du Motier; 1757-1834), French general and statesman **9** 151-152

**LAFONTAINE, SIR LOUIS-HIPPOLYTE** (1807-1864), Canadian politician **9** 157-158

**LAFONTAINE, OSKAR** (born 1943), German politician **9** 158-160

**LAFORGUE, JULES** (1860-1887), French poet **9** 160-161

**LAGERFELD, KARL** (born 1938), German-French designer of high fashion **9** 161-162

**LAGERKVIST, PÄR FABIAN** (born 1891), Swedish author **9** 162-163

**LAGERLÖF, SELMA OTTILIANA LOVISA** (1858-1940), Swedish author **9** 163-164

**Lagos** (former British colony)  
see Nigeria

**LAGRANGE, JOSEPH LOUIS** (1736-1813), Italian-born French mathematician **9** 164-166 [term]  
Germain, Sophie **21** 157-158

**LAHR, BERT** (Irving Lahrheim; 1895-1967), performer and comedian in burlesque, vaudeville, musical comedy, film, and television **9** 167-168

**LAIRD, MELVIN R.** (born 1922), U.S. congressman and secretary of defense **9** 168-170

**LALIBELA** (ruled circa 1181-circa 1221), Ethiopian king and saint **9** 170

**LAMAR, LUCIUS QUINTUS CINCINNATUS** (1825-1893), American politician and jurist **9** 170-171

**LAMARCK, CHEVALIER DE** (Jean Baptiste Pierre Antoine de Monet; 1744-1829), French naturalist **9** 171-173

**LAMARTINE, ALPHONSE MARIE LOUIS DE** (1790-1869), French poet and diplomat **9** 173-175

**LAMAS, CARLOS SAAVEDRA** (1878-1959), Argentine scholar, statesman, and diplomat **9** 175-176

**LAMB, CHARLES** (1775-1834), English author, critic, and minor poet **9** 176-177

**LAMBSORFF, OTTO GRAF** (born 1926), West German minister of economics **9** 177-179

**LAMENNAIS, HUGUES FÉLICITÉ ROBERT DE** (1782-1854), French priest and political writer **9** 179

**L'AMOUR, LOUIS** (Louis Dearborn LaMoore; 1908-1988), American author of westerns **20** 213-215

**LAMPMAN, ARCHIBALD** (1861-1899), Canadian poet **9** 180-181

**LAMPRECHT, KARL** (1856-1915), German historian **9** 181

**LAMY, JEAN BAPTISTE** (1814-1888), French archbishop in the United States **9** 181-182

**LANCASTER, BURT** (Burton Stephen Lancaster; 1913-1994), American actor **20** 215-218

**Lancaster, House of**  
see England—1399-1461 (Lancastrian)

**LANCASTER, JOSEPH** (1778-1838), English educator **9** 182-183

**LAND, EDWIN HERBERT** (1909-1991), American physicist, inventor, and manufacturer **9** 183-184

**LANDAU, LEV DAVIDOVICH** (1908-1968), Soviet theoretical physicist **9** 184-185

**LANDINI, FRANCESCO** (circa 1335-1397), Italian composer and poet **9** 185-186

**LANDOR, WALTER SAVAGE** (1775-1864), English poet, essayist and critic **9** 186-187

**LANDOWSKI, MARCEL** (born 1915), French composer of lyric works **9** 187-188

**LANDSTEINER, KARL** (1868-1943), Austrian-born American immunologist **9** 188-189

**LANE, FITZ HUGH** (1804-1865), American marine painter **9** 189

**LANFRANC** (circa 1010-1089), Italian theologian, archbishop of Canterbury **9** 189-190

**LANG, FRITZ** (1890-1976), film director **9** 190-192

**LANG, JOHN THOMAS** (1876-1975), Australian politician **9** 192-193

**LANGE, DOROTHEA** (1895-1965), American photographer **9** 193-194

**LANGLAND, WILLIAM** (circa 1330-1400), English poet **9** 194-195

**LANGLEY, SAMUEL PIERPONT** (1834-1906), American scientist **9** 195-196

**LANGMUIR, IRVING** (1881-1957), American chemist **9** 196-197

**LANGSTON, JOHN MERCER** (1829-1897), American educator and diplomat **9** 197

**LANGTON, STEPHEN** (c. 1155-1228), English prelate and signer of the Magna Carta **21** 249-251

**LANIER, JARON** (born ca. 1961), American computer engineer **9** 198-199

**LANIER, SIDNEY** (1842-1881), American poet, critic, and musician **9** 199-200

**LANSING, ROBERT** (1864-1928), American lawyer and statesman **9** 200

**LAO SHÊ** (1899-1966), Chinese novelist **9** 200-201

**LAO TZU** (flourished 6th century B.C.), Chinese philosopher **9** 201-202

**LAPLACE, MARQUIS DE** (Pierre Simon; 1749-1827), French mathematician **9** 202-204

**LARDNER, RINGGOLD WILMER** (1885-1933), American author **9** 204-205

**LARIONOV, MIKHAIL** (1881-1964), Russian artist **9** 205-206

**LARKIN, PHILIP** (1922-1986), English poet **9** 206-207

**LARKIN, THOMAS OLIVER** (1802-1858), American merchant and diplomat **9** 208

**LARSEN, NELLA** (1893-1963), Harlem Renaissance writer **9** 209-210

**LARSON, JONATHAN** (1961-1996), American playwright, composer, and lyricist **18** 243-145

**LAS CASAS, BARTOLOMÉ DE** (1474-1566), Spanish Dominican missionary and historian **9** 211-212

**LASCH, CHRISTOPHER** (1932-1994), American historian and social critic **9** 212-214

**LASHLEY, KARL SPENCER** (1890-1958), American neuropsychologist **9** 214-215

**LASKER, ALBERT** (1880-1952), American advertising executive **21** 251-254

**LASKER, EMANUEL** (1868-1941), German chess grandmaster **20** 218-220

**LASKI, HAROLD J.** (1893-1950), English political scientist and Labour party leader **9** 215-216

**LASKY, JESSE** (1880-1958), American film producer **21** 254-256

**LASSALLE, FERDINAND** (1825-1864), German socialist leader **9** 216

**LASSUS, ROLAND DE** (1532-1594), Franco-Flemish composer **9** 216-218

**LASSWELL, HAROLD DWIGHT** (born 1902), American political scientist **9** 218-219

**LÁSZLÓ I, KING OF HUNGARY** (ca. 1040-1095), king of Hungary and saint **9** 219-221

**LATIMER, HUGH** (circa 1492-1555), English Protestant bishop, reformer, and martyr **9** 221

**LATIMER, LEWIS** (1848-1928), American inventor and electrical engineer **19** 191-193

**LATROBE, BENJAMIN HENRY** (1764-1820), English-born American architect **9** 222-224

**LAUD, WILLIAM** (1573-1645), English archbishop of Canterbury **9** 224-225

**LAUDER, ESTEE** (née Josephine Esthe Menzer, born ca. 1908), founder of an international cosmetics empire **9** 225-226

**LAUREL, SALVADOR H.** (Doy; born 1928), member of the Philippine Congress and vice-president **9** 226-227

**LAUREN, RALPH** (Ralph Lipschitz; born 1939), American fashion designer **9** 228-229

**LAURENCE, MARGARET** (Jean Margaret Wemyss; 1926-1987), Canadian writer **9** 229-230

**LAURENS, HENRI** (1885-1954), French sculptor **9** 230-231

**LAURENS, HENRY** (1724-1792), American merchant and Revolutionary statesman **9** 232

**LAURIER, SIR WILFRID** (1841-1919), Canadian statesman, prime minister 1896-1911 **9** 232-234

**LAURO, ACHILLE** (1887-1984), Italian business and political leader **9** 234-235

**LAUTARO** (circa 1535-1557), Araucanian Indian chieftain in Chile **9** 235

**LAVAL, FRANCOIS XAVIER DE** (1623-1708), French bishop in Canada **9** 235-236

**LAVAL, PIERRE** (1883-1945), French politician, chief Vichy minister **9** 237-238

**LAVALLEJA, JUAN ANTONIO** (1778-1853), Uruguayan independence leader **9** 238-239

**LAVIGERIE, CHARLES MARTEL ALLEMAND** (1825-1892), French cardinal **9** 240

**LAVISSE, ERNEST** (1842-1922), French historian **9** 241

**LAVOISIER, ANTOINE LAURENT** (1743-1794), French chemist **9** 241-244

**Law**  
common  
Bracton, Henry **21** 54-55

**LAW, JOHN** (1671-1729), Scottish monetary theorist and banker **9** 244-245

**LAW, WILLIAM** (1686-1761), English devotional writer **9** 245-246

**LAWRENCE, ABBOTT** (1792-1855), American manufacturer and diplomat **9** 246

**LAWRENCE, DAVID HERBERT** (1885-1930), English novelist, poet, and essayist **9** 247-248

**LAWRENCE, ERNEST ORLANDO** (1901-1958), American physicist **9** 248-250

**LAWRENCE, JACOB** (born 1917), African American painter **9** 250-251

**LAWRENCE, JAMES** (1781-1813), American naval officer **9** 251-252

**LAWRENCE, SIR THOMAS** (1769-1830), English portrait painter **9** 252-253

**LAWRENCE, THOMAS EDWARD** (1888-1935), British soldier and author **9** 253-254

**LAWSON, HENRY** (1867-1922), Australian poet and short-story writer **9** 254-255

**LAWSON, THOMAS WILLIAM** (1857-1925), American entrepreneur and reformer **9** 255-256

**Lawyers**  
see Jurists

**LAYAMON** (flourished circa 1200), English poet **9** 256-257

**LAYE, CAMARA** (1928-1980), Guinean novelist **9** 257-259

**LAZARSFELD, PAUL F.** (1901-1976), American sociologist **9** 259-260

**LAZARUS, EMMA** (1849-1887), American poet and playwright **9** 260-261

**LE BON, GUSTAVE** (1841-1931), French social scientist and philosopher **9** 268-269

**LE BRUN, CHARLES** (1619-1690), French painter, decorator, and draftsman **9** 269-270

**LE CARRE, JOHN** (born David Cornwell, 1931), British spy novelist **9** 270-271

**LE CORBUSIER** (Charles Édouard Jeanneret-Gris; 1887-1965), Swiss architect, city planner, and painter **9** 274-275

**LE DUAN** (1908-1986), North Vietnamese leader and later head of the government of all Vietnam **9** 278-280

**LE GUIN, URSULA KROEBER** (born 1929), American author **18** 249-251

**LE JEUNE, CLAUDE** (circa 1530-1600), Flemish composer **9** 314-315

**LE NAIN BROTHERS**, 17th-century French painters **9** 321-322

**LE NÔTRE, ANDRÉ** (or Le Nostre; 1613-1700), French landscape architect **9** 328-329

**LE PEN, JEAN MARIE** (born 1928), French political activist of the radical right **9** 348-350

**LE PLAY, GUILLAUME FRÉDÉRIC** (1806-1882), French sociologist and economist **9** 350-351

**LE VAU, LOUIS** (1612-1670), French architect **9** 360-361

**LEA, HENRY CHARLES** (1825-1909), American historian **9** 261-262

**LEAKEY, LOUIS SEYMOUR BAZETT** (1903-1972), British anthropologist **9** 262

**LEAKEY, MARY DOUGLAS** (1913-1996), English archaeologist **9** 263-264

**LEAKEY, RICHARD ERSKINE FRERE** (born 1944), Kenyan researcher in human prehistory and wildlife conservationist **9** 264-265

**LEAR, EDWARD** (1812-1888), English writer and artist **9** 265-266

**LEAR, NORMAN** (born 1922), American author and television director and producer **19** 193-195

**LEARY, TIMOTHY** (1920-1996), American psychologist, author, lecturer, and cult figure **9** 266-267

**LEASE, MARY ELIZABETH CLYENS** (1853-1933), American writer and politician **9** 268

**LEBED, ALEXANDER IVANOVICH** (born 1950), Russian general and politician **18** 245-247

**LEBLANC, NICOLAS** (1742-1806), French industrial chemist **21** 256-258

**LECKY, WILLIAM EDWARD HARTPOLE** (1838-1903), Anglo-Irish historian and essayist **9** 271-272

**LECLERC, JACQUES PHILIPPE** (1902-1947), French general **9** 272-273

**LECONTE DE LISLE, CHARLES MARIE RENÉ** (1818-1894), French poet **9** 273-274

**LEDERBERG, JOSHUA** (born 1925), Nobel Prize winning geneticist **9** 275-277

**LEDOUX, CLAUDE NICOLAS** (1736-1806), French architect **9** 277-278

**LEE, MOTHER ANN** (1736-1784), religious and social reformer and founder of the Shakers **9** 289-290

**LEE, ARTHUR** (1740-1792), American statesman and diplomat **9** 288-289

**LEE, BRUCE** (1940-1973), Asian American actor and martial arts master **18** 247-249

**LEE, HARPER** (Nelle Harper Lee; born 1926), American author **20** 220-222

**LEE, MING CHO** (born 1930), American scene designer for theater and opera **9** 289-290

**LEE, RICHARD HENRY** (1732-1794), American patriot and statesman **9** 291-292

**LEE, ROBERT EDWARD** (1807-1870), American army officer and Confederate general in chief **9** 292-294

**LEE, ROSE** (Rose Hum; 1904-1964), American sociologist **21** 258-260

**LEE, SPIKE** (born Sheldon Jackson Lee; born 1957), African American actor, author, and filmmaker **9** 295-299

**LEE, TSUNG-DAO** (born 1926), Chinese-born American physicist **9** 299-300

**LEE HSIEN LOONG** (born 1952), Singaporean soldier and deputy prime minister **9** 280-281

**LEE KUAN YEW** (born 1923), prime minister of Singapore (1959-1988) **9** 281-283

**LEE TENG-HUI** (born 1923), president of the Republic of China (1988-) **9** 283-285

**LEEUWENHOEK, ANTON VAN** (1632-1723), Dutch naturalist and microscopist **9** 300-301

**LEFEBVRE, GEORGES** (1874-1959), French historian **9** 301-302

**Legal reform**  
see Law—legal reform

**LÉGER, FERNAND** (1881-1955), French painter **9** 302-303

**LEGHARI, SARDAR FAROOQ AHMED KHAN** (born 1940), president of the Islamic Republic of Pakistan **9** 303-305

**LEGUÍA Y SALCEDO, AUGUSTO BERNARDINO** (1863-1932), Peruvian president 1908-12 and 1919-30 **9** 305-306

**LEHMAN, HERBERT HENRY** (1878-1963), American banker and statesman **9** 306-307

**LEHMBRUCK, WILHELM** (1881-1919), German sculptor **9** 307

**LEIBNIZ, GOTTFRIED WILHELM VON** (1646-1716), German mathematician and philosopher **9** 307-310

**LEIBOVITZ, ANNIE** (born 1949), American photographer **9** 310-312

**LEICESTER, EARL OF** (Robert Dudley; 1532?-1588), English politician **9** 312-313

**LEIGH, VIVIEN** (Vivian Mary Hartley; 1913-1967), British actress **18** 251-253

**LEISLER, JACOB** (1640-1691), American colonial leader **9** 313-314

**LELY, SIR PETER** (1618-1680), German-born painter active in England **9** 315

**LEMAÎTRE, ABBÉ GEORGES ÉDOUARD** (1894-1966), Belgian astronomer **9** 315-316

**LEMAY, CURTIS E.** (1906-1990), United States combat leader (World War II) and Air Force chief of staff **9** 316-318

**LEMBEDE, ANTON** (1913-1947), leader of black resistance to white supremacy in South Africa **9** 318-319

**LEMIEUX, MARIO** (born 1965), Canadian hockey player and team owner **20** 222-224

**LEMNITZER, LYMAN LOUIS** (Lem; 1899-1988), American soldier-statesman and strategist and NATO architect **9** 319-320

**L'ENFANT, PIERRE CHARLES** (1754-1825), French-born American architect **9** 322-323

**L'ENGLE, MADELEINE** (born 1918), American author **18** 253-255

**LENGLEN, SUZANNE** (1899-1938), French tennis player **19** 195-197

**LENIN, VLADIMIR ILICH** (1870-1924), Russian statesman **9** 323-326

**Lenoir, Étienne** (1822-1900), French inventor  
Otto, Nikolaus August **21** 331-333

**LEO I** (circa 400-461), saint and pope 440-461 **9** 329-330

**LEO III** (the Isaurian; circa 680-741), Byzantine emperor 717-741 **9** 330-332

**LEO IX, Saint** (Bruno of Egisheim; 1002-1054), pope 1049-1054 **9** 332

**LEO X** (Giovanni de' Medici; 1475-1521), pope 1513-1521 **9** 332-334  
appointments  
Fugger, Jakob **21** 147-149

**LEO XIII** (Vincenzo Gioacchino Pecci; 1810-1903), pope 1878-1903 **9** 334-336

**LEON, MOSES DE** (circa 1250-1305), Jewish mystic **9** 336

**LEONARD, DANIEL** (1740-1829), American loyalist lawyer and essayist **9** 336-337

**LEONARDO DA VINCI** (1452-1519), Italian painter, sculptor, architect, and scientist **9** 337-340

**LEONIDAS I** (ca. 530 B.C. - 480 B.C.), Spartan king **9** 340-343

**LÉONIN** (Leoninus; flourished circa 1165-1185), French composer **9** 343-344

**LEOPARDI, CONTE GIACOMO** (1798-1837), Italian poet **9** 344-345

**LEOPOLD I** (1790-1865), king of Belgium 1831-1865 **9** 345-346

**LEOPOLD II** (1747-1792), Holy Roman emperor 1790-1792 **9** 346

**LEOPOLD II** (1835-1909), king of Belgium 1865-1909 **9** 346-347

**LEOPOLD III** (1901-1983), king of Belgium 1934-1951 **9** 347-348

**LERDO DE TEJADA, MIGUEL** (1812-1861), Mexican liberal politician **9** 351-352

**LERMONTOV, MIKHAIL YURIEVICH** (1814-1841), Russian poet and prose writer **9** 352-353

**LERNER, ALAN JAY** (1918-1986), American lyricist/librettist **20** 224-226

**LESAGE, ALAIN RENÉ** (1668-1747), French novelist and playwright **9** 353-354

**LESCOT, PIERRE** (1500/1515-1578), French architect **9** 354

**LESSEPS, VICOMTE DE** (Ferdinand Marie; 1805-1894), French diplomat **9** 354-355

**LESSING, DORIS** (Doris May Taylor; born 1919), South African expatriate writer **9** 355-357

**LESSING, GOTTHOLD EPHRAIM** (1729-1781), German philosopher, dramatist, and critic **9** 357-359

**LETCHER, JOHN** (1813-1884), American politician **9** 359-360

**Letters** (New Testament)  
see Bible—New Testament (Epistolists)

**LEVANT, OSCAR** (1906-1972), American composer and pianist **19** 197-199

**LEVERRIER, URBAIN JEAN JOSEPH** (1811-1877), French mathematical astronomer **9** 361-362

**LÉVESQUE, RENÉ** (1922-1987), premier of the province of Quebec, Canada (1976-1985) **9** 362-363

**LEVI BEN GERSHON** (1288-circa 1344); French Jewish scientist, philosopher, and theologian **9** 363-364

**LEVI, CARLO** (1902-1975), Italian writer and painter **9** 364

**LEVI, PRIMO** (1919-1987), Italian author and chemist **9** 365-366

**LEVI-MONTALCINI, RITA** (born 1909) Italian and American biologist who discovered the nerve growth factor **9** 366-368

**LÉVI-STRAUSS, CLAUDE GUSTAVE** (born 1908), French social anthropologist **9** 371-372

**LEVINAS, EMMANUEL** (1906-1995), Jewish philosopher **9** 368-369

**LEVINE, JAMES** (born 1943), American conductor and pianist **9** 369-371

**LEVITT, WILLIAM** (1907-1994), American real estate developer **19** 199-201

**LEVY, BERNARD-HENRI** (born 1948), French moralist and political philosopher **9** 372-373

**LEVY, DAVID** (born 1937), Israeli minister of foreign affairs and deputy prime minister **9** 373-374

**LÉVY-BRUHL, LUCIEN** (1857-1939), French philosopher and anthropologist **9** 374-375

**LEWIN, KURT** (1890-1947), German-American social psychologist **9** 375-376

**LEWIS, ANDREW** (circa 1720-1781), American general in the Revolution **9** 376-377

**LEWIS, CARL** (born Frederick Carlton Lewis; born 1961), African American track and field athlete **9** 377-380

**LEWIS, CECIL DAY** (1904-1972), British poet and essayist **9** 380

**LEWIS, CLARENCE IRVING** (1883-1964), American philosopher **9** 381

**LEWIS, CLIVE STAPLES** (C.S.; 1898-1963), British novelist and essayist **9** 381-382

**LEWIS, ESSINGTON** (1881-1961), Australian industrial leader **9** 382-384

**LEWIS, GILBERT NEWTON** (1875-1946), American physical chemist **9** 384-385

**LEWIS, HARRY SINCLAIR** (1885-1951), American novelist **9** 385-387

**LEWIS, JOHN LLEWELLYN** (1880-1969), American labor leader **9** 387-388

**LEWIS, JOHN ROBERT** (born 1940), United States civil rights activist and representative from Georgia **9** 388-390

**LEWIS, MATTHEW GREGORY** (1775-1818), English novelist and playwright **9** 390-391

**LEWIS, MERIWETHER** (1774-1809), American explorer and army officer **9** 391-392

**LEWIS, OSCAR** (1914-1970), American anthropologist **9** 392-393

**LEWITT, SOL** (born 1928), American Minimalist and Conceptualist artist **9** 393-395

**LI HUNG-CHANG** (1823-1901), Chinese soldier, statesman, and industrialist **9** 407-409

**LI PENG** (born 1928), premier of the People's Republic of China **9** 433-435

**LI PO** (701-762), Chinese poet **9** 437-439

**LI SSU** (280?-208 B.C.), Chinese statesman **9** 442-443

**LI TA-CHAO** (1889-1927), Chinese Communist revolutionist **9** 447

**LI TZU-CH'ENG** (circa 1606-1645), Chinese bandit and rebel leader **9** 452

**LIANG CH'I-CH'AO** (1873-1929), Chinese intellectual and political reformer **9** 395-396

**LIANG WU-TI** (464-549), Chinese emperor of Southern dynasties **9** 396-397

**LIAQUAT ALI KHAN** (1896-1951), Pakistani statesman **9** 397

**LIBBY, WILLARD FRANK** (1908-1980), American chemist **9** 397-398

**Liberator, The** (newspaper; 1861-65) contributors  
Rock, John **21** 370-372

**LICHTENSTEIN, ROY** (1923-1997), American painter, sculptor, and printmaker **9** 398-399

**LIE, TRYGVE HALVDAN** (1896-1968), Norwegian statesman and UN secretary general **9** 400-401

**LIEBER, FRANCIS** (circa 1798-1872), German American political scientist **9** 401-402

**LIEBERMANN, MAX** (1847-1935), German painter **9** 402-403

**LIEBIG, BARON JUSTUS VON** (1803-1873), German chemist **9** 403-404

**LIGACHEV, YEGOR KUZ'MICH** (born 1920), member of the Central Committee of the Communist Party of the Soviet Union (1966-1990) **9** 404-406

**LIGETI, GYÖRGY** (born 1923), Austrian composer **9** 406-407

**LIGHTNER, CANDY** (born 1946), American activist and founder of Mothers Against Drunk Driving **19** 201-203

**LILBURNE, JOHN** (1615-1657), English political activist and pamphleteer **9** 409-410

**LILIENTHAL, DAVID ELI** (1899-1981), American public administrator **9** 410-411

**LILIENTHAL, OTTO** (1848-1896), Prussian design engineer **21** 260-262

**LILIUOKALANI, LYDIA KAMAKAEHA** (1838-1917), queen of the Hawaiian Islands **9** 411-412

**LIMBOURG BROTHERS** (flourished circa 1399-1416), Netherlandish illuminators **9** 412-413

**LIN, MAYA YING** (born 1959), American architect **9** 413-415

**LIN PIAO** (1907-1971), Chinese Communist military and political leader **9** 429-430

**LIN TSE-HSÜ** (1785-1850), Chinese official **9** 431-432

**LINCOLN, ABRAHAM** (1809-1865), American statesman, president 1861-1865 **9** 415-418

**LINCOLN, BENJAMIN** (1733-1810), American military officer **9** 418-419

**LIND, JAKOV** (Heinz "Henry" Landwirth; born 1927), Austrian autobiographer, short-story writer, novelist, and playwright **9** 419-420

**LINDBERGH, ANNE MORROW** (born 1906), American author and aviator **9** 420-421

**LINDBERGH, CHARLES AUGUSTUS** (1902-1974), American aviator **9** 421-423

**LINDSAY, JOHN VLIET** (born 1921), U.S. congressman (1959-1965) and mayor of New York (1966-1973) **9** 423-424

**LINDSAY, VACHEL** (1879-1931), American folk poet **9** 424-425

**LINDSEY, BENJAMIN BARR** (1869-1943), American jurist and reformer **9** 425-426

**LINH, NGUYEN VAN** (1915-1998), secretary-general of the Vietnamese Communist Party (1986-1991) **9** 426-427

**LINNAEUS, CARL** (Carl von Linné; 1707-1778), Swedish naturalist **9** 427-429

**LINTON, RALPH** (1893-1953), American anthropologist **9** 431

**LIPCHITZ, JACQUES** (1891-1973), Lithuanian-born American sculptor **9** 432-433

**LIPPI, FRA FILIPPO** (circa 1406-1469), Italian painter **9** 439

**LIPPMANN, WALTER** (1889-1974), American journalist **9** 439-440

**LIPPOLD, RICHARD** (born 1915), American Constructivist sculptor **9** 440-442

**LIST, GEORG FRIEDRICH** (1789-1846), German economist **9** 443-444

**LISTER, JOSEPH** (1st Baron Lister of Lyme Regis; 1827-1912), English surgeon **9** 444-445

**LISZT, FRANZ** (1811-1886), Hungarian composer **9** 445-447

**LITTLE, ROYAL** (born 1896), American textile tycoon **9** 449-451

**Little Nemo in Slumberland** (cartoon) McCay, Winsor **21** 288-291

**LITTLE RICHARD** (Richard Penniman; born 1932), American rock 'n' roll musician **9** 447-449

**LITTLE WOLF** (1818?-1904), Cheyenne chief **18** 255-257

**LITVINOV, MAXIM MAXIMOVICH** (1876-1951), Soviet diplomat **9** 451-452

**LIU Hsieh** (circa 465-522), Chinese literary critic **9** 452-453

**LIU PANG** (Han Kao-tsu or Liu Chi; 256 B.C.-195 B.C.), Chinese emperor **9** 453

**LIU SHAO-CH'Ō** (born 1900), Chinese Communist party leader **9** 453-455

**LIU TSUNG-YÜAN** (773-819), Chinese poet and prose writer **9** 455-456

**LIUZZO, VIOLA** (1925-1965), American civil rights activist **19** 203-205

**Liver** (anatomy)  
Laennec, René **21** 247-249  
Starzl, Thomas **21** 393-395

**LIVERPOOL, 2ND EARL OF** (Robert Barks Jenkinson; 1770-1828), English statesman, prime minister 1812-1827 **9** 456-457

**Livestock**  
see Cattle industry

**LIVIA** (ca. 58 B.C. - 29 A.D.), Roman empress, wife of Augustus **9** 457-460

**LIVINGSTON, EDWARD** (1764-1836), American jurist and statesman **9** 460-461

**LIVINGSTON, ROBERT** (1654-1728), American colonial politician **9** 461-462

**LIVINGSTON, ROBERT R.** (1746-1813), American jurist and diplomat **9** 462-463

**LIVINGSTONE, DAVID** (1813-1873), Scottish missionary and explorer in Africa **9** 463-465

**LIVY** (Titus Livius; circa 64 B.C.-circa 12 A.D.), Roman historian **9** 465-467

**LLERAS CAMARGO, ALBERTO** (1906-1990), Colombian statesman, twice president **9** 467

**LLEWELYN AP GRUFFYDD** (died 1282), Prince of Wales **9** 468

**LLOYD, HENRY DEMAREST** (1847-1903), American social reformer **9** 468-469

**LLOYD GEORGE, DAVID**, (1st Earl of Dwyfor; 1863-1945), English statesman, prime minister 1916-1922 **9** 469-471

**LLOYD, HAROLD** (1893-1971), American actor **20** 226-229

**LLOYD-JONES, ESTHER MCDONALD** (born 1901), school personnel specialist who focused on

development of the whole person **9** 471-472

**LOBACHEVSKII, NIKOLAI IVANOVICH** (1792-1856), Russian mathematician **9** 472-474

**LOBENGULA** (died circa 1894), South African Ndebele king **9** 474-475

**LOCHNER, STEPHAN** (circa 1410-1451), German painter **9** 475

**LOCKE, ALAIN** (1886-1954), African American educator, editor, and author **9** 475-478

**LOCKE, JOHN** (1632-1704), English philosopher and political theorist **9** 478-480

**LOCKWOOD, BELVA** (1830-1917), American lawyer, suffragist, and reformer **19** 205-207

**LODGE, DAVID** (born 1935), English novelist **9** 480-482

**LODGE, HENRY CABOT** (1850-1924), American political leader **9** 482-483

**LODGE, HENRY CABOT, JR.** (1902-1985), American congressman, senator, ambassador, and presidential adviser **9** 483-485

**LOESSER, FRANK** (Francis Henry Loesser; 1910-1969), American lyricist **18** 257-259

**LOEW, MARCUS** (1870-1927), founder of a theater chain and Metro-Goldwyn-Mayer **9** 485-486

**LOEWI, OTTO** (1873-1961), German-American pharmacologist and physiologist **9** 486-487

**LOFTING, HUGH** (1886-1947), British author of children's books **19** 207-209

**LOGAN, JAMES** (1674-1751), American colonial statesman and jurist **9** 487-488

**LOGAN, SIR WILLIAM EDMOND** (1798-1875), Canadian geologist **9** 488-489

**LOISY, ALFRED FIRMIN** (1857-1940), French theologian and biblical historian **9** 489-490

**LOMBARD, PETER** (circa 1095-1160), Italian bishop and theologian **9** 490-491

**LOMBARDI, VINCE** (1913-1970), American football coach **9** 491-492

**LOMBROSO, CESARE** (1835-1909), Italian criminologist **9** 493

**LOMONOSOV, MIKHAIL VASILEVICH** (1711-1765), Russian chemist and physicist **9** 494



**London** (city; England)  
Great Fire (1666)

Graunt, John **21** 176-178  
statistical studies  
Graunt, John **21** 176-178

**LONDON, JACK** (1876-1916), American author **9** 494-495

**LONG, CRAWFORD WILLIAMSON** (1815-1878), American physician **9** 495-496

**LONG, HUEY PIERCE** (1893-1935), American politician **9** 496-497

**LONG, IRENE D.** (born 1951), African American aerospace medicine physician **9** 497-498

**LONGFELLOW, HENRY WADSWORTH** (1807-1882), American poet **9** 499-500

**LONGINUS** (flourished 1st or 3rd century), Latin author and rhetorician **9** 500-501

**LONGUS** (flourished 3rd century), Greek author **20** 229-230

**LONSDALE, KATHLEEN** (born Kathleen Yardley; 1903-1971), Irish crystallographer **9** 501-502

**LOOS, ADOLF** (1870-1933), Viennese architect **9** 502-503

**LOOS, ANITA** (1893-1981), American actress and writer **21** 262-265

**LOPE FÉLIX DE VEGA CARPIO** (1562-1635), Spanish dramatist **9** 503-506

**LOPEZ ARELLANO, OSWALDO** (born 1921), Honduran military officer and president **20** 230-231

**LÓPEZ, CARLOS ANTONIO** (1792-1862), Paraguayan president-dictator 1844-1862 **9** 506-507

**LÓPEZ, FRANCISCO SOLANO** (1826-1870), Paraguayan president-dictator **9** 507-508

**LÓPEZ, NARCISO** (1798-1851), Venezuelan military leader **9** 508

**LÓPEZ DE AYALA, PEDRO** (1332-1407), Spanish statesman, historian, and poet **9** 508-509

**LÓPEZ MATEOS, ADOLFO** (1910-1970), president of Mexico (1958-1964) **9** 509-510

**LÓPEZ PORTILLO, JOSÉ** (born 1920), president of Mexico (1976-1982) **9** 510-511

**LORCA, FEDERICO GARCÍA** (1898-1936), Spanish poet and playwright **9** 511-513

**Lord and Thomas** (advertising company)  
Lasker, Albert **21** 251-254

**LORDE, AUDRE** (1934-1992), African American poet **9** 513-515

**LOREN, SOPHIA** (Sofia Villani Scicolone; born 1936), Italian actress and author **18** 259-261

**LORENTZ, HENDRIK ANTOON** (1853-1928), Dutch physicist **9** 515-516

**LORENZ, KONRAD Z.** (1903-1989), animal psychologist **9** 516-517

**LORENZETTI, PIERRE AND AMBROGIO** (flourished 14th century), Italian painters **9** 517-518

**Los Angeles Lakers** (basketball team)  
West, Jerry Alan **21** 428-430

**Los Angeles Rams** (football team)  
Davis, Glenn **21** 101-103

**Lost World, The** (novel)  
O'Brien, Willis **21** 324-326

**LOTI, PIERRE** (1850-1923), French novelist **9** 519-520

**LOTT, TRENT** (Chester Trent Lott; born 1941), American congressman **18** 262-264

**LOTTO, LORENZO** (circa 1480-1556), Italian painter **9** 520-521

**LOTZE, RUDOLF HERMANN** (1817-1881), German idealist philosopher **9** 521-522

**LOUIS I** (778-840), Holy Roman emperor and king of France and Germany 814-840 **9** 522-523

**LOUIS VI** (1081-1137), king of France 1108-1137 **9** 523-524

**LOUIS VII** (circa 1120-1180), king of France 1137-1180 **9** 524-525

**Louis VIII** (1187-1226), king of France 1223-1226  
Blanche of Castile **21** 45-47

**LOUIS IX** (1214-1270), king of France 1226-1270 **9** 525-526  
Blanche of Castile **21** 45-47  
Gregory IX **21** 180-183  
Vincent of Beauvais **21** 416-418

**LOUIS XI** (1423-1483), king of France 1461-1483 **9** 526-528

**LOUIS XII** (1462-1515), king of France 1498-1515 **9** 528-529

**LOUIS XIII** (1601-1643), king of France 1610-1643 **9** 529-531

**LOUIS XIV** (1638-1715), king of France 1643-1715 **9** 531-533  
art patronage  
Beauchamps, Pierre **21** 27-29

**LOUIS XV** (1710-1774), king of France 1715-1774 **9** 533-534

**LOUIS XVI** (1754-1793), king of France 1774-1792 **9** 534-535  
associates  
Leblanc, Nicolas **21** 256-258

**LOUIS XVIII** (1755-1824), king of France 1814-1824 **9** 535-536

**LOUIS, JOE** (Joe Louis Barrow; 1914-1981), American boxer **9** 537-538

**LOUIS, MORRIS** (Bernstein; 1912-1962), American painter **9** 538-539

**LOUIS, PIERRE CHARLES ALEXANDRE** (1787-1872), French physician **9** 540

**Louis le Lion**  
see Louis VIII (king of France)

**LOUIS PHILIPPE** (1773-1850), king of the French 1830-1848 **9** 536-537

**Louisville and Nashville Railroad** (United States)  
Fink, Albert **21** 133-135

**LOVE, NAT** (1854-1921), African American champion cowboy **10** 1-2

**LOVE, SUSAN M.** (born 1948), American surgeon and medical researcher **10** 2-3

**LOVECRAFT, H. P.** (1890-1937), American author **10** 3-6

**LOVEJOY, ARTHUR ONCKEN** (1873-1962), American philosopher **10** 6

**LOVEJOY, ELIJAH PARISH** (1802-1837), American newspaper editor and abolitionist **10** 6-7

**LOVELACE, ADA BYRON** (Countess of Lovelace, Augusta Ada King Byron; 1815-1852), English mathematician and author **18** 264-266

**LOVELACE, RICHARD** (circa 1618-circa 1657), English Cavalier poet **10** 7-8

**LOVELL, SIR ALFRED CHARLES BERNARD** (born 1913), English astronomer **10** 8-9

**LOW, JULIETTE GORDON** (born Juliette Magill Kinzie Gordon; 1860-1927), American reformer and founder of the Girl Scouts **10** 10-11

**LOW, SETH** (1850-1916), American politician and college president **10** 11-12

**LOWELL, ABBOTT LAWRENCE** (1856-1943), American educator and political scientist **10** 12-13

**LOWELL, AMY** (1874-1925), American poet, critic, and biographer **10** 13

**LOWELL, FRANCIS CABOT** (1775-1817), American merchant and manufacturer **10** 13-14

**LOWELL, JAMES RUSSELL** (1819-1891), American poet and diplomat **10** 14-15

**LOWELL, JOSEPHINE SHAW** (1843-1905), American social reformer and philanthropist **10** 15-16

**LOWELL, ROBERT TRAIL SPENCE, JR.** (1917-1977), American poet **10** 16-17

**LOWIE, ROBERT HARRY** (1883-1957), Austrian-born American anthropologist **10** 18

**LOWRY, MALCOLM** (1909-1957), English author **19** 209-211

**LU CHI** (261-303), Chinese poet and critic **10** 24

**LU CHIU-YUAN** (Lu Hsiang-shan; 1139-1193), Chinese philosopher **10** 24-25

**LU HSÜN** (pen name of Chou Shu-jen; 1881-1936), Chinese author and social critic **10** 35-37

**LUBITSCH, ERNST** (1892-1947), German-American film director **10** 18-19

**LUCARIS, CYRIL** (1572-1637), Greek Orthodox patriarch and theologian **10** 20

**LUCAS, GEORGE** (born 1944), American filmmaker **19** 211-213

**LUCAS VAN LEYDEN** (1494-1533), Dutch engraver and painter **10** 20-21

**LUCE, CLARE BOOTHE** (1903-1987), playwright and U.S. congresswoman **10** 21-23

**LUCE, HENRY ROBINSON** (1898-1967), American magazine editor and publisher **10** 23-24

**LUCIAN** (circa 120-circa 200), Greek satirist **10** 25-26

**LUCIANO, LUCKY** (Charles Luciano, Salvatore Lucania; 1897-1962), Italian American mobster **19** 214-215

**LUCID, SHANNON** (born 1943), American astronaut **19** 215-217

**LUCRETIUS** (Titus Lucretius Carus; circa 94-circa 55 B.C.), Latin poet and philosopher **10** 26-27

**LUDENDORFF, ERICH FRIEDRICH WILHELM** (1865-1937), German general **10** 27-28

**LUDLUM, ROBERT** (a.k.a. Jonathan Ryder and Michael Shepherd; born 1927), American suspense novelist **10** 28-29

**LUDWIG, DANIEL KEITH** (1897-1992), American shipping magnate **10** 29-31

**LUDWIG, KARL FRIEDRICH WILHELM** (1816-1895), German physiologist **10** 31

**LUGARD, FREDERICK JOHN DEALTRY** (1st Baron Lugard; 1858-1945), British

soldier and colonial administrator in Africa **10** 31-32

**LUHAN, MABEL DODGE** (1879-1962), American writer, salon hostess, and patron of artists, writers, and political radicals **10** 32-34

**LUHMANN, NIKLAS** (born 1927), German sociologist who developed a general sociological systems theory **10** 34-35

**LUKÁCS, GYORGY** (1885-1971), Hungarian literary critic and philosopher **10** 37-38

**LUKE, Saint** (flourished A.D. 50), Evangelist and biblical author **10** 38

**LUKS, GEORGE BENJAMIN** (1867-1933), American painter **10** 38-39

**LULL, RAYMOND** (1232/35-1316), Spanish theologian, poet, and missionary **10** 39-40

**LULLY, JEAN BAPTISTE** (1632-1687), Italian-born French composer **10** 40-41

**LUMIÈRE BROTHERS** (Auguste Marie Louis, 1862-1954, and Louis Jean, 1864-1948), French inventors **10** 41-43

**LUMUMBA, PATRICE EMERY** (1925-1961), Congolese statesman **10** 43-45

**LUNDY, BENJAMIN** (1789-1839), American journalist **10** 45-46

**LUNS, JOSEPH** (born 1911), West European political leader **10** 46-47

**LURIA, ISAAC BEN SOLOMON ASHKENAZI** (1534-1572), Jewish mystic **10** 47-48

**LUTHER, MARTIN** (1483-1546), German religious reformer **10** 48-51

**LUTHULI, ALBERT JOHN** (1898-1967), South African statesman **10** 51-52

**LUTOSLAWSKI, WITOLD** (1913-1994), Polish composer **10** 52-53

**LUTYENS, EDWIN LANDSEER** (1869-1944), English architect **10** 54-55

**LUXEBURG, ROSA** (1870-1919), Polish revolutionary **10** 55-56

**LUZ, ARTURO ROGERIO** (born 1926), Philippine painter and sculptor **10** 56-57

**LUZHKOV, YURI MIKHAYLOVICH** (born 1936), mayor of Moscow **18** 266-268

**LUZZATO, MOSES HAYYIM** (1707-1747), Jewish mystic and poet **10** 57-58

**LUZZI, MONDINO DE'** (circa 1265/70-1326), Italian anatomist **10** 58

**LWOFF, ANDRÉ** (1902-1994), French microbiologist and geneticist **10** 58-59

**LY, ABDOULAYE** (born 1919), Senegalese politician and historian **10** 60

**LYAUTEY, LOUIS HUBERT GONZALVE** (1854-1934), French marshal and colonial administrator **10** 60-61

**LYDGATE, JOHN** (circa 1370-1449/50), English poet **10** 61-62

**LYELL, SIR CHARLES** (1797-1875), Scottish geologist **10** 62-63

**LYND, HELEN MERRELL** (1896-1982), American sociologist and educator **10** 63-64

**LYND, ROBERT STAUGHTON** (1892-1970), American sociologist **10** 64-65

**LYND, STAUGHTON** (born 1929), historian and peace militant **10** 65-66

**LYNDSAY, SIR DAVID** (circa 1485-1555), Scottish poet and courtier **10** 66-67

**LYON, MARY** (1797-1849), American educator, religious leader, and women's rights advocate **10** 67-69

**LYONS, JOSEPH ALOYSIUS** (1879-1939), Australian statesman, prime minister 1932-39 **10** 69-70

**Lyons** (city; France)  
Jacquard, Joseph Marie **21** 216-218

**LYSANDER** (died 395 B.C.), Spartan military commander and statesman **10** 70

**LYSENKO, TROFIM DENISOVICH** (1898-1976), Soviet agronomist and geneticist **10** 71

## M

**MA, YO-YO** (born 1955), American cellist **20** 232-234

**MAATHAI, WANGARI MUTA** (born 1940), Kenyan environmental activist **18** 269-271

**MABILLON, JEAN** (1632-1707), French monk and historian **10** 72

**MABINI, APOLINARIO** (1864-1903), Filipino political philosopher **10** 72-73

**MABUCHI, KAMO** (1697-1769), Japanese writer and scholar **10** 73-74

**MACAPAGAL, DIOSDADO P.** (born 1910), Filipino statesman **10** 74-76

**MACARTHUR, DOUGLAS** (1880-1964), American general **10** 76-78

**MACARTHUR, JOHN** (circa 1767-1834), Australian merchant, sheep breeder, and politician **10** 78

**MACAULAY, HERBERT** (1864-1945), Nigerian politician **10** 78-79

**MACAULAY, THOMAS BABINGTON** (1st Baron Macaulay of Rothley; 1800-1859), English essayist, historian, and politician **10** 79-80

**MACBETH** (died 1057), king of Scotland 1040-1057 **10** 81

**MACBRIDE, SEAN** (1904-1988), Irish statesman **19** 218-220

**MacCREADY, PAUL** (born 1925), American aeronautical engineer **20** 234-237

**MACDONALD, DWIGHT** (1906-1982), American editor, journalist, essayist, and critic **10** 81-83

**MACDONALD, ELEANOR JOSEPHINE** (born 1906), American epidemiologist **10** 83-84

**MACDONALD, JAMES RAMSAY** (1866-1937), British politician **10** 84-85

**MACDONALD, SIR JOHN ALEXANDER** (1815-1891), Canadian statesman **10** 85-87

**MACDOWELL, EDWARD ALEXANDER** (1861-1908), American pianist and composer **10** 87-88

**MACEO, ANTONIO** (1845-1896), Cuban general and patriot **10** 88-90

**MACH, ERNST** (1838-1916), Austrian physicist **10** 90-91

**MACHADO DE ASSIS, JOAQUIM MARIA** (1839-1908), Brazilian novelist **10** 91-92

**MACHADO Y MORALES, GERARDO** (1871-1939), Cuban general and president **10** 92-93

**MACHAUT, GUILLAUME DE** (circa 1300-1377), French composer and poet **10** 93-94

**MACHEL, SAMORA MOISES** (1933-1986), socialist revolutionary and first president of Mozambique **10** 94-96

**MACHIARELLI, NICCOLÒ** (1469-1527), Italian author and statesman **10** 97-99

**MacINTYRE, ALASDAIR CHALMERS** (born 1929), Scottish-born philosopher and ethicist **10** 99-100

**MACIVER, ROBERT MORRISON** (1882-1970), Scottish-American sociologist, political philosopher, and educator **10** 100-101

**MACK, CONNIE** (Cornelius Alexander McGillicuddy; 1862-1956), American

baseball player and manager **19** 220-222

**MACKAY, JOHN WILLIAM** (1831-1902), American miner and business leader **10** 101-102

**MACKIE, AUGUST** (1887-1914), Expressionist painter **10** 102-103

**MACKENZIE, SIR ALEXANDER** (circa 1764-1820), Scottish explorer, fur trader, and businessman **10** 103-104

**MACKENZIE, ALEXANDER** (1822-1892), Scottish-born Canadian statesman, prime minister 1873-1878 **10** 104

**MACKENZIE, WILLIAM LYON** (1795-1861), Scottish-born Canadian journalist, politician, and rebel **10** 104-106

**MACKILLOP, MARY** (1842-1909), first Australian candidate for sainthood in the Roman Catholic Church and foundress of the Sisters of Saint Joseph of the Sacred Heart **10** 106-107

**MACKINTOSH, CHARLES RENNIE** (1868-1928), Scottish artist, architect, and interior/furniture/textile designer **10** 107-108

**MACLEAN, GEORGE** (1801-1847), Scottish soldier and agent of British expansion **10** 108-109

**MACLEISH, ARCHIBALD** (born 1892), American poet, playwright, and public official **10** 109-110

**MACLENNAN, HUGH** (1907-1990), Canadian novelist, essayist, and academic **10** 110-111

**MACMILLAN, DONALD BAXTER** (1874-1970), American explorer and scientist **10** 111-112

**MACMILLAN, HAROLD** (born 1894), British statesman **10** 112-113

**MACNEICE, LOUIS** (1907-1964), British poet **10** 113-114

**MACON, NATHANIEL** (1758-1837), American statesman **10** 114-115

**MACQUARIE, LACHLAN** (1762-1824), British officer, governor of New South Wales 1810-1822 **10** 115-116

**MACQUARRIE, JOHN** (born 1919), Anglican theologian **10** 116-117

**MACY, ANNE SULLIVAN** (Johanna "Annie" Sullivan; 1866-1936), American teacher **20** 237-239

**MADERNO, CARLO** (1556-1629), Italian architect **10** 117-118

**MADERO, FRANCISCO INDALECIO** (1873-1913), Mexican politician, president 1911-13 **10** 118-119

**MADISON, DOLLY** (wife of James Madison, born Dorothea Payne; 1768-1849), American First Lady **10** 119-121

**MADISON, JAMES** (1751-1836), American statesman, president 1809-1817 **10** 121-123

**MADONNA** (Madonna Louise Veronica Ciccone, born 1958), American singer and actress **10** 123-125

**MAETERLINCK, COUNT MAURICE** (1863-1949), Belgian poet, dramatist, and essayist **10** 125-126

**MAGELLAN, FERDINAND** (1480-1521), Portuguese explorer **10** 126-127

**Magna Carta** (England; 1215) Langton, Stephen **21** 249-251

**MAGNASCO, ALESSANDRO** (1667-1749), Italian painter **10** 127-128

**MAGRITTE, RENÉ** (1890-1967), Surrealist painter **10** 128-130

**MAGSAYSAY, RAMON** (1907-1957), Philippine statesman, president 1953-1957 **10** 130-131

**MAHAL, HAZRAT** (Iftikarun-nisa; 1820?-1879), Indian revolutionary **18** 271-273

**MAHAN, ALFRED THAYER** (1840-1914), American naval historian and strategist **10** 131-132

**MAHARISHI MAHESH YOGI** (born 1911?), Indian guru and founder of the Transcendental Meditation movement **10** 132-133

**MAHATHIR MOHAMAD** (born 1925), prime minister of Malaysia **10** 134-135

**MAHDI, THE** (Mohammed Ahmed; circa 1844-1885), Islamic reformer and Sudanese military leader **10** 137-138

**MAHENDRA, KING** (Bir Bikram Shah Dev; 1920-1972), ninth Shah dynasty ruler of Nepal (1955-1972) **10** 138-139

**MAHERERO, SAMUEL** (ca. 1854-1923), Supreme Chief of the Herero nation in southwest Africa **10** 139-142

**MAHFUZ, NAJIB** (born 1912), Egyptian novelist **10** 142-144

**MAHLER, GUSTAV** (1860-1911), Bohemian-born composer and conductor **10** 144-145

**MAHMUD II** (1785-1839), Ottoman sultan 1808-1839 **10** 145-147

**MAHMUD OF GHAZNI** (971-1030); Ghaznavid sultan in Afghanistan **10** 147

**MAHONE, WILLIAM** (1826-1895), American politician and Confederate general **10** 147-148

**MAILER, NORMAN KINGSLEY** (born 1923), American author, producer, and director **10** 148-150

**MAILLOL, ARISTIDE** (1861-1944), French sculptor **10** 150-151

**MAIMONIDES** (1135-1204), Jewish philosopher **10** 151-152

**MAINE, SIR HENRY JAMES SUMNER** (1822-1888), English legal historian and historical anthropologist **10** 152

**MAISONNEUVE, SIEUR DE** (Paul de Chomedey; 1612-1676), French explorer and colonizer in Canada **10** 153

**MAISTRE, JOSEPH DE** (1753-1821), French political philosopher **10** 153-154

**MAITLAND, FREDERIC WILLIAM** (1850-1906), English historian, lawyer, and legal scholar **10** 154-155

**MAJOR, JOHN** (born 1943), British prime minister **10** 155-157

**MAKARIOS III** (Michael Christodoulou Mouskos; 1913-1977), archbishop and ethnarch of the Orthodox Church of Cyprus and first president of the Republic of Cyprus (1959-1977) **10** 157-158

**MAKEMIE, FRANCIS** (1658-1708), Irish-born Presbyterian missionary **10** 158-159

**MAKI, FUMIHIKO** (born 1928), Japanese architect **10** 159-161

**MAKIBI, KIBI-NO** (693-775), Japanese courtier and statesman **10** 161

**MÄKONNEN ENDALKAČÄW** (1892-1963), Ethiopian writer and official **10** 161-162

**MALAMUD, BERNARD** (1914-1986), American novelist and short-story writer **10** 162-163

**MALAN, DANIEL FRANCOIS** (1874-1959), South African pastor, journalist, and prime minister 1948-1954 **10** 163-164

**MALCOLM III** (died 1093), king of Scotland 1058-1093 **10** 164-165

**MALCOLM X** (1925-1965), African American civil rights leader **10** 165-166

**MALEBRANCHE, NICOLAS** (1638-1715), French philosopher and theologian **10** 166-167

**MALENKOV, GEORGY MAKSIMILIANOVICH** (1902-1988),

head of the Soviet government and leader of its Communist Party (1953) **10** 168

**MALEVICH, KASIMIR** (1878-1935), Russian painter **10** 168-169

**MALHERBE, FRANÇOIS DE** (1555-1628), French poet **10** 169-170

**MALINOWSKI, KASPAR BRONISLAW** (1884-1942), Austrian-born British social anthropologist **10** 170-171

**MALIPIERO, GIAN FRANCESCO** (1882-1973), Italian composer **10** 171

**MALKAM KHAN, MIRZA** (1831-1908), Persian diplomat **10** 172

**MALLARMÉ, STÉPHANE** (1842-1898), French poet **10** 172-173

**MALLE, LOUIS** (1932-1995), French film director and producer **18** 273-275

**MALLON, MARY** (Typhoid Mary; 1869-1938), Irish woman who unwittingly infected many with typhoid fever **21** 266-268

**MALLORY, GEORGE** (1886-1924), English mountain climber **21** 268-271

**MALONE, DUMAS** (1892-1986), American historian and editor **10** 174-175

**MALORY, SIR THOMAS** (flourished 15th century), English author **10** 175-176

**MALPIGHI, MARCELLO** (1628-1694), Italian anatomist **10** 176-178

**MALRAUX, ANDRÉ** (1901-1976), French novelist, essayist, and politician **10** 178-180

**MALTHUS, THOMAS ROBERT** (1766-1834), English economist **10** 180-181

**MAMET, DAVID ALAN** (born 1947), American author **10** 181-182

**MAMUN, ABDALLAH AL-** (786-833), Abbasid caliph **10** 183

**Man and Nature** (book)  
Marsh, George Perkins **21** 275-277

**Management by objective** (business concept)  
Drucker, Peter **21** 110-112

**MANASSEH BEN ISRAEL** (1604-1657), Dutch rabbi and theologian **10** 183-184

**Manchu dynasty**  
see Ch'ing dynasty

**MANCINI, HENRY** (Enrico Mancini; 1924-1994), American composer, pianist, and film music scorer **18** 275-276

**MANCO CAPAC** (circa 1500-1545), Inca emperor **10** 184-185

**MANDELA, NELSON ROLIHLEHLA** (born 1918), South African leader **10** 185-186

**MANDELA, WINNIE** (Nomzamo Winifred Madikizela; born 1936), South African anti-apartheid leader **10** 187-189

**MANDELBROT, BENOIT B.** (born 1924), Polish-born French-American mathematician who invented fractals **10** 189-191

**MANDELSTAM, OSIP EMILYEVICH** (1891-1938), Russian poet **10** 191

**MANDEVILLE, BERNARD** (circa 1670-1733), English satirist and moral philosopher **10** 192

**MANDEVILLE, SIR JOHN** (flourished 14th century), pen name of English author **10** 192-193

**MANET, ÉDOUARD** (1832-1883), French painter **10** 193-194  
associates  
Morisot, Berthe **21** 303-305

**MANGAS COLORADAS** (ca. 1790-1863), Apache military leader **10** 194-196

**MANI** (216-276/277), Persian prophet **10** 196-197

**MANIN, DANIELE** (1804-1857), Venetian patriot **10** 197-198

**MANKILLER, WILMA** (born 1945), Native American activist and Cherokee chief **10** 198-199

**MANLEY, MICHAEL NORMAN** (1924-1997), Jamaican prime minister (1972-1980) **10** 200-201

**MANN, HEINRICH** (1871-1950), German novelist, essayist, and social critic **10** 201-202

**MANN, HORACE** (1796-1859), American educational reformer and humanitarian **10** 202-204

**MANN, THOMAS** (1875-1955), German novelist and essayist **10** 204-207

**MANNERHEIM, BARON CARL GUSTAV EMIL VON** (1867-1951), Finnish military leader and statesman, president 1944-46 **10** 207-208

**MANNHEIM, KARL** (1893-1947), Hungarian-born sociologist and educator **10** 208-209  
Wirth, Louis **21** 434-436

**MANNING, HENRY EDWARD** (1808-1892), English cardinal **10** 209-210

**MANNIX, DANIEL** (1864-1963), Irish-born Australian archbishop **10** 210

**MANRIQUE, JORGE** (1440?-1478), Spanish poet and soldier **10** 210-211

**MANSART, FRANÇOIS** (1598-1666), French architect **10** 211

**MANSART, JULES HARDOUIN** (1646-1708), French architect **10** 212

**MANSFIELD, KATHERINE** (born Kathleen Mansfield Beauchamp; 1888-1923), New Zealander short-story writer and poet **10** 213-214

**MANSUR, ABU JAFAR IBN MUHAMMAD AL** (712-775), Abbasid caliph **10** 214-215

**MANTEGNA, ANDREA** (circa 1430-1506), Italian painter and engraver **10** 215-216

**MANTLE, MICKEY** (1931-1995), American baseball player **10** 216-218

**MANUEL I** (1469-1521), king of Portugal 1495-1521 **10** 219-220

**MANUEL I COMNENUS** (circa 1123-1180), Byzantine emperor 1143-1180 **10** 218-219

**MANUELITO** (1818-1894), Navajo tribal leader **10** 220-222

**Manufacturers**  
see Business and industrial leaders

**MANZONI, ALESSANDRO** (1785-1873), Italian novelist and playwright **10** 222-224

**MANZÙ, GIACOMO** (born 1908), Italian sculptor **10** 224-225

**MAO ZEDONG** (1893-1976), Chinese statesman **10** 225-227

**MAPPLETHORPE, ROBERT** (1946-1989), controversial American photographer **10** 227-228

**MARADONA, DIEGO** (born 1961), Argentine soccer player **20** 239-241

**MARAGHI, AL-MUSTAFA'Ā** (1881-1945), Egyptian jurist and educator **10** 228-229

**MARAT, JEAN PAUL** (1743-1793), French journalist and political leader **10** 230-231

**MARBLE, ALICE** (1913-1990), American tennis player **21** 271-273

**MARC, FRANZ** (1880-1916), German painter **10** 231

**MARCEAU, MARCEL** (born 1923), world's greatest practitioner of pantomime **10** 231-233

**MARCEL, GABRIEL** (1889-1973), French philosopher **10** 233-234

**MARCHAND, JEAN-BAPTISTE** (1863-1934), French explorer and soldier **10** 234-237

**MARCiano, ROCKY** (1923-1969), American boxer **10** 237-238

**MARCION** (flourished mid-2nd century), Christian theologian **10** 238-239

**MARCONI, GUGLIELMO** (1874-1937), Italian inventor **10** 239-240

**MARCOS, FERDINAND** (1917-1989), president of the Republic of the Philippines (1965-1986) **10** 240-242

**MARCOS, IMELDA ROMUALDEZ** (born 1930), wife of Philippine President Ferdinand Marcos and governor of Metro Manila **10** 242-243

**MARCOS DE NIZA, FRIAR** (circa 1500-1558), Franciscan missionary in Spanish America **10** 240

**MARCUS AURELIUS ANTONINUS** (121-180), Roman emperor 161-180 **10** 243-245

**MARCUS, STANLEY** (born 1905), American businessman **19** 222-224

**MARCUSE, HERBERT** (1898-1979), German-American philosopher **10** 245-247

**MARCY, WILLIAM LEARNED** (1786-1857), American statesman **10** 247-248

**MARENZIO, LUCA** (1553/54-1599), Italian composer **10** 248

**MARGAI, SIR MILTON AUGUSTUS STRIERY** (1895-1964), Sierra Leonean physician and statesman **10** 248-249

**MARGARET OF ANJOU** (1430-1482), queen consort of Henry VI of England **10** 249-250

**MARGARET OF DENMARK** (born Margaret Valdemarsdottir; 1353-1412), queen of Denmark **10** 250-252

**MARGARET OF SCOTLAND, Saint** (1045-1093), wife of Malcolm III of Scotland **10** 252-253

**MARGGRAF, ANDREAS** (1709-1782), German chemist **21** 273-275

**MARGULIS, LYNN** (born 1938), American biologist **10** 253-254

**MARIA THERESA** (1717-1780), Holy Roman empress 1740-1780 **10** 256-258

**MARIANA, JUAN DE** (1536-1624), Spanish Jesuit historian **10** 254-255

**MARIÁTEGUI, JOSÉ CARLOS** (1895-1930), Peruvian writer **10** 255-256

**MARIE ANTOINETTE** (1755-1793), queen of France 1774-1793 **10** 258-259

**MARIE DE FRANCE** (flourished late 12th century), French poet **10** 259

**MARIN, JOHN, III** (1870-1953), American painter **10** 259-260

**MARINI, MARINO** (1901-1980), Italian sculptor **10** 260-262

**MARION, FRANCIS** (1732-1795), American Revolutionary War leader **10** 262-263

**MARITAIN, JACQUES** (1882-1973), French Catholic philosopher **10** 263

**MARIUS GAIUS** (circa 157-86 B.C.), Roman general and politician **10** 264-265

**MARIVAUX, PIERRE CARLET DE CHAMBLAIN DE** (1688-1763), French novelist and dramatist **10** 265-266

**MARK, Saint** (flourished 1st century), Apostle of Jesus **10** 266-267

**MARKHAM, BERYL** (1902-1986), British aviator, author, and horse trainer **20** 241-243

**MARKHAM, EDWIN** (1852-1940), American poet **10** 267

**MARKIEVICZ, CONSTANCE** (1868-1927), Irish nationalist, labor activist, and feminist **10** 267-271

**MARLBOROUGH, 1ST DUKE OF** (John Churchill; 1650-1722), English general and statesman **10** 271-272

**MARLOWE, CHRISTOPHER** (1564-1593), English dramatist **10** 272-274

**MÁRMOL, JOSÉ** (1817-1871), Argentine writer and intellectual **10** 274

**MARQUETTE, JACQUES** (1637-1675), French Jesuit, missionary and explorer **10** 274-275

**MARSALIS, WYNTON** (born 1961), American trumpeter and bandleader **19** 224-226

**MARSH, GEORGE PERKINS** (1801-1882), American diplomat, philologist, and conservationist **21** 275-277

**MARSH, NGAIO** (Edith Ngaio Marsh; 1899-1982), New Zealander author and playwright **19** 226-228

**MARSH, OTHNIEL CHARLES** (1831-1899), American paleontologist **10** 275-276

**MARSH, REGINALD** (1898-1954), American painter and printmaker **10** 276-277

**MARSHALL, ALFRED** (1842-1924), English economist **10** 277-278

**MARSHALL, GEORGE CATLETT** (1880-1959), American soldier and statesman **10** 278-279

**MARSHALL, JOHN** (1755-1835), American jurist, chief justice of United

States. Supreme Court 1801-1835 **10** 279-281

**MARSHALL, PAULE BURKE** (born 1929), American author **10** 281-282

**MARSHALL, THURGOOD** (1908-1993), African American jurist **10** 282-284

**MARSILIUS OF PADUA** (1275/80-1342), Italian political philosopher **10** 284

**MARTEL, CHARLES** (circa 690-741), Frankish ruler **10** 285

**MARTÍ, JOSÉ** (1853-1895), Cuban revolutionary, poet, and journalist **10** 285-286

**MARTIAL** (Marcus Valerius Martialis; circa 38/41-circa 104), Roman epigrammatist **10** 286-287

**MARTIN V** (Oddone Colonna; 1368-1431), pope 1417-1431 **10** 287-288

**MARTIN, AGNES** (born 1912), American painter **10** 288-289

**MARTIN, GREGORY** (circa 1540-1582), British Bible translator and scholar **21** 277-279

**MARTIN, LUTHER** (1748-1826), American lawyer and Revolutionary patriot **10** 289-290

**MARTIN, LYNN MORLEY** (born 1939), Republican representative from Illinois and secretary of labor under George Bush **10** 290-292

**MARTIN, MARY** (1913-1990), popular stage actress, singer, and dancer and a television and film star **10** 292-293

**MARTIN, WILLIAM MCCHESENEY, JR.** (1906-1998), American business executive and federal government official **10** 293-295

**MARTIN DU GARD, ROGER** (1881-1958), French author **10** 295-296

**MARTINEAU, HARRIET** (1802-1876), English writer and philosopher **10** 296-297

**MARTÍNEZ, MAXIMILIANO HERNÁNDEZ** (1882-1966), president of El Salvador (1931-1944) **10** 297-298

**MARTINEZ, VILMA SOCORRO** (born 1943), Hispanic American attorney and activist **18** 276-279

**MARTINI, SIMONE** (flourished 1315-1344), Italian painter **10** 298-299

**MARTINU, BOHUSLAV** (1890-1959), Czech composer **10** 299-300

**MARTY, MARTIN E.** (born 1928), Lutheran pastor, historian of American religion, and commentator **10** 300-301

**MARVELL, ANDREW** (1621-1678), English poet and politician **10** 301-303

**MARX, KARL** (1818-1883), German political philosopher **10** 304-308

**MARX BROTHERS**, 20th-century American stage and film comedians **10** 303-304

**MARY, QUEEN OF SCOTS** (1542-1587), queen of France and Scotland **10** 308-309

**MARY, SAINT** (Blessed Virgin Mary; late 1st century B.C.-1st century A.D.), New Testament figure, mother of Jesus **10** 308-309  
Bernadette of Lourdes **21** 34-36

**MARY I** (1516-1558), queen of England 1553-1558 **10** 308-309

**MARY II** (1662-1694), queen of England, Scotland, and Ireland 1689-1694 **10** 309-310

**MASACCIO** (1401-1428), Italian painter **10** 312-313

**MASARYK, JAN** (1886-1948), Czech foreign minister **20** 243-246

**MASARYK, TOMÁŠ GARRIGUE** (1850-1937), Czech philosopher and statesman, president 1919-1935 **10** 314-315

**MASINISSA, KING OF NUMIDIA** (240 B.C. - 148 B.C.), prince of the Massylians who consolidated the Numidian tribes to form a North African kingdom **10** 315-317

**MASIRE, QUETT KETUMILE** (born 1925), a leader of the fight for independence and president of Botswana **10** 318-319

**MASON, GEORGE** (1725-1792), American statesman **10** 319-320

**MASON, JAMES MURRAY** (1796-1871), American politician and Confederate diplomat **10** 320-321

**MASON, LOWELL** (1792-1872), American composer and music educator **10** 321-322

**Mass production** (industry) development  
Maudslay, Henry **21** 286-288

**Massachusetts** (state; United States) legislators (19th century)  
Butler, Benjamin Franklin **21** 65-67

**MASSASOIT** (1580-1661), Native American tribal chief **10** 322-324

**MASSEY, WILLIAM FERGUSON** (1856-1925), New Zealand prime minister 1912-1925 **10** 324

**MASSINGER, PHILIP** (1583-1640), English playwright **10** 324-325

**MASSYS, QUENTIN** (1465/66-1530), Flemish painter **10** 325-326

**MASTERS, EDGAR LEE** (1869-1950), American author and lawyer **10** 326-327

**MASTERS, WILLIAM HOWELL** (born 1915), American psychologist and sex therapist **10** 327-328

**MASUDI, ALI IBN AL- HUSAYN AL-** (died 956), Arab historian **10** 328-329

**MASUR, KURT** (born 1927), German conductor and humanist **20** 246-248

**MATA HARI** (Margaretha Geertruida Zelle; 1876-1917), Dutch spy **21** 279-282

**MATAMOROS, MARINO** (1770-1814), Mexican priest and independence hero **10** 329-330

**Mathematics**  
and Chladni figures  
Germain, Sophie **21** 157-158  
applied  
Peirce, Benjamin **21** 340-342  
decimal numbers  
Stevin, Simon **21** 395-398  
hydrostatics  
Stevin, Simon **21** 395-398

**MATHER, COTTON** (1663-1728), American Puritan clergyman and historian **10** 330-332

**MATHER, INCREASE** (1639-1723), American Puritan clergymen, educator, and author **10** 332-333

**MATHEWSON, CHRISTY** (Christopher Mathewson; 1880-1925), American baseball player **21** 282-284

**MATHIAS, BOB** (Robert Bruce Mathias; born 1930), American track and field star **21** 284-286

**MATHIEZ, ALBERT** (1874-1932), French historian **10** 333-334

**MATILDA OF TUSCANY** (ca. 1046-1115), Italian countess **10** 334-336

**MATISSE, HENRI** (1869-1954), French painter and sculptor **10** 336-337

**MATLIN, MARLEE** (born 1965), American actress **19** 228-230

**MATLOVICH, LEONARD** (1943-1988), American gay rights activist **20** 248-250

**MATSUNAGA, SPARK MASAYUKI** (1916-1990), Asian American U.S. senator **18** 279-281

**MATSUSHITA, KONOSUKE** (1918-1989), Japanese inventor and businessman **19** 230-232

**MATTEI, ENRICO** (1906-1962), Italian entrepreneur **10** 337-339

**MATTEOTTI, GIACOMO** (1885-1924), Italian political leader **10** 339-340

**MATTHEW, SAINT** (flourished 1st century), Apostle and Evangelist **10** 340-341

**MATTHEW PARIS** (circa 1200-1259), English Benedictine chronicler **10** 341-342

**MATTINGLY, GARRETT** (1900-1962), American historian, professor, and author of novel-like histories **10** 342-344

**MATZELIGER, JAN** (1852-1889), American inventor and shoemaker **19** 232-234

**MAUCHLY, JOHN** (1907-1980), American computer entrepreneur **20** 250-252

**MAUDSLAY, HENRY** (1771-1831), British engineer and inventor **21** 286-288

**MAUGHAM, WILLIAM SOMERSET** (1874-1965), English author **10** 344-345

**MAULBERTSCH, FRANZ ANTON** (1724-1796), Austrian painter **10** 345

**MAULDIN, BILL** (born 1921), cartoon biographer of the ordinary GI in World War II **10** 345-346

**MAUPASSANT, HENRI RENÉ ALBERT GUY DE** (1850-1893), French author **10** 347

**MAURIAC, FRANÇOIS** (1885-1970), French author **10** 347-348

**MAURICE, JOHN FREDERICK DENISON** (1805-1872), English theologian and Anglican clergyman **10** 349-350

**MAURICE OF NASSAU, PRINCE OF ORANGE** (1567-1625), Dutch general and statesman **10** 348-349

**MAURRAS, CHARLES MARIE PHOTIUS** (1868-1952), French political writer and reactionary **10** 350-351

**MAURY, ANTONIA** (1866-1952), American astronomer and conservationist **20** 252-254

**MAURY, MATTHEW FONTAINE** (1806-1873), American naval officer and oceanographer **10** 351-352

**MAUSS, MARCEL** (1872-1950), French sociologist and anthropologist **10** 352-353

**MAWDUDI, ABU-I A'LA** (1903-1979), Muslim writer and religious and political leader in the Indian sub-continent **10** 353-354

**MAWSON, SIR DOUGLAS** (1882-1958), Australian scientist and Antarctic explorer **10** 354-355

**MAXIM, SIR HIRAM STEVENS** (1840-1916), American-born British inventor **10** 355-356

**MAXIMILIAN I** (1459-1519), Holy Roman emperor 1493-1519 **10** 356-357  
associates  
Fugger, Jakob **21** 147-149

**MAXIMILIAN II** (1527-1576), Holy Roman emperor 1564-1576 **10** 357-358

**MAXIMILIAN OF HAPSBURG** (1832-1867), archduke of Austria and emperor of Mexico **10** 358-360

**MAXWELL, IAN ROBERT** (née Ludvik Hock; 1923-1991), British publishing magnate **10** 360-361

**MAXWELL, JAMES CLERK** (1831-1879), Scottish physicist **10** 361-364

**MAYAKOVSKY, VLADIMIR VLADIMIROVICH** (1893-1930), Russian poet **10** 364-365

**MAYER, JEAN** (born 1920), nutritionist, researcher, consultant to government and international organizations, and president of Tufts University **10** 365-366

**MAYER, LOUIS BURT** (Eliezer Mayer; 1885-1957), American motion picture producer **19** 234-235

**MAYNARD, ROBERT CLYVE** (1937-1993), African American journalist and publisher **10** 366-367

**MAYO, WILLIAM J.** (1861-1939) and **CHARLES H.** (1865-1939), American physicians **10** 367-369

**MAYOR ZARAGOSA, FEDERICO** (born 1934), Spanish biochemist who was director-general of UNESCO (United Nations Educational, Scientific, and Cultural Organization) **10** 369-371

**MAYO-SMITH, RICHMOND** (1854-1901), American statistician and sociologist **10** 371-372

**MAYR, ERNST** (born 1904), American evolutionary biologist **10** 372-374

**MAYS, BENJAMIN E.** (1894-1984), African American educator and civil rights activist **10** 374-376

**MAYS, WILLIE** (William Howard Mays, Jr.; born 1931), African American baseball player **10** 376-379

**MAZARIN, JULES** (1602-1661), French cardinal and statesman **10** 379-380

**MAZEPA, IVAN STEPANOVICH** (circa 1644-1709), Ukrainian Cossack leader **10** 381

**MAZZINI, GIUSEPPE** (1805-1872), Italian patriot **10** 381-383

**M'BOW, AMADOU-MAHTAR** (born 1921), director general of UNESCO (United Nations Educational, Scientific, and Cultural Organization) **10** 383-384

**MBOYA, THOMAS JOSEPH** (1930-1969), Kenyan political leader **10** 384-385

**MCADOO, WILLIAM GIBBS** (1863-1941), American statesman **10** 385-386

**MCAULIFFE, ANTHONY** (1898-1975), American army officer **19** 236-239

**MCAULIFFE, CHRISTA** (nee Sharon Christa Corrigan; 1948-1986), American teacher **20** 254-257

**MCCARTHY, EUGENE JOSEPH** (born 1916), American statesman **10** 386-388

**MCCARTHY, JOSEPH RAYMOND** (1908-1957), American politician **10** 388-389  
Trumbo, Dalton **21** 409-411

**MCCARTHY, MARY T.** (born 1912), American writer **10** 389-391

**McCAY, WINSOR** (Zenas Winsor McKay; 1871?-1934), American cartoonist and animator **21** 288-291

**MCCLELLAN, GEORGE BRINTON** (1826-1885), American general **10** 391-392

**MCCLELLAN, JOHN LITTLE** (1896-1977), U.S. senator from Arkansas **10** 392-393

**MCCLINTOCK, BARBARA** (1902-1992), geneticist and winner of the Nobel Prize in physiology **10** 393-394

**MCCLINTOCK, SIR FRANCIS LEOPOLD** (1819-1907), British admiral and Arctic explorer **10** 394-395

**MCCLOSKEY, JOHN** (1810-1885), American cardinal **10** 395

**MCCLUNG, NELLIE LETITIA** (1873-1951), Canadian suffragist, social reformer, legislator, and author **10** 396-397

**MCCLURE, SIR ROBERT** (1807-1873), English explorer and navy officer **10** 398-399

**MCCLURE, SAMUEL SIDNEY** (1857-1949), American editor and publisher **10** 398-399

**MCCORMACK, JOHN WILLIAM** (1891-1980), U.S. congressman and Speaker of the House **10** 399-400

**MCCORMICK, CYRUS HALL** (1809-1884), American inventor, manufacturer, and philanthropist **10** 400-401

**MCCORMICK, ROBERT RUTHERFORD** (1880-1955), American publisher **10** 401-402

**MCCOSH, JAMES** (1811-1894), Scottish-American minister, philosopher, and college president **10** 402-403

**MCCOY, ELIJAH** (1843-1929), American engineer and inventor **19** 239-241

**MCCOY, ISAAC** (1784-1846), American Indian agent and missionary **10** 403

**MCCOY, JOSEPH GEITING** (1837-1915), American cattleman **10** 403-404

**MCCULLERS, CARSON** (Lula Carson Smith; 1917-1967), American novelist and playwright **18** 281-283

**MCCULLOCH, HUGH** (1808-1895), American banker and lawyer **10** 404-405

**MCDANIEL, HATTIE** (1898-1952), African American actress **10** 405-408

**MCDUFFIE, GEORGE** (1790-1851), American statesman **10** 408

**MENROE, JOHN PATRICK, JR.** (born 1959), American tennis player **10** 408-411

**MCGILL, RALPH EMERSON** (1898-1969), American journalist **10** 411-412

**MCGILLIVRAY, ALEXANDER** (circa 1759-1793), American Creek Indian chief **10** 412

**MCGOVERN, GEORGE STANLEY** (born 1922), American statesman **10** 412-414

**MCGUFFEY, WILLIAM HOLMES** (1800-1873), American educator **10** 414-415

**MCINTIRE, SAMUEL** (1757-1811), American builder and furniture maker **10** 415

**MCKAY, CLAUDE** (1890-1948), African American poet and novelist **10** 416

**MCKAY, DONALD** (1810-1880), American ship builder **10** 416-417

**MCKIM, CHARLES FOLLEN** (1847-1909), American architect **10** 417-418

**MCKINLEY, WILLIAM** (1843-1901), American statesman, president 1897-1901 **10** 418-420

**MCKISSICK, FLOYD B.**, (1922-1991), African American civil rights leader **10** 420-422

**MCLEAN, JOHN** (1785-1861), American jurist and politician **10** 422-423

**MCLOUGHLIN, JOHN** (1784-1857), Canadian pioneer and trader **10** 423-424

**MCLUHAN, MARSHALL** (Herbert Marshall McLuhan; 1911-1980), Canadian professor of literature and culture **10** 424-426

**MCMASTER, JOHN BACH** (1852-1932), American historian **10** 426-427

**McMILLAN, TERRY** (born 1951), African American novelist and short story writer **10** 427-428

**MCMURRAY, BETTE CLAIR** (1924-1980), American inventor and businesswoman **10** 429

**MCNAMARA, ROBERT S.** (born 1916), U.S. secretary of defense and president of the World Bank **10** 429-431

**MCNAUGHTON, ANDREW** (1887-1966), Canadian soldier and diplomat **10** 431-432

**MCNEALY, SCOTT** (born 1954), American businessman **19** 241-243

**MCNICKLE, D'ARCY** (born William D'Arcy McNickle; 1904-1977), Native American author, historian, and activist **10** 433

**MCPHERSON, AIMEE SEMPLE** (1890-1944), American evangelist **10** 434

**MCQUEEN, BUTTERFLY** (born Thelma McQueen; 1911-1995), African American actress **10** 434-437

**MEAD, GEORGE HERBERT** (1863-1931), American philosopher and social psychologist **10** 437-438

**MEAD, MARGARET** (1901-1978), American anthropologist **10** 438-440

**MEADE, GEORGE GORDON** (1815-1872), American general **10** 440-441

**MEANS, RUSSELL** (born 1939), Native American activist **10** 441-444

**MEANY, GEORGE** (1894-1980), American labor leader **10** 444

**MECIAR, VLADIMIR** (born 1942), Slovak prime minister **18** 283-285

**Medal of Honor**  
see Congressional Medal of Honor

**MEDAWAR, PETER BRIAN** (1915-1987), British zoologist **10** 444-445

**MEDICI, CATHERINE DE'** (1519-1589), Italian queen of France **10** 445-449  
patronage  
Beaujoyeux, Balthasar de **21** 29-30

**MEDICI, COSIMO DE'** (1389-1464), Italian statesman and merchant prince **10** 449-450

**Medici, Ferdinand de'** (1663-1713), prince of Tuscany  
Cristofori, Bartolomeo **21** 94-96

**MEDICI, LORENZO DE'** (1449-1492), Italian statesman, ruler of Florence 1469-1492 **10** 450-451

## Medicine

cardiology

Forssmann, Werner **21** 140-141

germ theory of disease

Fracastoro, Girolamo **21** 144-147

homeopathy

Hahnemann, Samuel **21** 190-193

occupational diseases

Ramazzini, Bernardino **21** 362-364

parasitology

Fibiger, Johannes **21** 131-133

women's complaints

Pinkham, Lydia **21** 351-353

**MEDILL, JOSEPH** (1823-1899), American abolitionist editor and publisher **10** 451-452

**MEGAWATI SUKARNOPUTRI** (born 1947), Indonesian prime minister **20** 257-259

**MEHMED THE CONQUEROR** (a.k.a. Mehmed II and Mehmed Celebi; ca. 1432-1481), Turkish sultan **10** 452-454

**MEHTA, SIR PHEROZESHAH** (1845-1915), Indian statesman **10** 455

**MEHTA, ZUBIN** (born 1936), India born American conductor **10** 455-456

**MEIER, RICHARD** (born 1934), New York architect **10** 456-458

**MEIGGS, HENRY** (1811-1877), American railroad builder **10** 458-459

**MEIGHEN, ARTHUR** (1874-1960), Canadian lawyer, prime minister 1920-21, 1926 **10** 459-460

**MEINECKE, FRIEDRICH** (1862-1954), German historian **10** 460-461

**MEINESZ, FELIX ANDRIES VENING** (1887-1966), Dutch geodesist and geophysicist **10** 461

**MEINONG, ALEXIUS RITTER VON HANDSCHUCHSHEIM** (1853-1920), Austrian philosopher **10** 461-462

**MEIR, GOLDA** (1898-1978), Israeli prime minister **10** 462-463

**MEITNER, LISE** (born Elise Meitner; 1878-1968), Austrian-born American nuclear physicist **10** 463-466

**MELANCTHON, PHILIP** (1497-1560), German theologian and humanist **10** 466-467

**MELAND, BERNARD EUGENE** (born 1899), American historian of liberal theology **10** 467-468

**MELBOURNE, 2ND VISCOUNT** (William Lamb; 1779-1848), English statesman, prime minister 1834 and 1835-1841 **10** 468-469



**MELLON, ANDREW WILLIAM** (1855-1937), American businessman **10** 469-470

**MELLON, RICHARD KING** (1899-1970), American business leader and philanthropist **20** 259-261

**MELNIKOV, KONSTANTIN STEPANOVICH** (1890-1974), Russian avant-grant architect **10** 470-471

**MELVILLE, GEORGE WALLACE** (1841-1912), American naval officer and explorer **10** 472

**MELVILLE, HERMAN** (1819-1891), American author **10** 472-476

**MEMLING, HANS** (circa 1440-1494), German-born painter active in Flanders **10** 476

**MEMMINGER, CHRISTOPHER GUSTAVUS** (1803-1888), American politician **10** 476-477

**MENANDER** (342-291 B.C.), Athenian comic playwright **10** 477-478

**MENCHÚ, RIGOBERTA** (born 1959), Guatemalan human rights activist who won the Nobel Peace Prize **10** 479-480

**MENCIUS** (circa 371-circa 289 B.C.), Chinese philosopher **10** 480-481

**MENCKEN, HENRY LOUIS** (1880-1956), American journalist, editor, critic, and philologist **10** 481-483

**MENDAÑA DE NEYRA, ÁLVARO DE** (1541-1595), Spanish explorer **10** 483

**MENDEL, JOHANN GREGOR** (1822-1884), Moravian natural scientist and Augustinian abbot **10** 483-486

**MENDELEEV, DMITRII IVANOVICH** (1834-1907), Russian chemist **10** 486-488

**MENDELSON, ERICH** (1887-1953), German architect **10** 488

**MENDELSSOHN, MOSES** (1729-1786), German Jewish philosopher **10** 488-489

**MENDELSSOHN-BARTOLDY, FELIX JAKOB LUDWIG** (1809-1847), German composer **10** 489-491

**MENDENHALL, DOROTHY REED** (1874-1964), American physician **10** 491-492

**MENDES, CHICO** (Francisco Mendes; 1944-1988), Brazilian environmental activist **19** 243-245  
Julia, Raul **21** 230-232

**MENDÈS FRANCE, PIERRE** (1907-1982), French prime minister (1954-1955) and politician **10** 492-493

**MENDES PINTO, FERNÃO** (1509-1583), Portuguese adventurer **10** 493-494

**MENDOZA, ANTONIO DE** (1490-1552), Spanish viceroy in Mexico and Peru **10** 494-495

**MENDOZA, DANIEL** (1764-1836), English boxer **20** 261-263

**MENELIK II** (born Sahle Mariam; 1844-1913), Ethiopian emperor 1889-1913 **10** 495-497

**MENEM, CARLOS SÁUL** (born 1930), Peronist president of Argentina **10** 497-499

**MENÉNDEZ DE AVILÉS, PEDRO** (1519-1574), Spanish seaman and colonizer **10** 499-500

**MENES** (King of Egypt; ca. 3420 B.C. - 3345 B.C.), unifier of Egypt **10** 500-502

**MENGELE, JOSEF** (1911-1979), German physician and war criminal **10** 502-503

**MENGISTU HAILE MARIAM** (born 1937), head of state of Ethiopia **10** 503-505

**MENGES, ANTON RAPHAEL** (1728-1779), German painter **10** 505

**MENKEN, ALAN** (born 1949), American composer **20** 263-266

**MENNO SIMONS** (circa 1496-1561), Dutch reformer **10** 505-506

**MENOCAL, MARIO GARCIA** (1866-1941), Cuban statesman, president 1913-1921 **10** 506-507

**MENON, VENGALIL KRISHNAN KRISHNA** (born 1897), Indian statesman **10** 507-509

**MENOTTI, GIAN CARLO** (born 1911), Italian-born American composer **10** 509-510

**MENUHIN, YEHUDI** (1916-1999), American and British violinist and conductor **20** 266-268

**MENZIES, SIR ROBERT GORDON** (born 1894), Australian statesman **10** 510-511

**MENZIES, WILLIAM CAMERON** (1896-1957), American film director, producer, and set designer **21** 291-293

**MERCATOR, GERHARDUS** (1512-1594), Flemish cartographer **10** 511-512

**MEREDITH, GEORGE** (1828-1909), English novelist and poet **10** 512-513

**MEREDITH, JAMES H.** (born 1933), African American civil rights activist and politician **10** 514-515

**MEREZHKOVSKY, DMITRY SERGEYEVICH** (1865-1941), Russian writer and literary critic **10** 515-516

**MERGENTHALER, OTTMAR** (1854-1899), German-American inventor of the Linotype **10** 516-517

**MERIAN, MARIA SIBYLLA** (1647-1717), German artist and entomologist **20** 268-269

**MERICI, ANGELA** (St. Angela; 1474-1530), Italian nun and educator **21** 293-295

**MÉRIMÉE, PROSPER** (1803-1870), French author **10** 517

**MERLEAU-PONTY, MAURICE** (1908-1961), French philosopher **10** 518

**MERMAN, ETHEL** (Ethel Agnes Zimmermann; 1909-1984), American singer and actress **21** 295-297

**Merovingian dynasty**  
see France—481-751

**MERRIAM, CHARLES EDWARD** (1874-1953), American political scientist **10** 518-519

**MERRILL, CHARLES E.** (1885-1956), founder of the world's largest brokerage firm **10** 519-520

**MERRILL, JAMES** (1926-1995), American novelist, poet, and playwright **10** 521-522

**MERTON, ROBERT K.** (born 1910), American sociologist and educator **10** 522-523

**MERTON, THOMAS** (1915-1968), Roman Catholic writer, social critic, and spiritual guide **10** 523-525

**MERULO, CLAUDIO** (1533-1604), Italian composer, organist, and teacher **10** 525-526

**MESMER, FRANZ ANTON** (1734-1815), German physician **10** 526-527

**MESSALI HADJ** (1898-1974), founder of the Algerian nationalist movement **10** 527-528

**MESSIAEN, OLIVIER** (1908-1992), French composer and teacher **10** 528-529

**METACOM** (a.k.a. King Philip; 1640-1676), Wampanoag chieftain **10** 529-531

**Metallurgy** (science)  
Parkes, Alexander **21** 334-336

**METCALFE, CHARLES THEOPHILUS** (1st Baron Metcalfe; 1785-1846), British colonial administrator **10** 531-532

**METCHNIKOFF, ÉLIE** (1845-1916), Russian physiologist and bacteriologist **10** 532-533

**METHODIUS, SAINT** (825-885), Greek missionary and bishop **4** 362-363

**Metro-Goldwyn-Mayer** (film studio)  
Coogan, Jackie **21** 83-85  
Gibbons, Cedric **21** 158-159  
Loos, Anita **21** 262-265  
Weissmuller, Johnny **21** 425-427

**METTERNICH, KLEMENS VON** (1773-1859), Austrian politician and diplomat **10** 533-536

**MEYERBEER, GIACOMO** (1791-1864), German composer **10** 536-537

**MEYERHOF, OTTO FRITZ** (1884-1951), German biochemist **10** 537-539

**MEYERHOLD, VSEVOLOD EMILIEVICH** (1874-1942?), Russian director **10** 539

**MFUME, KWEISI** (born Frizzell Gray; born 1948), African American civil rights activist and congressman **10** 539-542

**MGM**  
see Metro-Goldwyn-Mayer

**MI FEI** (1051-1107), Chinese painter, calligrapher, and critic **11** 12-13

**MICAH** (flourished 8th century B.C.), prophet of ancient Israel **10** 542-543

**MICHAEL VIII** (Palaeologus; 1224/25-1282), Byzantine emperor 1259-1282 **11** 1-2

**MICHELANGELO BUONARROTI** (1475-1564), Italian sculptor, painter, and architect **11** 2-5

**MICHELET, JULES** (1798-1874), French historian **11** 5-6

**MICHELOZZO** (circa 1396-1472), Italian architect and sculptor **11** 6-7

**MICHELSON, ALBERT ABRAHAM** (1852-1931), American physicist **11** 7-8

**MICHENER, JAMES** (1907-1997), American author **19** 245-247

**MIDDLETON, THOMAS** (1580-1627), English playwright **11** 8-9

**MIDGELY, MARY BURTON** (born 1919), British philosopher who focused on the philosophy of human motivation and ethics **11** 9-10

**Midwivory** (medicine)  
LaChapelle, Marie **21** 245-247

**MIES VAN DER ROHE, LUDWIG** (1886-1969), German-born American architect **11** 10-12

**MIKAN, GEORGE** (born 1924), American basketball player **21** 297-299

**MIKULSKI, BARBARA** (born 1936), United States senator from Maryland **11** 13-15

**MILÁN, LUIS** (circa 1500-after 1561), Spanish composer **11** 15-16

**MILES, NELSON APPLETON** (1839-1925), American general **11** 16-17

**MILHAUD, DARIUS** (born 1892), French composer and teacher **11** 17-18

#### **Military leaders, American**

- **ARMY AND AIR FORCE**  
Army generals (19th century; Union)  
Butler, Benjamin Franklin **21** 65-67
- **NAVY**  
admirals  
Moffett, William Adger **21** 299-301

#### **Military leaders, British**

- **ARMY**  
generals (19th-20th century)  
Baden-Powell, Robert **21** 16-18
- **NAVY**  
lords of the admiralty  
Montagu, John, Fourth Earl of Sandwich **21** 301-303

#### **Military leaders, Chinese**

- warlords  
Chu Yuan-chang **21** 79-81

#### **Military leaders, Hausa**

- Amina of Zaria **21** 5-7

**MILIUKOV, PAVEL NIKOLAYEVICH** (1859-1943), Russian historian and statesman **11** 18-19

**MILK, HARVEY BERNARD** (1930-1978), American politician and gay rights activist **11** 19-21

**MILKEN, MICHAEL** (born 1946), American businessman **19** 247-249

**MILL, JAMES** (1773-1836), Scottish philosopher and historian **11** 21

**MILL, JOHN STUART** (1806-1873), English philosopher and economist **11** 21-23

**MILLAIS, SIR JOHN EVERETT** (1829-1896), English painter **11** 23-24

**MILLAY, EDNA ST. VINCENT** (1892-1950), American lyric poet **11** 24-25

**MILLER, ARTHUR** (born 1915), American playwright, novelist, and film writer **11** 25-26

**MILLER, GLENN** (Alton Glenn Miller; 1904-1944), American musician **19** 250-251

**MILLER, HENRY** (born 1891), American author **11** 26-27

**MILLER, JOAQUIN** (1837-1913), American writer **11** 27-28

**MILLER, PERRY** (1905-1963), American historian **11** 28-29

**MILLER, SAMUEL FREEMAN** (1816-1890), American jurist **11** 29-30

**MILLER, WILLIAM** (1782-1849), American clergyman **11** 30-31

**MILLET, JEAN FRANÇOIS** (1814-1875), French painter **11** 31

**MILLET, KATE** (born 1934), American feminist author and sculptor **11** 31

**MILLIKAN, ROBERT ANDREWS** (1868-1953), American physicist **11** 33-35

**MILLS, BILLY** (Makata Taka Hela; born 1938), Native American runner and businessman **19** 251-253

**MILLS, C. WRIGHT** (1916-1962), American sociologist and political polemicist **11** 35-36

**MILLS, ROBERT** (1781-1855), American architect **11** 36-37

**MILNE, ALAN ALEXANDER** (A.A. Milne; 1882-1956), British author **19** 253-254

**MILNE, DAVID BROWN** (1882-1953), Canadian painter and etcher **11** 37-38

**MILNER, ALFRED** (1st Viscount Milner; 1854-1925), British statesman **11** 38-39

**MILOSEVIC, SLOBODAN** (born 1941), president of Serbia **11** 39-40

**MIŁOSZ, CZESŁAW** (born 1911), Nobel Prize winning Polish author and poet **11** 40-42

**MILTIADES** (circa 549-488 B.C.), Athenian military strategist and statesman **11** 42-43

**MILTON, JOHN** (1608-1674), English poet and controversialist **11** 43-46

**MIN** (1851-1895), Korean queen **11** 46-47

**MINDON MIN** (ruled 1852-1878), Burmese king **11** 47

**MINDSZENTY, CARDINAL JÓZSEF** (1892-1975), Roman Catholic primate of Hungary **11** 47-49

**Ming dynasty** (China; 1368-1644)  
Chu Yuan-chang **21** 79-81

**Mining** (metallurgy)  
industry  
Guggenheim, Daniel **21** 185-187

**MINK, PATSY TAKEMOTO** (born 1927), Asian American congresswoman **18** 287-289

**Minneapolis Lakers** (basketball team)  
Mikan, George **21** 297-299

**Minorites**

see Franciscans

**MINTZ, BEATRICE** (born 1921), American embryologist **11** 49-50

**MINUIT, PETER** (1580-1638), Dutch colonizer **11** 50

**MIRABEAU, COMTE DE** (Honoré Gabriel Victor de Riqueti; 1749-1791), French statesman and author **11** 51-52

**MIRANDA, FRANCISCO DE** (1750-1816), Latin American patriot **11** 52-53

**MIRÓ, JOAN** (1893-1983), Spanish painter **11** 53-54

**MISHIMA, YUKIO** (1925-1970), Japanese novelist and playwright **11** 54-55

**MISTRAL, GABRIELA** (1889-1957), Chilean poet and educator **11** 55-56

**MITCHELL, BILLY** (1879-1936), American military officer and aviator **20** 269-272

**MITCHELL, GEORGE JOHN** (born 1933), Maine Democrat and majority leader in the United States Senate **11** 56-58

**MITCHELL, JOHN** (1870-1919), American labor leader **11** 58-59

**MITCHELL, MARGARET** (Munnerlyn; 1900-1949), American author of *Gone With the Wind* **11** 59-60

**MITCHELL, MARIA** (1818-1889), American astronomer and educator **11** 61

**MITCHELL, WESLEY CLAIR** (1874-1948), American economist **11** 61-62

**MITRE, BARTOLOMÉ** (1821-1906), Argentine historian and statesman, president 1862-1868 **11** 62-63

**MITTERRAND, FRANÇOIS** (born 1916), French politician and statesman and president (1981-1990) **11** 63-66

**MIZRAHI, ISAAC** (born 1961), American designer **11** 66-67

**MLADIC, RATKO** (born 1943), Bosnian Serb military leader **11** 68-69

**MOBUTU SESE SEKO** (Joseph Désiré Mobutu; 1930-1997), Congolese president **11** 69-71

**MODEL, LISETTE** (nee Lisette Seyberg; 1906?-1983), American photographer and educator **19** 254-256

**MODERSOHN-BECKER, PAULA** (1876-1907), German painter **11** 71-72

**MODIGLIANI, AMEDEO** (1884-1920), Italian painter and sculptor **11** 72-73

**Modoc Indians** (North America) Captain Jack **21** 72-74

**MOFFETT, WILLIAM ADGER** (1869-1933), American naval officer **21** 299-301

**MOFOLO, THOMAS** (1876-1948), Lesothoan author **11** 74

**MOGILA, PETER** (1596/1597-1646), Russian Orthodox churchman and theologian **11** 74-75

**MOHAMMAD REZA SHAH PAHLAVI** (1919-1980), king of Iran **11** 75-76

**MOHAMMED** (circa 570-632), founder of Islam **11** 76-78

**MOHAMMED V** (Mohammed Ben Youssef; 1911-1961), king of Morocco **11** 79-81

**MOHAMMED ALI** (1769-1849), Ottoman pasha of Egypt 1805-1848 **11** 81-82

**MOHOLY-NAGY, LÁSZLÓ** (1895-1946), Hungarian painter and designer **11** 82-83

**MOI, DANIEL ARAP** (born Daniel Toroitich arap Moi; born 1924), president of Kenya **11** 83-86

**MOLIÈRE** (1622-1673), French dramatist **11** 86-88  
collaborators  
Beauchamps, Pierre **21** 27-29

**MOLINARI, SUSAN K.** (born 1958), American newscaster **18** 289-291

**MOLINOS, MIGUEL DE** (1628-1696), Spanish priest **11** 88-89

**MOLOTOV, VYACHESLAV MIKHAILOVICH** (1890-1986), Soviet statesman **11** 89-90

**MOLTKE, COUNT HELMUTH KARL BERNARD VON** (1800-1891), Prussian military leader **11** 90-91

**MOLTMANN, JÖURGEN** (born 1926), German Protestant theologian **11** 91-92

**MOMADAY, N. SCOTT** (born 1934), Native American author **11** 92-94

**MOMMSEN, THEODOR** (1817-1903), German historian and philologist **11** 94-95

**MONAGHAN, TOM** (Thomas Stephen Monaghan; born 1937), American businessman and philanthropist **19** 256-258

**MONASH, JOHN** (1865-1931), Australian soldier, engineer, and administrator **11** 95-96

**MONCK, GEORGE** (1st Duke of Albemarle; 1608-1670), English general and statesman **11** 96-97

**MONDALE, WALTER F.** (Fritz; born 1928), United States senator and vice president **11** 97-99

**MONDAVI, ROBERT** (born 1913), American winemaker **19** 258-260

**MONDLANE, EDUARDO CHIVAMBO** (1920-1969), Mozambican educator and nationalist **11** 100-101

**MONDRIAN, PIET** (1872-1944), Dutch painter **11** 101-102

**MONET, CLAUDE** (1840-1926), French painter **11** 102-104

**MONGKUT** (Rama IV; 1804-1868), king of Thailand 1851-1868 **11** 104

**Mongol Empire**

China

Chu Yuan-chang **21** 79-81

**MONK, THELONIOUS** (1917-1982), African American jazz musician **11** 104-108

**MONMOUTH AND BUCCLEUGH, DUKE OF** (James Scott; 1649-1685), English claimant to the throne **11** 108-109

**MONNET, JEAN** (1888-1979), French economist and diplomat **11** 109-110

**MONOD, JACQUES** (1910-1976), French biologist who discovered messenger RNA **11** 110-111

**MONROE, JAMES** (1758-1831), American diplomat and statesman, president 1817-1825 **11** 111-113

**MONROE, MARILYN** (Norma Jean Baker; 1926-1962), film actress **11** 113-114

**MONTAGNIER, LUC** (born 1932), French virologist **11** 114-116

**MONTAGU, JOHN, FOURTH EARL OF SANDWICH** (1718-1792), English politician and first lord of the admiralty **21** 301-303

**MONTAGU, MARY WORTLEY** (1689-1762), English poet **18** 291-293

**MONTAIGNE, MICHEL EYQUEM DE** (1533-1592), French essayist **11** 116-117

**MONTALE, EUGENIO** (1896-1981), Italian poet and critic **11** 117-118

**MONTALEMBERT, COMTE DE** (Charles Forbes; 1810-1870), French political writer **11** 118-119

**MONTALVO, JUAN MARÍA** (1832-1889), Ecuadorian writer **11** 119-120

**MONTANA, JOE** (born 1956), American football player **11** 120-121

**MONTANUS** (flourished 2nd century), Early Christian founder of schismatic sect **11** 122

**MONTCALM DE SAINT-VÉRAN, MARQUIS DE** (1712-1759), French general in Canada **11** 122-123

**MONTEFIORE, MOSES** (1784-1885), English Zionist and philanthropist **20** 272-274

**MONTESQUIEU, BARON DE** (Charles Louis de Secondat; 1689-1755), French man of letters **11** 123-125

**MONTESSORI, MARIA** (1870-1952), Italian educator and physician **11** 125-126

**MONTEVERDI, CLAUDIO GIOVANNI ANTONIO** (1567-1643), Italian composer **11** 126-128

**MONTEZUMA II** (1466?-1520), Aztec emperor 1502-1520 **11** 128-129

**MONTEZUMA, CARLOS** (born Wassaja; ca. 1865-1923), Native American physician and political leader **11** 129-132

**MONTFORT, SIMON DE** (6th Earl of Leicester; 1208-1265), English statesman and soldier **11** 132-133

**MONTGOLFIER, JACQUES ÉTIENNE** (1745-1799), French inventor and industrialist **11** 133-134

**MONTGOLFIER, JOSEPH MICHEL** (1740-1810), French inventor and industrialist **11** 133-134

**MONTGOMERY, BERNARD LAW** (1st Viscount Montgomery of Alamein; born 1887), English field marshal **11** 135-136

**MONTGOMERY, LUCY MAUD** (1874-1942), Canadian author **11** 136-138

**MONTGOMERY, RICHARD** (1736-1775), colonial American general **11** 138-139

**MONTREUIL, PIERRE DE** (flourished circa 1231-1266/67), French architect **11** 139

**MONTT TORRES, MANUEL** (1809-1880), Chilean statesman, president 1851-1861 **11** 139-140

**MOODIE, SUSANNA** (1803-1885), Canadian poet, novelist, and essayist **11** 140-141

**MOODY, DWIGHT L.** (1837-1899), American evangelist **11** 141-142

**MOON, SUN MYUNG** (born 1920), founder of the Unification Church **11** 142-143

**MOORE, CHARLES WILLARD** (1925-1993), American architect and educator **11** 143-145

**MOORE, CHARLOTTE E.** (1898-1990), American astrophysicist **11** 145-146

**MOORE, GEORGE EDWARD** (1873-1958), English philosopher **11** 146

**MOORE, HENRY** (1898-1986), English sculptor **11** 146-148

**MOORE, MARIANNE** (1887-1972), American poet and translator **11** 148-149

**MORALES, LUIS DE** (circa 1519-1586), Spanish painter **11** 150

**MORALES-BERMÚDEZ CERRUTI, FRANCISCO** (born 1921), president of Peru (1975-1980) **11** 150-151

**MORAN, THOMAS** (1837-1926), American painter and graphic artist **11** 151-152

**MORANDI, GIORGIO** (1890-1964), Italian painter of still lifes **11** 152-153

**MORAVIA, ALBERTO** (1907-1990), Italian author **11** 153-155

**MORAZÁN, JOSÉ FRANCISCO** (1792-1842), Central American general and statesman **11** 155

**MORE, SIR THOMAS** (1478-1535), English humanist and statesman **11** 156-157

**MORELOS, JOSÉ MARÍA** (1765-1815), Mexican priest and revolutionary leader **11** 157-158

**MORENO, MARIANO** (1778-1811), Argentine revolutionary **20** 274-275

**MORGAGNI, GIOVANNI BATTISTA** (1682-1771), Italian anatomist **11** 158-159

**MORGAN, CONWAY LLOYD** (1852-1936), English psychologist **11** 159-160

**MORGAN, DANIEL** (circa 1735-1802), American soldier and tactician **11** 160-161

**MORGAN, GARRETT A.** (1877-1963), African American inventor and publisher **11** 161-162

**MORGAN, JOHN** (1735-1789), American physician **11** 162-163

**MORGAN, JOHN PIERPONT** (1837-1913), American banker **11** 163-165  
associates  
Perkins, George Walbridge **21** 344-347

**MORGAN, JOHN PIERPONT, II** (1867-1943), American banker **11** 165

**MORGAN, JULIA** (1872-1957), American architect **11** 165-166

**MORGAN, JUNIUS SPENCER** (1813-1890), American banker **11** 166-167

**MORGAN, LEWIS HENRY** (1818-1881), American anthropologist **11** 167-168

**MORGAN, ROBIN** (born 1941), feminist writer, editor, poet, and political activist **11** 168-170

**MORGAN, THOMAS HUNT** (1866-1945), American zoologist and geneticist **11** 170-171

**MORGENTHAU, HANS J.** (1904-1979), American political scientist **11** 171-172

**MORGENTHAU, HENRY, JR.** (1891-1967), American statesman **11** 172-173

**MORIN, PAUL** (1889-1963), French-Canadian poet **11** 174

**MORÍNIGO, HIGINIO** (1897-1985), Paraguayan statesman **11** 174-175

**MORISON, SAMUEL ELIOT** (1887-1976), American historian and biographer **11** 175-176

**MORISOT, BERTHE** (1841-1895), French painter **21** 303-305

**MORITA, AKIO** (born 1921), Japanese industrial leader **11** 176-178

**MORLEY, JOHN** (Viscount Morley of Blackburn; 1838-1923), English statesman and author **11** 178-179

**MORLEY, THOMAS** (circa 1557-1602/08), English composer and organist **11** 179-180

**MORO, ALDO** (1916-1978), leader of Italy's Christian Democratic Party **11** 180-181

**Morphine** (medicine)  
Sertürner, Friedrich **21** 379-381

**MORRICE, JAMES WILSON** (1865-1924), Canadian painter **11** 181-182

**MORRILL, JUSTIN SMITH** (1810-1898), American legislator **11** 182

**MORRIS, GOUVERNEUR** (1752-1816), American statesman and diplomat **11** 182-183

**MORRIS, LEWIS** (1671-1746), American colonial official **11** 183-184

**MORRIS, MARK** (born 1956), American choreographer **11** 184-185

**MORRIS, ROBERT** (1734-1806), American financier and statesman **11** 185-187

**MORRIS, WILLIAM** (1834-1896), English man of letters, artist, and politician **11** 187-188

**MORRISON, JIM** (James Douglas Morrison; 1943-1971), American singer and songwriter **18** 293-295

**MORRISON, TONI** (Chloe Anthony Wofford; born 1931), African American novelist **11** 188-190

**MORROW, DWIGHT WHITNEY** (1873-1931), American banker and diplomat **11** 190-191

**MORSE, JEDIDIAH** (1761-1826), American geographer and clergyman **11** 191-192

**MORSE, SAMUEL FINLEY BREESE** (1791-1872), American artist and inventor **11** 192-193

**MORSE, WAYNE L.** (1900-1974), United States senator from Oregon **11** 193-194

**MORTIMER, JOHN CLIFFORD** (born 1923), British author of novels, stories, and plays for radio, stage, television, and film **11** 194-195

**MORTON, NELLE KATHERINE** (1905-1987), activist for racial justice, teacher of Christian educators, and proponent of feminist theology **11** 195-197

**MORTON, OLIVER HAZARD PERRY THROCK** (1823-1877), American politician **11** 197-198

**MORTON, WILLIAM THOMAS GREEN** (1819-1868), American dentist **11** 198-199

**MOSELY-BRAUN, CAROL** (born 1947), African American Democratic senator from Illinois **11** 199-200

**MOSES** (circa 1392-circa 1272 B.C.), Hebrew prophet and lawgiver **11** 200-201

**MOSES, EDWIN** (born 1955), African American track and field star **20** 275-277

**MOSES, GRANDMA** (Anna Mary Robertson; 1860-1961), American painter **11** 201-202

**MOSES, ROBERT** (1888-1981), New York City's builder of public works **11** 202-203

**MOSHWESHWHE** (Moshesh; circa 1787-1868), South African king **11** 203-205

**MOSQUERA, TOMÁS CIPRIANO DE** (1798-1878), Colombian statesman **11** 205-206

**MOSSADEGH, MOHAMMAD** (Musaddiq; 1882-1967), Iranian

nationalist politician and prime minister (1951-1953) **11** 206-207

**MÖSSBAUER, RUDOLF** (born 1929), German physicist **11** 208-209

**MOTHERWELL, ROBERT** (1915-1991), American painter **11** 210-211

**Motion Picture Producers and Directors Association** (United States)  
Hays, Will **21** 197-199

**Motion pictures** (Europe)  
De Sica, Vittorio **21** 106-108  
Von Stroheim, Erich **21** 418-420

**Motion pictures** (United States)  
advertising for  
Bass, Saul **21** 25-27  
animation  
Bray, John Randolph **21** 55-57  
Hubley, John **21** 208-210  
McCay, Winsor **21** 288-291  
O'Brien, Willis **21** 324-326  
Ward, Jay **21** 421-423  
art directors  
Gibbons, Cedric **21** 158-159  
Kalmus, Natalie **21** 233-235  
Menzies, William Cameron **21** 291-293

comedy  
Wilder, Billy **21** 430-432

development  
Bitzer, Billy **21** 36-38  
Fox, William **21** 143-144

directors  
Bass, Saul **21** 25-27  
Canutt, Yakima **21** 71-72  
Corman, Roger **21** 87-89  
Menzies, William Cameron **21** 291-293

Peckinpah, Sam **21** 338-340  
fantasy

O'Brien, Willis **21** 324-326

film noir  
Wilder, Billy **21** 430-432

filmmakers  
Hubley, John **21** 208-210  
Toland, Gregg **21** 405-407

gangster films  
De Niro, Robert **21** 103-106

Hays Production Code  
Hays, Will **21** 197-199

horror  
Corman, Roger **21** 87-89

music for  
Herrmann, Bernard **21** 199-202  
Kander, John **21** 235-237

producers  
Fox, William **21** 143-144  
Ince, Thomas **21** 213-215  
Lasky, Jesse **21** 254-256  
Todd, Mike **21** 402-404  
Van Peebles, Melvin **21** 414-416  
Ward, Jay **21** 421-423  
Wilder, Billy **21** 430-432

science fiction  
Menzies, William Cameron **21** 291-293

screenwriters  
Loos, Anita **21** 262-265  
Trumbo, Dalton **21** 409-411

shorts

Bass, Saul **21** 25-27  
silents  
Canutt, Yakima **21** 71-72  
Coogan, Jackie **21** 83-85  
Lasky, Jesse **21** 254-256  
Von Stroheim, Erich **21** 418-420

special effects  
O'Brien, Willis **21** 324-326  
Struss, Karl **21** 398-399  
"talkies" and after  
Cagney, James **21** 68-71  
Cooper, Gary **21** 85-87  
Nelson, Rick **21** 314-316  
Weissmuller, Johnny **21** 425-427

theater chains  
Fox, William **21** 143-144

westerns  
Ince, Thomas **21** 213-215  
Peckinpah, Sam **21** 338-340

**Motivation** (psychology)  
Jenner, Bruce **21** 218-221  
Nidetch, Jean **21** 318-320

**MOTLEY, CONSTANCE BAKER** (born 1921), African American judge and attorney **18** 295-297

**MOTLEY, JOHN LOTHROP** (1814-1877), American historian and diplomat **11** 211-212

**MOTT, JOHN R.** (1865-1955), American Protestant leader **11** 212

**MOTT, LUCRETIA COFFIN** (1793-1880), American feminist and abolitionist **11** 212-213

**MOUNT, WILLIAM SIDNEY** (1807-1868), American painter **11** 213-214

**Mount Everest**  
Mallory, George **21** 268-271

**MOUNTBATTEN, LOUIS FRANCIS ALBERT VICTOR NICHOLAS** (1900-1979), English Navy officer and viceroy of India **18** 297-299

**MOYERS, BILLY DON** ("Bill"; born 1934), television journalist, author, and press secretary to president Lyndon B. Johnson **11** 214-216

**MOYNIHAN, DANIEL PATRICK** ("Pat"; born 1927), United States senator from New York **11** 216-218

**MOZART, WOLFGANG AMADEUS** (1756-1791), Austrian composer **11** 218-221

**MPHAHLELE, EZEKIEL** (a.k.a. Bruno Eseki; born 1919), South African author and scholar **11** 221-223

**MQHAYI, SAMUEL EDWARD KRUNE** (1875-1945), South African novelist and poet **11** 223

**MUAWIYA IBN ABU SUFYAN** (died 680), Umayyad caliph **11** 223-224

**MUBARAK, HOSNI** (born 1928), president of Egypt **11** 225-226

**MUELLER, OTTO** (1874-1930), German expressionist painter **11** 226-227

**MUGABE, ROBERT GABRIEL** (born 1924), Zimbabwe's first elected black prime minister **11** 227-229

**MUHAMMAD, ELIJAH** (Poole; 1897-1975), leader of the Nation of Islam ("Black Muslims") **11** 230-231

**MUHAMMAD BIN TUGHLUQ** (ruled 1325-1351), Moslem sultan of Delhi **11** 229

**MUHAMMAD TURE, ASKIA** (circa 1443-1538), ruler of the West African Songhay empire **11** 231-232

**MÜHLENBERG, HEINRICH MELCHIOR** (1711-1787), German-born American Lutheran clergyman **11** 232-233

**MUHLBERG, WILLIAM AUGUSTUS** (1796-1877), American Episcopalian clergyman **11** 233-234

**MUIR, JOHN** (1838-1914), American naturalist **11** 234

**MUJIBUR RAHMAN, SHEIK** (1920-1975), Bengal leader who helped found Bangladesh **11** 234-236

**MULDOWNEY, SHIRLEY** (born ca. 1940), American race car driver **11** 236-238

**MULLER, HERMANN JOSEPH** (1890-1967), American geneticist **11** 238-239

**MÜLLER, JOHANNES PETER** (1801-1858), German physiologist and anatomist **11** 239-240

**MÜLLER, KARL ALEXANDER** (born 1927), Swiss-born solid-state physicist **11** 240-241

**MÜLLER, PAUL HERMANN** (1899-1965), Swiss chemist **11** 241-242

**MULRONEY, MARTIN BRIAN** (born 1939), prime minister of Canada **11** 242-246

**MUMFORD, LEWIS** (1895-1990), American social philosopher and architectural critic **11** 246-247

**MUNCH, EDVARD** (1863-1944), Norwegian painter and graphic artist **11** 247-248

**MUNDELEIN, GEORGE WILLIAM** (1872-1939), American Roman Catholic cardinal **11** 248-249

**MUÑOZ MARÍN, JOSÉ LUÍS ALBERTO** (1898-1980), Puerto Rican political leader **11** 249-250

**MUÑOZ RIVERA, LUÍS** (1859-1916), Puerto Rican political leader **11** 250

**MUNSEY, FRANK ANDREW** (1854-1925), American publisher **11** 251

**MÜNZER, THOMAS** (1489?-1525), German Protestant reformer **11** 251-252

**MURASAKI SHIKIBU** (circa 976-circa 1031), Japanese writer **11** 252-253

**MURAT, JOACHIM** (1767-1815), French marshal, king of Naples 1808-1815 **11** 253-254

**MURATORI, LODOVICO ANTONIO** (1672-1750), Italian historian and antiquary **11** 254-255

**MURCHISON, SIR RODERICK IMPEY** (1792-1871), British geologist **11** 255-256

**MURDOCH, JEAN IRIS** (1919-1999), British novelist **11** 256-257

**MURDOCH, RUPERT** (born 1931), Australian newspaper publisher **11** 257-258

**MURILLO, BARTOLOMÉ ESTEBAN** (1617-1682), Spanish painter **11** 258-259

**MURPHY, AUDIE** (1924-1971), American army officer and actor **18** 299-301

**MURPHY, CHARLES FRANCIS** (1858-1924), American politician **11** 259-260

**MURPHY, FRANK** (1890-1949), American jurist and diplomat **11** 260-261

**MURRAY, JAMES** (1721-1794), British general **11** 261-262

**MURRAY, JOSEPH** (born 1919), American physician **18** 301-303

**MURRAY, LESLIE ALLAN** (born 1938), Australian poet and literary critic **11** 262-263

**MURRAY, PHILIP** (1886-1952), American labor leader **11** 264-265

**MURROW, EDWARD ROSCOE** (1908-1965), American radio and television news broadcaster **11** 265-266

**MUSA MANSÁ** (died 1337), king of the Mali empire in West Africa ca. 1312-1337 **11** 266

**MUSGRAVE, THEA** (born 1928), Scottish-born composer **11** 266-268

**MUSIAL, STAN** (Stanislaus Musial, Stanley Frank Musial; born 1920), American baseball **19** 260-262

#### Music

recording of  
Goldmark, Peter Carl **21** 170-172  
use of computers to compose or  
produce  
Pierce, John Robinson **21** 349-351

**Musicals** (United States)  
librettists/lyricists  
Ebb, Fred **21** 113-115  
Kander, John **21** 235-237  
orchestrators  
Bennett, Robert Russell **21** 32-34  
stars  
Merman, Ethel **21** 295-297

#### Musicians, American

bandleaders  
Arnaz, Desi **21** 12-14  
composers (20th century)  
Bennett, Robert Russell **21** 32-34  
Herrmann, Bernard **21** 199-202  
Kander, John **21** 235-237  
conductors  
Bennett, Robert Russell **21** 32-34  
Herrmann, Bernard **21** 199-202  
guitarists  
Garcia, Jerry **21** 150-152  
lyricists  
Ebb, Fred **21** 113-115  
Garcia, Jerry **21** 150-152  
Kander, John **21** 235-237  
singers  
Garcia, Jerry **21** 150-152  
Merman, Ethel **21** 295-297  
Nelson, Rick **21** 314-316

#### Musicians, French

composers (18th-19th century)  
Philidor, François-André **21** 347-349

#### Musicians, Italian

composers (14th-17th century)  
Beaujoyeux, Balthasar de **21** 29-30  
instrument makers  
Cristofori, Bartolomeo **21** 94-96

#### Musicians, Nigerian

Fela **21** 127-129

**MUSIL, ROBERT EDLER VON** (1880-1942), Austrian novelist, dramatist, and short story writer **11** 268-269

**MUSKIE, EDMUND SIXTUS** (1914-1996), United States senator and Democratic vice-presidential nominee **11** 269-271

**MUSSET, LOUIS CHARLES ALFRED DE** (1810-1857), French poet, dramatist, and fiction writer **11** 271-272

**MUSSOLINI, BENITO** (1883-1945), Italian Fascist dictator 1922-1943 **11** 272-274

**MUSSORGSKY, MODEST PETROVICH** (1839-1881), Russian composer **11** 274-276

**MUSTE, ABRAHAM JOHANNES** (1885-1967), American pacifist and labor leader **11** 276-277

#### Mute, the

see Deaf, the—deaf-mutes

**MUTESA I** (circa 1838-1884), African monarch of Buganda **11** 277

**MUTESA II** (1924-1969), Monarch of Buganda **11** 277-278

**MUTIS, JOSÉ CELESTINO** (1732-1808), Spanish-Colombian naturalist **11** 278-279

**MUTSUHITO** (a.k.a. Meiji; 1852-1912), Japanese emperor **11** 279-282

**MUYBRIDGE, EADWEARD** (1830-1904), English photographer **21** 305-308

**MWANGA** (circa 1866-1901), Monarch of Buganda **11** 282-283

**MYDANS, CARL** (born 1907), American photojournalist **11** 283-284

**MYRDAL, KARL GUNNAR** (1898-1987), Swedish economist and sociologist **11** 284

**MYRON** (flourished circa 470-450 B.C.), Greek sculptor **11** 285

**MZILIKAZI** (circa 1795-1868), South African warrior leader **11** 285-286

## N

**NABOKOV, VLADIMIR** (1899-1977), Russian-born American writer, critic, and lepidopterist **11** 287-288

**NABUCO DE ARAUJO, JOAQUIM AURELIO** (1849-1910), Brazilian abolitionist, statesman, and author **11** 288-289

**NADELMAN, ELIE** (1882-1946), Polish-American sculptor and graphic artist **11** 289-290

**NADER, RALPH** (born 1934), American lawyer and social crusader **11** 290-291

**NADIR SHAH** (born Nadir Kouli; 1685-1747), Emperor of Persia **20** 278-281

**NAGEL, ERNEST** (1901-1985), American philosopher of science **11** 291-292

**NAGUMO, CHUICHI** (1887-1944), Japanese admiral **19** 263-266

**NAGURSKI, BRONKO** (Bronislaw Nagurski; 1908-1990), Canadian football player **21** 309-311

**NAGY, IMRE** (1896-1958), prime minister of Hungary (1953-55, 1956) **11** 292-293

**NAHMANIDES** (1194-1270), Spanish Talmudist **11** 293-294

**NAIDU, SAROJINI** (1879-1949), Indian poet and nationalist **11** 294-295

**NAIPAUL, V. S.** (born 1932), Trinidadian author of English-language prose **11** 295-296

**NAISMITH, JAMES** (1861-1939), Canadian inventor of basketball **21** 311-313

**NAJIBULLAH, MOHAMMAD** (born 1947), Soviet-selected ruler of the Republic of Afghanistan **11** 296-298

**NAKASONE, YASUHIRO** (born 1918), prime minister of Japan (1982-1987) **11** 298-300

**NAMATJIRA, ALBERT** (1902-1959), Australian Aboriginal artist **11** 300-301

**NAMIER, SIR LEWIS BERNSTEIN** (1888-1960), English historian **11** 301-303

**NANAK** (1469-1538), Indian reformer, founder of Sikhism **11** 303

**NANSEN, FRIDTJOF** (1861-1930), Norwegian polar explorer, scientist, and statesman **11** 304-305

**NAOROJI, DADABHAI** (1825-1917), Indian nationalist leader **11** 305

**NAPIER, JOHN** (1550-1617), Scottish mathematician **11** 306

**NAPOLEON I** (1769-1821), emperor of the French 1804-1815 **11** 306-310

**NAPOLEON III** (Louis Napoleon; 1808-1873), emperor of the French 1852-1870 **11** 310-312

**NARAYAN, JAYAPRAKASH** (1902-1979), Indian nationalist and social reformer **11** 312-313

**NARAYAN, R. K.** (Narayanswami; born 1906), Indian author **11** 313-314

**NARIÑO, ANTONIO** (1765-1823), Colombian patriot **11** 314-315

**NARVÁEZ, PÁNFILO DE** (1478?-1528), Spanish soldier and explorer **11** 315

**NASH, JOHN** (1752-1835), English architect and town planner **11** 316

**NASH, OGDEN** (Frederic Ogden Nash; 1902-1971), American poet **18** 304-306

**NASMYTH, JAMES** (1808-1890), Scottish engineer and inventor **11** 316-317

**NASSER, GAMAL ABDEL** (1918-1970), Egyptian statesman, president 1956-1970 **11** 317-318

**NAST, CONDÉ** (1873-1942), American publisher **19** 266-268

**NAST, THOMAS** (1840-1902), American caricaturist and painter **11** 318-319

**NATHAN, GEORGE JEAN** (1882-1958), American author, editor, and critic **11** 319-321

**NATION, CARRY AMELIA MOORE** (1846-1911), American temperance reformer **11** 321-322

**National Basketball Association** (United States)  
Cousy, Bob **21** 92-94

West, Jerry **21** 428-430

**National Broadcasting Company** (NBC)  
Lasker, Albert **21** 251-254

**National League** (United States baseball)  
Gibson, Bob **21** 159-162  
Hornsby, Rogers **21** 204-206  
Rose, Pete **21** 374-376

**National Professional Hall of Fame**  
Graham, Otto **21** 174-176

**NATIVIDAD, IRENE** (born 1948), Asian American activist and women's rights advocate **11** 322-324

**NATSUME, SOSEKI** (or Kinnosuke; 1867-1916), Japanese novelist and essayist **11** 324-325

**NAVRAILOVA, MARTINA** (born 1956), American tennis player **11** 325-327

**NAYLOR, GLORIA** (born 1950), African American novelist **11** 328-329

**NAZZAM, IBRAHIM IBN SAYYAR AL-** (died circa 840), Moslem thinker and theologian **11** 329

**NBC**  
see National Broadcasting Co.

**NE WIN** (born 1911), Burmese political leader **11** 364-365

**NEAL, PATRICIA** (Patsy Louise Neal; born 1926), American actress **19** 268-270

**NEBUCHADNEZZAR** (ruled 605-562 B.C.), king of Babylon **11** 330

**NECKER, JACQUES** (1732-1804), French financier and statesman **11** 330-331

**NEFERTITI** (flourished first half 14th century B.C.), Egyptian queen **11** 331-332

**NEHRU, JAWAHARLAL** (1889-1964), Indian nationalist, prime minister 1947-1964 **11** 332-334

**NEHRU, MOTILAL** (1861-1931), Indian lawyer and statesman **11** 334-335

**NEILL, ALEXANDER SUTHERLAND** (1883-1973), Scottish psychologist **11** 335-336

**NELSON, HORATIO** (Viscount Nelson; 1758-1805), English admiral **11** 336-338

**NELSON, RICK** (Eric Hillard Nelson; 1940-1985), American musician and actor **21** 314-316

**NEMEROV, HOWARD** (1920-1991), American author and third poet laureate of the United States **11** 338-340

**NERI, ST. PHILIP** (1515-1595), Italian reformer **11** 340

**NERNST, WALTHER** (born Hermann Walther Nernst; 1864-1941), German chemist and inventor **11** 340-342

**NERO CLAUDIUS CAESAR** (37-68), Roman emperor 54-68 **11** 342-344

**NERUDA, PABLO** (Néftalí Ricardo Reyes Basoalto; 1904-73), Chilean poet, Nobel prize winner 1971 **11** 344-345

**NERVAL, GÉRARD DE** (1808-1855), French poet **11** 345-346

**NERVI, PIER LUIGI** (1891-1979), Italian architect and engineer **11** 346-348

**NESSELRODE, COUNT KARL ROBERT** (1780-1862), Russian diplomat **11** 348-349

**NESTORIUS** (died circa 453), Syrian patriarch of Constantinople and heresiarch **11** 349-350

**NETANYAHU, BINYAMIN** (born 1949), Israeli ambassador to the United Nations (1984-1988), head of the Likud Party, and prime minister **11** 350-351

**NETO, ANTÓNIO AGOSTINHO** (1922-1979), Angolan intellectual and nationalist and first president of the People's Republic of Angola **11** 351-352

**NEUFELD, ELIZABETH F.** (born 1928), American biochemist **11** 352-353

**NEUMANN, BALTHASAR** (1687-1753), German architect **11** 354-355

**NEUTRA, RICHARD JOSEPH** (1892-1970), Austrian-born American architect **11** 355-356

**NEVELSON, LOUISE** (1900-1988), American abstract sculptor **11** 356-357

**NEVERS, ERNIE** (Ernest Alonzo Nevers; 1903-1976), American athlete **20** 281-283

**NEVIN, JOHN WILLIAMSON** (1803-1886), American Protestant theologian **11** 357

**NEVINS, ALLAN** (1890-1971), American historian **11** 357-359

**Nevis** (island; West Indies)  
Kidd, William **21** 242-244

**NEVSKY, ALEXANDER** (ca. 1220-1262), Russian grand duke and prince **11** 359

**New Amsterdam**  
see New York City

**New Haven Colony**  
see Connecticut—colonial charter

**New Netherland** (American colony)  
see New York (state; United States)

**New Orleans** (city; Louisiana)  
Butler, Benjamin Franklin **21** 65-67

**New Testament**  
see Bible

**New York** (state; United States)  
social reforms  
Folks, Homer **21** 137-140

**New York City** (New York State)  
• MODERN PERIOD  
Central Park  
Sickles, Daniel Edgar **21** 385-388  
typhoid outbreak (1906)  
Mallon, Mary **21** 266-268

**New York Giants** (baseball team)  
Mathewson, Christy **21** 282-284

**New York Life Insurance Company**  
Perkins, George Walbridge **21** 344-347

**New York State Charities Aid Association**  
Folks, Homer **21** 137-140

**New York University** (New York City)  
Drucker, Peter **21** 110-112

**NEWBERRY, JOHN** (1713-1767), English publisher **11** 360-361

**NEWCOMB, SIMON** (1835-1909), American astronomer **11** 361-362

**NEWCOMEN, THOMAS** (1663-1729), English inventor and engineer **11** 362

**NEWHOUSE, SAMUEL IRVING** (1895-1979), American media tycoon **11** 362-364

**NEWMAN, BARNETT** (1905-1970), American painter **11** 365

**NEWMAN, JOHN HENRY** (1801-1890), English cardinal and theologian **11** 365-367

**NEWMAN, PAUL LEONARD** (born 1925), American actor and humanitarian **18** 306-308

**News services**  
Reuter, Paul Julius von **21** 366-367

**NEWTON, HUEY P.** (born 1942), co-founder of the Black Panther Party **11** 367-369

**NEWTON, SIR ISAAC** (1642-1727), English scientist and mathematician **11** 369-372

**NEXØ, MARTIN ANDERSON** (1869-1954), Danish author **11** 372

**NEY, MICHEL** (1769-1815), French marshal **11** 372-373

**NEYMAN, JERZY** (1894-1981), American statistician **21** 316-318

**NGALA, RONALD GIDEON** (1923-1972), Kenyan politician **11** 373-374

**NGATA, SIR APIRANA TURUPA** (1874-1950), Maori leader, politician, and scholar **11** 374-375

**NGOYI, LILLIAN** (1911-1980), South African civil rights activist **20** 283-284

**NGUGI WA THIONG'O** (James Ngugi; born 1938), Kenyan writer **11** 375-376

**NI TSAN** (1301-1374), Chinese painter **11** 400

**NICHIREN** (1222-1282), Japanese Buddhist monk **11** 376-377

**NICHOLAS I** (1796-1855), czar of Russia 1825-1855 **11** 377-378

**NICHOLAS II** (1868-1918), czar of Russia 1894-1917 **11** 378-380  
Fabergé, Carl **21** 125-127

**NICHOLAS OF ORESME** (circa 1320-1382), French bishop, writer and translator **11** 380

**NICHOLSON, BEN** (1894-1982), English painter **11** 380-381

**NICHOLSON, SIR FRANCIS** (1655-1728), English colonial governor **11** 381-382

**NICKLAUS, JACK** (born 1940), American golfer **11** 382-383

#### Nicknames

big train, the  
Johnson, Walter **21** 228-230  
Charlie hustle  
Rose, Pete **21** 374-376  
father of American mathematics  
Peirce, Benjamin **21** 340-342  
father of aviation  
Guggenheim, Daniel **21** 185-187  
father of modern baseball  
Cartwright, Alexander **21** 74-77  
father of modern management  
Drucker, Peter **21** 110-112  
father of occupational medicine  
Ramazzini, Bernardino **21** 362-364  
father of railroad economics and statistics  
Fink, Albert **21** 133-135  
father of stop-motion animation  
O'Brien, Willis **21** 324-326  
father of the animated cartoon  
McCay, Winsor **21** 288-291  
father of the bicycle industry  
Starley, James **21** 392-393  
father of the machine-tool industry  
Maudslay, Henry **21** 286-288  
father of the petroleum industry  
Drake, Edwin **21** 108-110  
father of the submarine  
Bushnell, David **21** 64-65  
father of the typewriter  
Sholes, Christopher Latham **21** 383-385  
father of the western  
Ince, Thomas **21** 213-215  
father of thoracic medicine  
Laennec, René **21** 247-249  
father of whist  
Hoyle, Edmond **21** 206-208  
founder of the science of statistics  
Graunt, John **21** 176-178  
godfather of modern black cinema



- Van Peebles, Melvin **21** 414-416  
 Houdini of the hardwood  
 Cousy, Bob **21** 92-94  
 Johnny Appleseed  
 Chapman, John **21** 77-78  
 Kansas ironman  
 Cunningham, Glenn **21** 96-99  
 king of chefs and chef of kings  
 Escoffier, Auguste **21** 122-124  
 king of stop and go  
 Corman, Roger **21** 87-89  
 man you love to hate, the  
 Von Stroheim, Erich **21** 418-420  
 miracle worker, the  
 Anthony of Padua **21** 7-9  
 Mr. Clutch  
 West, Jerry **21** 428-430  
 Mr. Consistency  
 West, Jerry **21** 428-430  
 Mr. outside  
 Davis, Glenn **21** 101-103  
 patron saint for lost things  
 Anthony of Padua **21** 7-9  
 perfect prince, the  
 John II **21** 223-225  
 rapid Robert  
 Feller, Bob **21** 129-131  
 shoe, the  
 Shoemaker, Willie **21** 381-383  
 Sir Walter  
 Hagen, Walter **21** 188-190  
 slammin' Sam  
 Snead, Sam **21** 388-390  
 Stephen with the tongue of thunder  
 Langton, Stephen **21** 249-251  
 Typhoid Mary  
 Mallon, Mary **21** 266-268  
 will o' the wisp  
 Pep, Willie **21** 342-344  
 willie the wisp  
 Pep, Willie **21** 342-344
- NICHOLAS, ST.** (Santa Claus; died 345),  
 Lycian bishop **20** 284-285
- NICHOLS, MIKE** (Michael Igor  
 Peschkowsky; born 1931), American  
 film and theater director and producer  
**20** 285-288
- NICOLSON, HAROLD GEORGE** (1886-  
 1968), British diplomat, historian,  
 biographer, critic and journalist, and  
 diarist **11** 383-384
- NICOLSON, MARJORIE HOPE** (1894-  
 1981), American educator **11** 384-385
- NIDETCH, JEAN** (born 1927), founder of  
 Weight Watchers **21** 318-320
- NIEBUHR, BARTHOLD GEORG** (1776-  
 1831), German historian and statesman  
**11** 385-386
- NIEBUHR, HELMUT RICHARD** (1894-  
 1962), American Protestant theologian  
**11** 386-387
- NIEBUHR, REINHOLD** (1892-1971),  
 American Protestant theologian **11**  
 387-388
- NIELSEN, CARL AUGUST** (1865-1931),  
 Danish composer **11** 388-389
- NIEMEYER SOARES FILHO, OSCAR**  
 (born 1907), Brazilian architect **11**  
 389-390
- NIETZSCHE, FRIEDRICH** (1844-1900),  
 German philosopher and poet **11**  
 390-392
- Nigeria, Federal Republic of** (nation;  
 West Africa)  
 Moslem rulers  
 Amina of Zaria **21** 5-7
- NIGHTINGALE, FLORENCE** (1820-1910),  
 English nurse **11** 392-393
- NIJINSKY, VASLAV** (1890-1950), Russian  
 ballet dancer **11** 393-395
- NIKON, NIKITA MINOV** (1605-1681),  
 patriarch of the Russian Orthodox  
 Church 1652-1666 **11** 395
- NIMITZ, CHESTER WILLIAM** (1885-  
 1966), American admiral **11** 395-396
- NIN, ANAIS** (1903-1977), American  
 author **11** 397-398
- NIN-CULMELL, JOAQUÍN MARÍA** (born  
 1908), American composer, pianist,  
 and conductor **11** 398
- NIRENBERG, MARSHALL WARREN**  
 (born 1927), American biochemist **11**  
 399-400
- NIWANO, NIKKYO** (Shikazo Niwano;  
 born 1906), Buddhist Japanese  
 religious leader **11** 400-401
- NIXON, RICHARD MILHOUS** (1913-  
 1994), president of the United States  
 (1969-1974) **11** 401-404
- NIZAMI, KHALIQ AHMAD** (born 1925),  
 Indian historian, religious scholar, and  
 diplomat **11** 405
- NKOMO, JOSHUA MQABUKO** (1917-  
 1999), leading African nationalist in  
 former colony of Rhodesia and  
 president of the Zimbabwe African  
 People's Union **11** 405-407
- NKOSI, LEWIS** (born 1936), South  
 African author and literary critic **11**  
 407-408
- NKRUMAH, KWAME** (Francis Nwa  
 Nkrumah; 1909-1972), Ghanaian  
 statesman, president 1960-1966 **11**  
 408-410
- NOBEL, ALFRED BERNHARD** (1833-  
 1896), Swedish chemist **11** 410-411
- Nobel Prize winners**  
 physiology and medicine  
 Fibiger, Johannes **21** 131-133  
 Forssmann, Werner **21** 140-141
- NOBILE, UMBERTO** (1885-1978), Italian  
 explorer and airship designer **11**  
 411-412
- NOBUNAGA, ODA** (1534-1582),  
 Japanese general and statesman **11**  
 413-414
- NOETHER, EMMY** (born Amalie Emmy  
 Noether; 1882-1935), German  
 American mathematician **11** 414-416
- NOGUCHI, ISAMU** (1904-1988),  
 American sculptor and designer **11**  
 416-418
- NOLAN, SIDNEY ROBERT** (1917-1992),  
 Australian expressionist painter **11** 418
- NOLAND, KENNETH** (born 1924),  
 American color-field painter **11**  
 418-419
- NOLDE, EMIL** (1867-1956), German  
 expressionist painter **11** 419-420
- NONO, LUIGI** (1924-1990), Italian  
 composer **11** 420-421
- NORDENSKJÖLD, BARON NILS ADOLF  
 ERIK** (1832-1901), Finnish-Swedish  
 polar explorer and mineralogist **11**  
 421-422
- NORDENSKOLD, NILS OTTO GUSTAF**  
 (1869-1928), Swedish polar explorer  
 and geologist **11** 422-423
- NORDSTROM, JOHN** (Johan W.  
 Nordstrom; 1871-1963), American  
 shoe retailer **19** 270-272
- NORFOLK, 3D DUKE OF** (Thomas  
 Howard; 1473-1554), English soldier  
 and counselor **11** 423
- NORIEGA, MANUEL A.** (born 1934),  
 strongman of Panama (1980s) forced  
 out in 1989 by the United States **11**  
 423-425
- NORMAN, JESSYE** (born 1945),  
 American singer **11** 425-427
- NORRIS, BENJAMIN FRANKLIN, JR.**  
 (1870-1902), American novelist and  
 critic **11** 427-428
- NORRIS, GEORGE WILLIAM** (1861-  
 1944), American statesman **11**  
 428-429
- NORTH, FREDERICK** (2nd Earl of  
 Guilford; 1732-1792), English  
 statesman **11** 429-430
- Northern Nigeria**  
 see Nigeria
- NORTHROP, JOHN HOWARD** (1891-  
 1987), American biological chemist **11**  
 430-431
- NORTHUMBERLAND, DUKE OF** (John  
 Dudley; circa 1502-1553), English  
 soldier and statesman **11** 431-432
- NOSTRADAMUS** (born Michel de  
 Notredame; 1503-1566), French  
 physician, astrologist, and author **11**  
 432-434

**Notation** (music)  
see Music—notation

**Notre Dame, Cathedral of** (Paris)  
William of Sens **21** 432-434

**NOVALIS** (1772-1801), German poet  
and author **11** 435

**NOVELLO, ANTONIA** (Antonia Coello;  
born 1944), Puerto Rican American  
pediatrician **18** 308-310

**NOYCE, ROBERT** (1927-1990), American  
physicist and inventor **11** 436-437

**NOYES, JOHN HUMPHREY** (1811-  
1886), American founder of the  
Oneida Community **11** 437-438

**NOZICK, ROBERT** (born 1938),  
American philosopher and polemical  
advocate of radical libertarianism **11**  
438-439

**NU, U** (1907-1995), Burmese statesman  
**11** 439-441

**NUJOMA, SHAFIIHUNA** ("Sam"; born  
1929), first president of independent  
Namibia **11** 441-443

**Number** (mathematics)  
theory  
Peirce, Benjamin **21** 340-342

**NUNN, SAM** (born 1938), United States  
senator from Georgia **11** 443-444

**NUREDDIN** (Malik al-Adil Nur-al-Din  
Mahmud; 1118-1174), sultan of Syria  
and Egypt **11** 444-445

**NUREYEV, RUDOLPH** (born 1938),  
Russian-born dancer and  
choreographer **11** 445-446

**NURI AL-SA'ID** (1888-1958), Iraqi army  
officer, statesman, and nationalist **11**  
446-447

**NURMI, PAAVO** (1897-1973), Finnish  
runner **19** 272-274

**NYE, GERALD** (1892-1971), American  
senator **21** 320-323

**NYERERE, JULIUS KAMBERAGE** (born  
1922), Tanzanian statesman **11**  
447-449

**NYGREN, ANDERS** (1890-1978),  
Lutheran bishop of Lund and  
representative of the so-called  
Lundensian school of theology **11**  
449-451

**NZINGA NKUWU** (died 1506), king of  
Kongo **11** 451-452

## O

**OAKLEY, ANNIE** (1860-1926), American  
markswoman and Wild West star **11**  
453-454

**OATES, JOYCE CAROL** (born 1938),  
American author **11** 454-456

**OATES, TITUS** (1649-1705), English  
leader of the Popish Plot **11** 456

**OBOTE, APOLO MILTON** (born 1925),  
Ugandan politician **11** 457

**OBRECHT, JACOB** (1450-1505), Dutch  
composer **11** 457-458

**OBREGÓN, ÀLVARO** (1880-1928),  
Mexican revolutionary general and  
president **11** 458-459

**O'BRIEN, WILLIS** (1886-1962), American  
film special effects pioneer **21** 324-326

**Obstetrics** (medicine)  
LaChapelle, Marie **21** 245-247

**O'CASEY, SEAN** (1880-1964), Irish  
dramatist **11** 459-460

**Occupational diseases** (United States)  
Ramazzini, Bernardino **21** 362-364

**OCHOA, ELLEN** (born 1958), Hispanic  
American electrical engineer and  
astronaut **11** 460-461

**OCHOA, SEVERO** (1905-1993), Spanish  
biochemist **11** 461-464

**OCHS, ADOLPH SIMON** (1858-1935),  
American publisher and philanthropist  
**11** 464

**OCKEGHEM, JOHANNES** (circa 1425-  
1495), Netherlandish composer **11**  
464-465

**O'CONNELL, DANIEL** (1775-1847), Irish  
statesman **11** 465-467

**O'CONNOR, (MARY) FLANNERY** (1925-  
1964), American author of short stories  
and novels **11** 467-468

**O'CONNOR, SANDRA DAY** (born  
1930), United States Supreme Court  
justice **11** 468-470

**ODETS, CLIFFORD** (1906-1963),  
American playwright and film director  
**11** 470-471

**ODINGA, AJUMA JARAMOGI OGINGA**  
(born 1912), Kenyan politician **11**  
471-473

**ODOACER** (433-493), Germanic  
chieftain **11** 473

**ODRIÁ AMORETTI, MANUEL  
APOLINARIO** (1897-1974), Peruvian  
army officer, dictator-president, and  
politician **11** 473-474

**ODUM, HOWARD WASHINGTON**  
(1884-1954), American sociologist,  
educator, and academic administrator  
**11** 474-476

**ODUMEGWU OJUKWU,  
CHUKWUEMEKA** (born 1933),

Nigerian army general and rebel **18**  
311-313

**OERSTED, HANS CHRISTIAN** (1777-  
1851), Danish physicist **11** 476-478

**OERTER, AL** (Alfred Adolph Oerter Jr.;  
born 1936), American discus thrower  
**21** 326-328

**OFFENBACH, JACQUES** (1819-1880),  
German-French composer **11** 478-479

**OGATA, SADAKO** (born 1927), United  
Nations High Commissioner for  
Refugees **11** 479-480

**OGBURN, WILLIAM FIELDING** (1886-  
1959), American sociologist **11** 480

**OGDEN, PETER SKENE** (1794-1854),  
Canadian fur trader and explorer **11**  
480-481

**OGILVY, DAVID MACKENZIE** (1911-  
1999), British-American advertising  
executive **11** 481-482

**OGLETHORPE, JAMES EDWARD** (1696-  
1785), English general and colonizer  
**11** 482-483

**OGOT, GRACE EMILY AKINYI** (born  
1930), Kenyan author and politician  
**11** 483-484

**O'HAIR, MADALYN MURRAY** (born  
1919), American atheist author and  
radio commentator **11** 484-485

**O'HARA, JOHN** (1905-1970), American  
novelist **11** 485

**O'HIGGINS, BERNARDO** (1778-1842),  
Chilean soldier and statesman **11** 486

**OHM, GEORG SIMON** (1789-1854),  
German physicist **11** 486-487

**Oil industry**  
U.S.  
Drake, Edwin **21** 108-110  
Flagler, Henry **21** 135-137

**O'KEEFE, GEORGIA** (1887-1986),  
American painter **11** 487-489

**Oklahoma** (musical)  
Bennett, Robert Russell **21** 32-34

**OKUBO, TOSHIMICHI** (1830-1878),  
Japanese statesman **11** 489-490

**OKUMA, SHIGENOBU** (1838-1922),  
Japanese statesman **11** 490

**OLAF I TRYGGVASON** (968-1000),  
Viking warrior and king of Norway **11**  
490-493

**OLAF II** (circa 990-1030), king of  
Norway **11** 493-494

**OLBRICH, JOSEPH MARIA** (1867-1908),  
Austrian Art Nouveau architect and a  
founder of the Vienna Secession **11**  
494-495

**Old Testament**

see Bible

**OLDENBARNEVELT, JOHAN VAN**(1547-1619), Dutch statesman **11** 495-496**OLDENBURG, CLAES** (born 1929),American artist **11** 496-498**OLDS, RANSOM ELI** (1864-1950),American inventor and automobile manufacturer **18** 313-315**OLIPHANT, PATRICK BRUCE** (born1935), American newspaper editorial cartoonist **11** 498-500**OLIVER, JAMES** (1823-1908), Americaninventor and manufacturer **11** 500-501**OLIVETTI, ADRIANO** (1901-1960),Italian manufacturer of typewriters, calculators, and computers **11** 501-502**OLIVIER, LAURENCE** (1907-1989),English actor and director **11** 502-503**OLMSTED, FREDERICK LAW** (1822-1903), American landscape architect **11** 503-504Jenney, William Le Baron **21** 221-223**OLNEY, RICHARD** (1835-1917),American statesman **11** 504-505**OLSEN, TILLIE** (nee Tillie Lerner; born1913), American author **20** 289-291**OLSON, CHARLES** (1910-1970),American poet **11** 505-506**Olympic Games**

administration

Coubertin, Pierre de **21** 89-92

athletes

Bannister, Roger **21** 18-20Cunningham, Glenn **21** 96-99Jenner, Bruce **21** 218-221Johnson, Rafer **21** 225-227Mathias, Bob **21** 284-286Oerter, Al **21** 326-328Weissmuller, Johnny **21** 425-427West, Jerry **21** 428-430

politics

Coubertin, Pierre de **21** 89-92**OLYMPIO, SYLVANUS E.** (1902-1963),first president of the Republic of Togo **11** 506-507**OMAR AL-MUKHTAR** (circa 1860-1931),national hero of Libya and member of the Senusy **11** 507-508**OMAR IBN AL-KHATTAB** (died 644);second caliph of the Moslems **11** 508-509**OMAR IBN SAID TAL, AL-HAJJ** (circa1797-1864), West African Moslem leader **11** 509-510**OMAR KHAYYAM** (1048-circa 1132),Persian astronomer, mathematician, and poet **11** 510-511**ONASSIS, JACQUELINE LEE BOUVIER****KENNEDY** (1929-1994), American First Lady **11** 511-513**OÑATE, JUAN DE** (circa 1549-circa1624), Spanish explorer **11** 513-514/**ONDAATJE, MICHAEL** (Philip MichaelOndaatji; born 1943), Canadian author and poet **18** 315-317**O'NEILL, EUGENE** (1888-1953),American dramatist **11** 514-516**O'NEILL, TERENCE MARNE** (1914-1990),Northern Ireland prime minister **11** 516-517**O'NEILL, THOMAS P.** ("Tip"; 1912-1994), American politician **11** 517-519**ONG TENG CHEONG** (born 1936),Singapore's fifth president **11** 519-520**ONSAGER, LARS** (1903-1976), Americanchemist **11** 520-523**OORT, JAN HENDRIK** (1900-1992),Dutch astronomer **11** 523-524**Opera, French**

17th-18th century

Philidor, François-André **21** 347-349**OPPENHEIM, MERET** (1913-1985), SwissSurrealist artist **11** 524-525**OPPENHEIMER, J. ROBERT** (1904-1967),American physicist **11** 525-526**ORCAGNA** (1308?-1368?), Italianpainter, sculptor, and architect **11** 526-527**ORELLANA, FRANCISCO DE** (circa1511-1546), Spanish explorer **11** 527-528**Organ transplants** (medicine)Starzl, Thomas **21** 393-395**ORIGEN** (Origenes Adamantius; circa185-circa 254), Early Christian theologian **11** 528-529**Orlando furioso** (poem; Ariosto)Harrington, John **21** 193-195**ORLANDO, VITTORIO EMMANUELE**(1860-1952), Italian statesman **11** 529-530**ORLÉANS, CHARLES** (1394-1465),French prince and poet **11** 530**Orléans, Louis Philippe Joseph, Duc d'**

see Philippe Egalité

**ORLÉANS, PHILIPPE II** (1674-1723),French statesman, regent 1715-23 **11** 530-531**OROZCO, JOSÉ CLEMENTE** (1883-1949), Mexican painter **12** 1-2**ORR, BOBBY** (Robert Gordon Orr; born1948), Canadian hockey player **12** 2-4**ORR, JOHN BOYD** (1st Baron Orr ofBrechin; 1880-1971), Scottish nutritionist and UN official **12** 4-5**ORTEGA, DANIEL** (born 1945), leader ofthe Sandinista National Liberation Front and president of Nicaragua **12** 5-7**ORTEGA Y GASSET, JOSÉ** (1883-1955),Spanish philosopher and essayist **12** 7-8**ORTELIUS, ABRAHAM** (Abraham, Ortels;1527-1598), Flemish cartographer **12** 8-9**ORTIZ, SIMON J.** (born 1941), NativeAmerican author and storyteller **12** 9-12**ORTON, JOHN KINGSLEY** ("Joe;" 1933-1967), British playwright **12** 12-14**ORWELL, GEORGE** (1903-1950), Britishnovelist and essayist **12** 14-15**OSBORNE, JOHN** (1929-1994), Englishplaywright **12** 16-17**OSBORNE, THOMAS MOTT** (1859-1926), American reformer **12** 17-18**OSCEOLA** (circa 1800-1838), SeminoleIndian war chief **12** 18**OSGOOD, HERBERT LEVI** (1855-1918),American historian **12** 18-19**OSLER, SIR WILLIAM** (1849-1919),Canadian physician **12** 19-20**OSMAN I** (Othman; 1259-1326), Turkishwarrior-leader who established the Ottoman state as an independent entity **12** 20-22**OSMEÑA, SERGIO** (1878-1961),Philippine lawyer and statesman **12** 22-24**OSWALD, LEE HARVEY** (1939-1963),presumed assassin of John F. Kennedy **21** 328-330**OTIS, ELISHA GRAVES** (1811-1861),American manufacturer and inventor **12** 24**OTIS, HARRISON GRAY** (1765-1848),American statesman **12** 25**OTIS, JAMES, JR.** (1725-1783), AmericanRevolutionary statesman **12** 25-27**OTTERBEIN, PHILIP WILLIAM** (1726-1813), American clergyman **12** 27-28**OTTO I** (912-973), Holy Roman emperor936-973 **12** 28-29**OTTO III** (980-1002), Holy Romanemperor 996-1002 and German king 983-1002 **12** 29-30**OTTO, LOUIS KARL RUDOLF** (1869-1937), German interpreter of religion **12** 30-32

**OTTO, NIKOLAUS AUGUST** (1832-1891), German engineer and inventor **21** 331-333

**OTTO OF FREISING** (circa 1114-1158), German historiographer and philosopher of history **12** 30

**OUD, JACOBUS JOHANNES PIETER** (1890-1963), Dutch architect **12** 32

**OUSMANE, SEMBENE** (born 1923), Senegalese novelist and film maker **12** 32-33

**OU-YANG HSIU** (1007-1072), Chinese author and statesman **12** 33-34

**OVID** (Publius Ovidius Naso; 43 B.C. - circa. A.D. 18), Roman elegiac and epic poet **12** 34-36

**OVINGTON, MARY WHITE** (1865-1951), civil rights reformer and a founder of the National Association for the Advancement of Colored People **12** 36-37

**OWEN, DAVID ANTHONY LLEWELLYN** (born 1938), English peace envoy in former Yugoslavia for the European Community **12** 37-39

**OWEN, SIR RICHARD** (1804-1892), English zoologist **12** 39

**OWEN, ROBERT** (1771-1858), British socialist pioneer **12** 39-40

**OWEN, ROBERT DALE** (1801-1877), Scottish-born American legislator **12** 40-41

**OWEN, RUTH BRYAN** (1885-1954), American congresswoman, diplomat, and author **12** 41-43

**OWEN, WILFRED** (1893-1918), English poet **20** 291-293

**OWENS, JESSE** (1913-1980), African American track star **12** 43-44

**OXENSTIERNA, COUNT AXEL GUSTAFSSON** (1583-1654), Swedish statesman **12** 44-45

**OZ, AMOS** (born 1939), Israeli author **12** 45-47

**OZAL, TURGUT** (born 1927), Turkish prime minister and president **12** 47-49

**OZAWA, SEIJI** (born 1935), Japanese musician and conductor **12** 49-51

## P

**PA CHIN** (pen name of Li Fei-kan; born 1904), Chinese novelist **12** 53-54

**PACHELBEL, JOHANN** (1653-1706), German composer and organist **12** 52

**PACHER, MICHAEL** (circa 1435-98), Austro-German painter and wood carver **12** 53

**PACKARD, DAVID** (1912-1996), cofounder of Hewlett-Packard Company and deputy secretary of defense under President Nixon **12** 54-56

**PADEREWSKI, IGNACE JAN** (1860-1941), Polish pianist, composer, and statesman **12** 56-57

**PADMORE, GEORGE** (1902/03-1959), Trinidadian leftist political activist **12** 57-58

**PÁEZ, JOSÉ ANTONIO** (1790-1873), Venezuelan general and president 1831-46 **12** 58

**PAGANINI, NICCOLO** (1782-1840), Italian violinist and composer **12** 58-59

**PAGE, THOMAS NELSON** (1853-1922), American author and diplomat **12** 59-60

**PAGE, WALTER HINES** (1855-1918), American journalist and diplomat **12** 60-61

**PAGELS, ELAINE HIESEY** (born 1943), historian of religion **12** 61-62

**PAIGE, SATCHEL** (Leroy Robert Paige; 1906-1982), African American baseball player **12** 62-65

**PAINE, JOHN KNOWLES** (1839-1905), American composer **12** 65

**PAINE, THOMAS** (1737-1809), English-born American journalist and Revolutionary propagandist **12** 66-67

**PAISLEY, IAN K.** (born 1926), political leader and minister of religion in Northern Ireland **12** 67-69

**PALACKÝ, FRANTIŠEK** (1798-1876), Czech historian and statesman **12** 69-70

**PALAMAS, KOSTES** (1859-1943), Greek poet **12** 70

**Palestine** (region, South Western Asia) archeology Albright, William Foxwell **21** 1-3

**PALESTRINA, GIOVANNI PIERLUIGI DA** (circa 1525-94), Italian composer **12** 70-72

**PALEY, WILLIAM** (1743-1805), English theologian and moral philosopher **12** 72

**PALEY, WILLIAM S.** (1901-1990), founder and chairman of the Columbia Broadcasting System **12** 72-75

**PALLADIO, ANDREA** (1508-1580), Italian architect **12** 75-77

**Palm Beach, Florida** (city; United States) Flagler, Henry **21** 135-137

**PALMA, RICARDO** (1833-1919), Peruvian poet, essayist, and short-story writer **12** 77

**PALMER, ALEXANDER MITCHELL** (1872-1936), American politician and jurist **12** 77-78

**PALMER, ARNOLD DANIEL** (born 1929), American golfer **12** 78-80

**PALMER, NATHANIEL BROWN** (1799-1877), American sea captain **12** 80-81

**PALMERSTON, 3D VISCOUNT** (Henry John Temple; 1784-1865), English prime minister 1855-65 **12** 81-83

**PAN KU** (32-92), Chinese historian and man of letters **12** 86-87

**Pan-Africanism** (African nationalism) Africa Fela **21** 127-129

**PANDIT, VIJAYA LAKSHMI** (1900-1990), Indian diplomat and politician **12** 83-84

**PANETTA, LEON E.** (born 1938), Democratic congressman from California and chief of staff to President Clinton **12** 84-85

**PANKHURST, EMMELINE** (1858-1928), English reformer **12** 85-86

**PANNENBERG, WOLFHART** (born 1928), German Protestant theologian **12** 87-88

**PAPANDREOU, ANDREAS** (1919-1996), Greek scholar and statesman and prime minister **12** 88-91

**PAPINEAU, LOUIS-JOSEPH** (1786-1871), French-Canadian radical political leader **12** 91

**PARACELSUS, PHILIPPUS AUREOLUS** (1493-1541), Swiss physician and alchemist **12** 91-93

**Paramount Pictures** (film studio) Lasky, Jesse **21** 254-256 Struss, Karl **21** 398-399

**Parasitology** (science) Fibiger, Johannes **21** 131-133

**PARBO, ARVI** (born 1926), Australian industrial giant **12** 93-94

**PARÉ, AMBROISE** (1510-1590), French military surgeon **12** 94-95

**PARETO, VILFREDO** (1848-1923), Italian sociologist, political theorist, and economist **12** 95-96

**PARIZEAU, JACQUES** (born 1930), Canadian politician and premier of Quebec **12** 96-99

**PARK, CHUNG HEE** (1917-1979), Korean soldier and statesman **12** 99-102

**PARK, MAUD WOOD** (1871-1955), suffragist and first president of the League of Women Voters **12** 102

**PARK, ROBERT E.** (1864-1944), American sociologist **12** 102-104

**PARK, WILLIAM HALLOCK** (1863-1939), American physician **12** 104-105

**PARKER, CHARLES CHRISTOPHER, JR.** (Charlie Parker; 1920-55), American jazz musician **12** 105-106

**PARKER, DOROTHY ROTHSCHILD** (1893-1967), American writer **12** 106

**PARKER, ELY SAMUEL** (Ha-sa-no-an-da; 1828-1895), Native American tribal leader **12** 106-108

**PARKER, HORATIO WILLIAM** (1863-1919), American composer **12** 109

**PARKER, QUANAH** (c. 1845-1911), Native American religious leader **12** 109-112

**PARKER, THEODORE** (1810-1860), American Unitarian clergyman **12** 112-113

**PARKES, ALEXANDER** (1813-1890), British metallurgist and inventor of plastic **21** 334-336

**PARKES, SIR HENRY** (1815-1896), Australian statesman **12** 113

**PARKMAN, FRANCIS** (1823-1893), American historian **12** 113-115

**PARKS, GORDON** (born 1912), American photographer, composer, and filmmaker **19** 275-277

**PARKS, ROSA LEE MCCAULEY** (born 1913), American civil rights leader **12** 115-116

**Parliamentary Law**  
Robert, Henry Martyn **21** 367-370

**PARMENIDES** (flourished 475 B.C.), Greek philosopher **12** 116-117

**PARMIGIANINO** (1503-1540), Italian painter **12** 117

**PARNELL, CHARLES STEWART** (1846-1891), Irish nationalist leader **12** 117-119

**Parochial schools** (United States)  
see Education (United States)

**PARRINGTON, VERNON LOUIS** (1871-1929), American historian **12** 119-120

**PARSONS, SIR CHARLES ALGERNON** (1854-1931), British engineer **12** 120-121

**PARSONS, FRANK** (1854-1908), American educator and reformer **12** 121-122

**PARSONS, LOUELLA** (Louella Oetlinger; 1881-1972), American gossip columnist **21** 336-338

**PARSONS, TALCOTT** (1902-1979), American sociologist **12** 122

**PASCAL, BLAISE** (1623-1662), French scientist and philosopher **12** 122-124

**PASHA, ENVER** (1881-1922), Turkish soldier and Young Turk leader **5** 290-291

**PASHA, TEWFIK** (1852-1892), khedive of Egypt 1879-92 **15** 157-158

**PASTERNAK, BORIS LEONIDOVICH** (1890-1960), Russian poet, novelist, and translator **12** 124-125

**PASTEUR, LOUIS** (1822-1895), French chemist and biologist **12** 125-127

**PATCHEN, KENNETH** (1911-1972), American experimental poet and novelist **12** 128-129

**PATEL, VALLABHBHAI** (1875-1950), Indian political leader **12** 129-130

**PATER, WALTER HORATIO** (1839-1894), English author **12** 130-131

**PATERSON, ANDREW BARTON** (1864-1941), Australian folk poet **12** 131-132

**PATERSON, WILLIAM** (1745-1806), American jurist **12** 132-133

**Pathology** (science)  
Fibiger, Johannes **21** 131-133  
Laennec, René **21** 247-249

**PATÍÑO, SIMÓN ITURRI** (1862-1947), Bolivian industrialist and entrepreneur **12** 133-134

**PATON, ALAN STEWART** (1903-1988), South African writer and liberal leader **12** 134-135

**PATRICK, JENNIE R.** (born 1949), African American chemical engineer **12** 136-137

**PATRICK, RUTH** (born 1907), American limnologist **12** 137-138

**PATRICK, ST.** (died circa 460), British missionary bishop to Ireland **12** 135-136

**PATTEN, SIMON NELSON** (1852-1922), American economist **12** 138-139

**PATTERSON, FREDERICK DOUGLAS** (1901-1988), African American educator **12** 139-140

**PATTON, GEORGE SMITH, JR.** (1885-1945), American Army officer **12** 140-141

**PAUL I** (1754-1801), Russian czar 1796-1801 **12** 143-144

**PAUL III** (Alessandro Farnese; 1468-1549), pope 1534-49 **12** 144-145  
appointees  
Fracastoro, Girolamo **21** 144-147

**PAUL IV** (Giampietro Carafa; 1476-1559), pope 1555-59 **12** 145-146

**PAUL VI** (Giovanni Battista Montini; 1897-1978), pope **12** 146-148

**PAUL, ALICE** (1885-1977), American feminist and women's rights activist **19** 277-280

**PAUL, ST.** (died 66/67), Christian theologian and Apostle **12** 141-143

**PAULI, WOLFGANG ERNST** (1900-1958), Austrian theoretical physicist **12** 149

**PAULING, LINUS CARL** (born 1901), American chemist **12** 150-152

**PAVAROTTI, LUCIANO** (born 1935), Italian tenor **12** 152-154

**PAVESE, CESARE** (1908-1950), Italian novelist, poet, and critic **12** 154-155

**PAVLOV, IVAN PETROVICH** (1849-1936), Russian physiologist **12** 155-157

**PAVLOVA, ANNA** (1881-1931), Russian ballet dancer **12** 157-159

**PAYNE, JOHN HOWARD** (1791-1852), American actor, playwright, and songwriter **12** 159

**PAYNE-GAPOSCHKIN, CECILIA** (1900-1979), American astronomer **12** 159-161

**PAYTON, WALTER** (1954-1999), American football player **20** 294-296

**PAZ, OCTAVIO** (1914-1998), Mexican diplomat, critic, editor, translator, poet, and essayist **12** 161-162

**PAZ ESTENSSORO, VICTOR** (born 1907), Bolivian statesman and reformer **12** 163-164

**PAZ ZAMORA, JAIME** (born 1939), president of Bolivia (1989-) **12** 165-167

**PÁZMÁNY, PÉTER** (1570-1637), Hungarian archbishop **12** 164-165

**PEABODY, ELIZABETH PALMER** (1804-1894), American educator and author **12** 167-168

**PEABODY, GEORGE** (1795-1869), American merchant, financier, and philanthropist **12** 168

**PEACOCK, THOMAS LOVE** (1785-1866), English novelist and satirist **12** 169

**PEALE, CHARLES WILLSON** (1741-1827), American painter and scientist **12** 169-171

**PEALE, NORMAN VINCENT** (1898-1993), American religious leader who blended psychotherapy and religion **12** 171-172

**PEALE, REMBRANDT** (1778-1860), American painter **12** 172-173

**PEARSE, PATRICK HENRY** (1879-1916), Irish poet, educator, and revolutionary **12** 173-174

**PEARSON, LESTER BOWLES** (1897-1972), Canadian statesman and diplomat, prime minister **12** 174-175

**PEARY, ROBERT EDWIN** (1856-1920), American explorer **12** 175-176

**PECHSTEIN, HERMANN MAX** (1881-1955), German Expressionist painter and graphic artist **12** 176-177

**PECK, ROBERT NEWTON** (born 1928), American author of children's literature **12** 177-178

**PECKINPAH, SAM** (1925-1984), American film director **21** 338-340

**PEDRARIAS** (Pedro Arias de Ávila; circa 1440-1531), Spanish conqueror and colonial governor **12** 179

**PEDRO I** (1798-1834), emperor of Brazil and king of Portugal **12** 179-180

**PEDRO II** (1825-1891), emperor of Brazil 1831-89 **12** 180-181

**PEEL, SIR ROBERT** (1788-1850), English statesman, prime minister 1834-35 and 1841-46 **12** 181-183

**PÉGUY, CHARLES PIERRE** (1873-1914), French poet **12** 183-184

**PEI, I. M.** (Ieoh Ming Pei; born 1917), Chinese-American architect **12** 184-187

**PEIRCE, BENJAMIN** (1809-1880), American mathematician **21** 340-342

**PEIRCE, CHARLES SANDERS** (1839-1914), American scientist and philosopher **12** 187-188

**PEIXOTO, FLORIANO** (1839-1895), Brazilian marshal, president 1891-94 **12** 188-189

**PELAGIUS** (died circa 430), British theologian **12** 189-190

**PELE** (Edson Arantes Do Nascimento Pele; born 1940), Brazilian soccer player **12** 190-191

**PELLI, CESAR** (born 1926), Hispanic American architect and educator **12** 191-192

**PELTIER, LEONARD** (born 1944), Native American activist **12** 193-195

**PENDERECKI, KRZYSZTOF** (born 1933), Polish composer **12** 195-197

**PENDLETON, EDMUND** (1721-1803), American political leader **12** 197-198

**PENDLETON, GEORGE HUNT** (1825-1889), American politician **12** 198

**PENFIELD, WILDER GRAVES** (1891-1976), Canadian neurosurgeon **12** 198-200

**PENN, WILLIAM** (1644-1718), English Quaker, founder of Pennsylvania **12** 200-202

**PENNEY, J. C.** (James Cash Penney; 1875-1971), American chain store executive and philanthropist **12** 202-203

**PENROSE, BOIES** (1860-1921), American senator and political boss **12** 203-204

**PENROSE, ROGER** (born 1931), British mathematician and physicist **12** 204-205

**PENSKE, ROGER** (born 1937), American businessman and race car team owner **19** 280-282

**PEP, WILLIE** (William Guiglermo Papaleo; born 1922), American boxer **21** 342-344

**PEPPER, CLAUDE DENSON** (1900-1989), Florida attorney, state representative, U.S. senator, and U.S. representative **12** 205-206

**PEPPERELL, SIR WILLIAM** (1696-1759), American merchant and soldier **12** 206-207

**PEPYS, SAMUEL** (1633-1703), English diarist **12** 207-208

**PERCY, WALKER** (1916-1990), American author **19** 282-284

**PEREGRINUS, PETRUS** (flourished 1261-69), French scholastic and scientist **12** 208

**PERELMAN, S. J.** (Sidney Jerome Perelman; 1904-1979), American cartoonist, satirist, and parodist **12** 209-210

**PERES, SHIMON** (born 1923), head of the Israel Labour Party and Israeli prime minister (1984-1986) **12** 210-211

**PERETZ, ISAAC LOEB** (1851-1915), Jewish poet, novelist, and playwright **12** 212

**PÉREZ, CARLOS ANDRÉS** (born 1922), president of Venezuela (1989-1993) **12** 212-214

**PÉREZ DE CUELLAR, JAVIER** (born 1920), Peruvian foreign service officer and secretary general of the United Nations (1982-) **12** 214-215

**PÉREZ ESQUIVEL, ADOLFO** (born 1931), Argentine artist and human rights activist **12** 215-217

**PÉREZ JIMENEZ, MARCOS** (born 1914), Venezuelan dictator **12** 217-218

**PERGOLESI, GIOVANNI BATTISTA** (1710-1736), Italian composer **12** 218-219

**PERICLES** (circa 495-429 B.C.), Athenian statesman **12** 219-221

**PERKINS, FRANCES** (1882-1965), American statesman and social worker **12** 221-222

**PERKINS, GEORGE WALBRIDGE** (1862-1920), American businessman and banker **21** 344-347

**PERKINS, WILLIAM MAXWELL EVARTS** (1884-1947), American editor of fiction who discovered and developed brilliant authors **12** 222-223

**PERLE, GEORGE** (born 1915), American musician **12** 223-224

**PERLMAN, ITZHAK** (born 1945), American musician **18** 318-320

**PERÓN, EVA (MARÍA) DUARTE DE** (1919-1952), the second wife and political partner of President Juan Perón of Argentina **12** 225-226

**PERÓN, ISABEL MARTINEZ DE** (born 1931), first woman president of Argentina (1974-1976) **12** 226-228

**PERÓN, JUAN DOMINGO** (1895-1974), Argentine statesman, president 1946-55 **12** 228-230

**PEROT, HENRY ROSS** (born 1930), American businessman and activist **12** 230-231

**PÉROTIN** (Perotinus; flourished circa 1185-1205), French composer and musician **12** 231-232

**PERRAULT, CLAUDE** (1613-1688), French scientist and architect **12** 232-233

**PERRET, AUGUSTE** (1874-1954), French architect **12** 233

**PERRIN, JEAN BAPTISTE** (1870-1942), French physicist **12** 233-236

**PERRY, HAROLD ROBERT** (1916-1991), African American Roman Catholic bishop **12** 236-237

**PERRY, MATTHEW CALBRAITH** (1794-1858), American naval officer **12** 237-239

**PERRY, OLIVER HAZARD** (1785-1819), American naval officer **12** 239

**PERRY, RALPH BARTON** (1876-1957), American philosopher **12** 239-240

**PERRY, WILLIAM JAMES** (born 1927), President Clinton's secretary of defense (1994-) **12** 240-242

**PERSE, SAINT-JOHN** (Alexis Saint-Léger Léger; 1887-1975), French poet and diplomat **12** 242-243

**PERSHING, JOHN JOSEPH** (1860-1948), American general **12** 243-244

**PERTH, 16TH EARL OF** (James Eric Drummond; 1876-1951), English statesman **12** 244-245

**PERUGINO** (circa 1450-1523), Italian painter **12** 245-246

**PERUTZ, MAX** (born 1914), English crystallographer and biochemist **12** 246-248

**PESOTTA, ROSE** (1896-1965), American union organizer **12** 248-249

**PESTALOZZI, JOHANN HEINRICH** (1746-1827), Swiss educator **12** 249-250

**PÉTAIN, HENRI PHILIPPE** (1856-1951), French general and statesman **12** 250-252

**PETER I** (Peter the Great; 1672-1725), czar of Russia 1682-1725 **12** 253-256

**PETER I** (1844-1921), king of Serbia 1903-18, and of the Serbs, Croats, and Slovenes 1918-21 **12** 256

**PETER III** (Pedro; circa 1239-85), king of Aragon 1276-85 **12** 256-257

**PETER, ST.** (died circa 65), Apostle and bishop of Rome **12** 252-253

**PETERS, CARL** (1856-1918), German explorer and colonizer **12** 257-258

**PETERSON, EDITH R.** (born Edith Elizabeth Runne; 1914-1992), American medical researcher **12** 258-259

**PETO, JOHN FREDERICK** (1854-1907), American painter **12** 259

**PETRARCH** (Francesco Petrarca; 1304-74), Italian poet **12** 259-261

**PETRIE, SIR WILLIAM MATTHEW FLINDERS** (1853-1942), English archaeologist **12** 261-262

**Petroleum industry**  
see Oil industry

**PETRONIUS ARBITER** (died circa 66), Roman author **12** 262-263

**PEVSNER, ANTOINE** (1886-1962), Russian sculptor and painter **12** 263-264

**PHAEDRUS** (c. 15 BC-c. 50), Greek/Roman fabulists **20** 296-297

**Pharmaceutical industry**  
Squibb, Edward Robinson **21** 390-392

**Pharmacology** (science)  
Hahnemann, Samuel **21** 190-193  
Sertürner, Friedrich **21** 379-381  
Squibb, Edward Robinson **21** 390-392

**PHIBUN SONGKHRAM, LUANG** (1897-1964), Thai statesman, prime minister 1938-44 and 1948-57 **12** 264-265

**PHIDIAS** (flourished circa 475-425 B.C.), Greek sculptor **12** 265-267

**Philanthropists, American**  
19th-20th century  
Flagler, Henry **21** 135-137  
20th century  
Guggenheim, Daniel **21** 185-187

**Philanthropists, English**  
Harvard, John **21** 195-197

**PHILIDOR, FRANÇOIS-ANDRÉ** (François-André Danican-Philidor; 1726-1795), French composer and chess player **21** 347-349

**PHILIP** (died 1676), American Wampanoag Indian chief 1662-76 **12** 267-268

**PHILIP II** (382-336 B.C.), king of Macedon 359-336 **12** 269-271

**PHILIP II** (Philip Augustus; 1165-1223), king of France 1180-1223 **12** 268-269

**PHILIP II** (1527-1598), king of Spain 1556-1598 **12** 271-273

**PHILIP III** (1578-1621), king of Spain 1598-1621 **12** 273-274

**PHILIP IV** (the Fair; 1268-1314), king of France 1285-1314 **12** 274

**PHILIP IV** (1605-1665), king of Spain 1621-65 **12** 275

**PHILIP V** (1683-1746), king of Spain 1700-46 **12** 276-277

**PHILIP VI** (1293-1350), king of France 1328-50 **12** 277-278

**PHILIP THE GOOD** (1396-1467), duke of Burgundy 1419-67 **12** 278-279

**Philippe Égalité** (1747-1793), Duc d'Orleans  
Leblanc, Nicolas **21** 256-258

**PHILLIP, ARTHUR** (1738-1814), English governor of New South Wales **12** 279-280

**PHILLIPS, DAVID GRAHAM** (1867-1911), American journalist and novelist **12** 280-281

**PHILLIPS, WENDELL** (1811-1884), American abolitionist and social reformer **12** 281-282

**Philology** (social science)  
Marsh, George Perkins **21** 275-277

**Philosophers, Indian** (Asia)  
Ramanuja **21** 361-362

**Philosophy**  
Vishistadvaita Vendata  
Ramanuja **21** 361-362

**PHIPS, SIR WILLIAM** (1650/51-95), American shipbuilder and colonial governor **12** 283

**Phosphorous** (chemistry)  
Marggraf, Andreas **21** 273-275

**PHOTIUS** (circa 820-891), Byzantine patriarch **12** 283-284

**Photography**  
as art form  
Muybridge, Eadweard **21** 305-308  
Struss, Karl **21** 398-399  
Toland, Gregg **21** 405-407  
film  
Bitzer, Billy **21** 36-38  
Muybridge, Eadweard **21** 305-308  
invention and equipment  
Muybridge, Eadweard **21** 305-308

**Photo-Secession** (photography society)  
Struss, Karl **21** 398-399

**PHYFE, DUNCAN** (1768-1854), American cabinetmaker **12** 284-285

**PIAF, EDITH** (Edith Giovanna Gassion; 1915-63), French music hall/cabaret singer **12** 285-287

**PIAGET, JEAN** (1896-1980), Swiss psychologist and educator **12** 287-288

**PIANKHI** (ruled circa 741-circa 712 B.C.), Nubian king **12** 288-289

**Piano** (musical instrument)  
Cristofori, Bartolomeo **21** 94-96

**PIANO, RENZO** (born 1937), Italian architect, lecturer, and designer **12** 289-291

**PICABIA, FRANCIS** (1879-1953), French artist, writer, and bon vivant **12** 291-292

**PICASSO, PABLO** (1881-1973), Spanish painter, sculptor, and graphic artist **12** 292-295

**PICASSO, PALOMA** (born 1949), Spanish fashion designer **12** 295-297

**PICCARD, AUGUSTE** (1884-1962), Swiss scientist **12** 297-298

**PICCARD, JACQUES ERNEST JEAN** (born 1922), Swiss explorer, scientist, oceanographer, and engineer **18** 320-322

**PICKENS, THOMAS BOONE JR.** (T. Boone Pickens; born 1928), American businessman **19** 284-286

**PICKERING, EDWARD CHARLES** (1846-1919), American astronomer **12** 298

**PICKERING, TIMOTHY** (1745-1829), American Revolutionary soldier and statesman **12** 298-299

**PICKETT, BILL** (1870-1932), American rodeo cowboy **19** 286-288

**PICKFORD, MARY** (Gladys Louise Smith; 1893-1979), Canadian-American actress, screenwriter, and film producer **19** 288-290

**PICO DELLA MIRANDOLA, CONTE GIOVANNI** (1463-1494), Italian philosopher and humanist **12** 299-300

**PIERCE, FRANKLIN** (1804-1869), American statesman, president 1853-57 **12** 300-301

**PIERCE, JOHN ROBINSON** (born 1910), American electronics engineer and author **21** 349-351

**PIERO DELLA FRANCESCA** (circa 1415/20-92), Italian painter **12** 301-302

**PIGOU, ARTHUR CECIL** (1877-1959), English economist **12** 302

**PIKE, ZEBULON** (1779-1813), American soldier and explorer **12** 302-304

**PILLSBURY, CHARLES ALFRED** (1842-1899), American businessman **12** 304

**PILON, GERMAIN** (circa 1535-90), French sculptor **12** 305

**PILSUDSKI, JOSEPH** (1867-1935), Polish general, president 1918-21 **12** 305-306

**PINCHBACK, PINCKNEY BENTON STEWART** (1837-1921), African American politician **12** 306-308

**PINCHOT, GIFFORD** (1865-1946), American conservationist and public official **12** 308-309

**PINCKNEY, CHARLES** (1757-1824), American politician and diplomat **12** 309-310

**PINCKNEY, CHARLES COTESWORTH** (1745-1825), American statesman **12** 310

**PINCUS, GREGORY GOODWIN** (1903-1967), American biologist **12** 310-312

**PINDAR** (552/518-438 B.C.), Greek lyric poet **12** 312-313

**PINEL, PHILIPPE** (1745-1826), French physician **12** 313-314

**PINERO, ARTHUR WING** (1855-1934), English playwright **18** 322-324

**PINKERTON, ALLEN** (1819-1884), American detective **12** 314-315

**PINKHAM, LYDIA ESTES** (1819-1883), American patent medicine manufacturer **21** 351-353

**PINOCHET UGARTE, AUGUSTO** (born 1915), Chilean military leader and dictator **12** 315-317

**PINTER, HAROLD** (born 1930), English playwright **12** 317-318

**PINTO, ISAAC** (1720-1791), Jewish merchant and scholar **12** 318

**PIO, PADRE** (Francesco Forgione; 1887-1968), Italian priest **20** 297-299

**PIPPIN, HORACE** (1888-1946), African American painter **12** 318-319

**PIRANDELLO, LUIGI** (1867-1936), Italian playwright novelist, and critic **12** 319-321

**PIRANESI, GIOVANNI BATTISTA** (1720-1778), Italian engraver and architect **12** 321-322

#### Pirates

Blackbeard **21** 38-41  
Kidd, William **21** 242-244

**PIRENNE, JEAN HENRI** (Jean Henri Otto Lucien Marie Pirenne; 1862-1935), Belgian historian **12** 322-323

**PISANELLO** (Antonio Pisano; before 1395-1455), Italian painter and medalist **12** 323-324

**PISANO, GIOVANNI** (circa 1250-1314/17), Italian sculptor **12** 324-325

**PISANO, NICOLA** (Nicola d'Apulia; circa 1220/25-1278/84), Italian sculptor **12** 325

**PISSARO, CAMILLE** (1830-1903), French painter **12** 326-327

**PISTON, WALTER** (born 1894), American composer **12** 327-328

**PITT, WILLIAM, THE ELDER** (1708-1778), English statesman **12** 328-329

**PITT, WILLIAM, THE YOUNGER** (1759-1806), English statesman **12** 329-331

**PIUS II** (Enea Silvio de'Piccolomini; 1405-64), pope 1458-64 **12** 331

**PIUS IV** (Giovanni Angelo de' Medici; 1499-1565), pope 1559-65 **12** 332

**PIUS V** (Antonio Ghislieri; 1504-72), pope 1566-72 **12** 332-333

**PIUS VI** (Gianangelo Braschi; 1717-99), pope 1775-99 **12** 333-334

**PIUS VII** (Luigi Barnabà Chiaramonti; 1740-1823), pope 1800-23 **12** 334-335

**PIUS IX** (Giovanni Maria Mastai-Ferretti; 1792-1878), pope 1846-78 **12** 335-336

**PIUS X** (Giuseppe Melchiorre Sarto; 1835-1914), pope 1903-14 **12** 336-337

**PIUS XI** (Ambrogio Damiano Achille Ratti; 1857-1939), pope 1922-39 **12** 337-339

**PIUS XII** (Eugenio Maria Giuseppe Pacelli; 1876-1958), pope 1939-58 **12** 339-340

**PIZARRO, FRANCISCO** (circa 1474-1541), Spanish conquistador in Peru **12** 340-341

**PLAATJE, SOLOMON TSHEKISHO** (1878-1932), South African writer **12** 341-342

**PLANCK, MAX KARL ERNST LUDWIG** (1858-1947), German physicist **12** 342-344

**Plant breeding** (botany)  
Chapman, John **21** 77-78

**Plant classification** (botany)  
Rafinesque, Constantine Samuel **21** 359-361

**Plastic, development of**  
Parkes, Alexander **21** 334-336

**PLATH, SYLVIA** (1932-1963), American poet and novelist **12** 344-345

**PLATO** (428-347 B.C.), Greek philosopher **12** 345-347

**PLATT, THOMAS COLLIER** (1833-1910), American politician **12** 347-348

**PLAUTUS** (circa 254-circa 184 B.C.), Roman writer **12** 348-350

**PLAZA LASSO, GALO** (1906-1987), Ecuadorian statesman **12** 350-351

**PLEKHANOV, GEORGI VALENTINOVICH** (1856-1918), Russian revolutionist and social philosopher **12** 351-352

**PLENTY COUPS** (c. 1848-1932), Native American tribal leader and Crow chief **12** 352-355

**PLINY THE ELDER** (23/24-79), Roman encyclopedist **12** 355-356

**PLINY THE YOUNGER** (circa 61-circa 113), Roman author and administrator **12** 356

**PLISETSKAYA, MAYA MIKHAILOVNA** (born 1925), Russian ballet dancer **12** 356-358

**PLOTINUS** (205-270), Greek philosopher, founder of Neoplatonism **12** 358-359



**PLUTARCH** (circa 46-circa 120), Greek biographer **12** 359-360

**PO CHÜ-I** (772-846), Chinese poet **12** 362-363

**POBEDONOSTSEV, KONSTANTIN PETROVICH** (1827-1907), Russian statesman and jurist **12** 360-361

**POCAHONTAS** (circa 1595-1617), American Indian princess **12** 361-362

**POE, EDGAR ALLAN** (1809-1849), American writer **12** 363-365  
films based on works by  
Corman, Roger **21** 87-89

**POINCARÉ, JULES HENRI** (1854-1912), French mathematician **12** 365-366

**POINCARÉ, RAYMOND** (1860-1934), French statesman **12** 366-368

**POIRET, PAUL** (1879-1944), French fashion designer **19** 291-293

**POITIER, SIDNEY** (born 1927), African American actor and director **12** 368-370

**POL POT** (1928-1998), Cambodian Communist and premier of Democratic Kampuchéa (1976-1979) **12** 382-384

**POLANYI, JOHN CHARLES** (born 1929), Canadian scientist and Nobel Prize winner **12** 370-372

**POLANYI, KARL** (1886-1964), Hungarian economic historian **12** 372

**POLANYI, MICHAEL** (1891-1976), Hungarian medical doctor, physical chemist, social thinker, and philosopher **12** 372-373

**Politburo**  
see Statesmen, Russian

**POLIZIANO, ANGELO** (Politian; 1454-94), Italian poet **12** 373-374

**POLK, JAMES KNOX** (1795-1849), American statesman, president 1845-49 **12** 374-376

**POLK, LEONIDAS LAFAYETTE** (1837-1892), American agrarian crusader and editor **12** 376-377

**POLLAIUOLO, ANTONIO** (circa 1432-98), Italian painter, sculptor, goldsmith, and engraver **12** 377-378

**POLLARD, ALBERT FREDERICK** (1869-1948), English historian **12** 378

**POLLOCK, JACKSON** (1912-1956), American painter **12** 379-380

**POLO, MARCO** (circa 1254-circa 1324), Venetian traveler and writer **12** 380-382

**POLYBIOS** (circa 203-120 B.C.), Greek historian **12** 384-385

**POLYKLEITOS** (flourished circa 450-420 B.C.), Greek sculptor **12** 385-386

**POMBAL, MARQUÊS DE** (Sebastião José de Carvalho e Mello; 1699-1782), Portuguese statesman **12** 386-387

**POMPEY** (106-48 B.C.), Roman general and statesman **12** 387-389

**POMPIDOU, GEORGES** (1911-1974), second president of the French Fifth Republic (1969-1974) **12** 389-390

**POMPONAZZI, PIETRO** (1462-1525), Italian Aristotelian philosopher **12** 390-391

**PONCE DE LEÓN, JUAN** (1460?-1521), Spanish conqueror and explorer **12** 391-392

**PONIATOWSKA, ELENA** (born 1933), Mexican journalist, novelist, essayist, and short-story writer **12** 392-393

**PONTIAC** (circa 1720-69), Ottawa Indian chief **12** 393-394

**PONTORMO** (1494-1556), Italian painter **12** 394-395

**POPE, ALEXANDER** (1688-1744), English poet and satirist **12** 395-397

**POPE, JOHN RUSSELL** (1874-1937), American architect in the classical tradition **12** 397-399

**POPHAM, WILLIAM JAMES** (born 1930), American educator active in educational test development **12** 399-401

**POPOVA, LIUBOV SERGEEVNA** (1889-1924), Russian and Soviet avant-garde artist **12** 401-402

**POPPER, SIR KARL RAIMUND** (1902-1994), Austrian philosopher **12** 402

**PORSCHÉ, FERDINAND SR.** (1875-1951), Austrian German automobile designer and engineer **19** 293-295

**PORTA, GIACOMO DELLA** (circa 1537-1602), Italian architect **12** 402-403

**PORTA, GIAMBATTISTA DELLA** (1535-1615), Italian scientist and dramatist **12** 403-404

**PORTALES PLAZAZUELOS, DIEGO JOSÉ VÍCTOR** (1793-1837), Chilean statesman **12** 404

**PORTER, COLE ALBERT** (1891-1964), American composer **12** 405-406  
Merman, Ethel **21** 295-297

**PORTER, EDWIN STRATTON** (1870-1941), American filmmaker **20** 299-301

**PORTER, KATHERINE ANNE** (1890-1980), American writer **12** 406-407

**PORTINARI, CÂNDIDO** (1903-1962), Brazilian painter **12** 407-408

**PORTOLÁ, GASPAR DE** (circa 1723-1784), Spanish explorer and colonial governor **12** 408

**Portugal** (Portuguese Republic; nation, Europe)

- **EMPIRE and DECLINE**  
colonization (Africa)  
John II **21** 223-225  
colonization (India)  
John II **21** 223-225  
exploration (North America)  
John II **21** 223-225

**PORTZAMPARC, CHRISTIAN DE** (born 1944), French architect **18** 324-326

**POST, CHARLES WILLIAM** (1854-1914), American pioneer in the manufacture and mass-marketing of breakfast cereals **12** 408-409

**POST, EMILY PRICE** (1873-1960), American authority on etiquette **12** 409-410

**Postal service**  
Hill, Rowland **21** 202-204

**Postmasters general**  
see Statesmen, American

**POTEMKIN, GRIGORI ALEKSANDROVICH** (1739-1791), Russian administrator and field marshal **12** 411-412

**POTTER, BEATRIX** (Helen Beatrix Potter; 1866-1943), English author and illustrator **18** 326-328

**POTTER, DAVID M.** (1910-1971), American historian **12** 412

**POTTER, DENNIS** (1935-1994), British essayist, playwright, screenwriter, and novelist **12** 412-414

**POULENC, FRANCIS** (1899-1963), French composer **12** 414-415

**POUND, EZRA LOOMIS** (1885-1972), American poet, editor, and critic **12** 415-417

**POUND, ROSCOE** (1870-1964), American jurist and botanist **12** 417-418

**POUSSIN, NICOLAS** (1594-1665), French painter **12** 418-420

**POWDERLY, TERENCE VINCENT** (1849-1924), American labor leader **12** 420-421

**POWELL, ADAM CLAYTON, JR.** (1908-1972), African American political leader and Baptist minister **12** 421-422

**POWELL, ANTHONY** (1905-2000), English novelist **12** 422-423

**POWELL, COLIN LUTHER** (born 1937), African American chairman of the Joint Chiefs of Staff **12** 424-425

**POWELL, JOHN WESLEY** (1834-1902), American geologist, anthropologist, and explorer **12** 425-426

**POWELL, LEWIS F., JR.** (1907-1998), U.S. Supreme Court justice (1972-1987) **12** 426-428

**POWERS, HIRAM** (1805-1873), American sculptor **12** 428-429

**POWHATAN** (circa 1550-1618), Native American tribal chief **12** 429-430

**PRADO UGARTECHE, MANUEL** (1889-1967), Peruvian statesman **12** 430-431

**PRÆTORIUS, MICHAEL** (circa 1571-1621), German composer and theorist **12** 431-432

**PRAN, DITH** (born 1942), Cambodian American journalist and activist **18** 328-331

**PRANDTAUER, JAKOB** (1660-1726), Austrian baroque architect **12** 432

**PRASAD, RAJENDRA** (1884-1963), Indian nationalist, first president of the Republic **12** 433

**PRAXITELES** (flourished circa 370-330 B.C.), Greek sculptor **12** 433-434

**PREBISCH, RAÚL** (1901-1986), Argentine economist active in the United Nations **12** 434-436

**PREGL, FRITZ** (1869-1930), Austrian physiologist and medical chemist **12** 436-437

**PREM TINSULANONDA** (born 1920), military leader and prime minister of Thailand (1979-1988) **12** 437

**PREMADASA, RANASINGHE** (born 1924), president of Sri Lanka (1988-) **12** 437-439

**PREMCHAND** (1880-1936), Indian novelist and short-story writer **12** 439

**PREMINGER, OTTO** (1895-1986), Austrian filmmaker and theater producer/director **18** 331-332

**PRENDERGAST, MAURICE BRAZIL** (1859-1924), American painter **12** 440

**PRESCOTT, WILLIAM HICKLING** (1796-1859), American historian **12** 440-441

**Presidium**  
see Statesmen, Russian

**PRESLEY, ELVIS ARON** (1935-1977), American singer and actor **12** 441-442

**PRESTES, LUIZ CARLOS** (1898-1990), Brazilian revolutionary and Communist leader **12** 442-444

**PRETORIUS, ANDRIES** (1798-1853), South African politician and general **12** 444-445

**PREVIN, ANDRE** (Andreas Ludwig Priwin; born 1929), German American composer and conductor **18** 333-334

**PRÉVOST, ABBÉ** (1697-1763), French novelist, journalist, and cleric **12** 445-446

**PRICE, LEONTYNE** (Mary Leontyne Price; born 1927), American prima donna soprano **12** 446-447

**PRICE, RICHARD** (1723-1791), English Nonconformist minister and political philosopher **12** 447-448

**PRICHARD, DIANA GARCÍA** (born 1949), Hispanic American chemical physicist **12** 448-449

**PRIDI PHANOMYONG** (1901-1983), Thai political leader **12** 449

**PRIEST, IVY MAUDE BAKER** (1905-1975), treasurer of the United States (1953-1960) **12** 450-451

**PRIESTLEY, J(OHN) B(OYNTON)** (1894-1984), English author of novels, essays, plays, and screenplays **12** 451-452

**PRIESTLEY, JOSEPH** (1733-1804), English clergyman and chemist **12** 452-453

**PRIMATICCIO, FRANCESCO** (1504-1570), Italian painter, sculptor, and architect **12** 453-454

**PRIMO DE RIVERA Y ORBANEJA, MIGUEL** (1870-1930), Spanish general, dictator 1923-30 **12** 454-455

**PRINCE, HAL** (Harold Smith Prince; born 1928), American theatrical producer and director **19** 295-298

**PRINCIP, GAVRILO** (1894-1918), Serbian nationalist and assassin **21** 353-355

**Printing**  
Aldus Manutius **21** 3-5  
Hill, Rowland **21** 202-204

**PRITCHETT, V(ICTOR) S(AWDON)** (born 1900), English short story writer, novelist, literary critic, journalist, travel writer, biographer, and autobiographer **12** 455-457

**Prizefighters**  
see Athletes, American

**Probability** (mathematics)  
20th-century works  
Neyman, Jerzy **21** 316-318

**PROCLUS DIADOCHUS** (born 410), Byzantine philosopher **12** 457

**PROCOPIUS OF CAESAREA** (circa 500-circa 565), Byzantine historian **12** 457-458

**PROCTER, WILLIAM COOPER** (1862-1934), American businessman **19** 298-300

**Progressive party** (United States)  
Perkins, George Walbridge **21** 344-347

**PROKOFIEV, SERGEI SERGEEVICH** (1891-1953), Russian composer **12** 458-460

**Prophets**  
see Bible—Old Testament

**PROSSER, GABRIEL** (circa 1775-1800), Afro-American slave rebel **12** 460-461

**PROTAGORAS** (circa 484-circa 414 B.C.), Greek philosopher **12** 461

**PROUDHON, PIERRE JOSEPH** (1809-1864), French anarchist political philosopher and journalist **12** 461-463

**PROULX, E. ANNIE** (born 1935), American author **12** 463-465

**PROUST, MARCEL** (1871-1922), French novelist **12** 465-467

**PROXMIRE, WILLIAM** (born 1915), Democratic senator for Wisconsin **12** 467-468

**PRUD'HON, PIERRE PAUL** (1758-1823), French painter **12** 469

**PRYOR, RICHARD** (born 1940), American entertainer **19** 300-302

**PRZHEVALSKY, NIKOLAI MIKHAILOVICH** (1839-1888), Russian general and traveler **12** 469-470

**Psychology** (social science)  
and worker productivity  
Gilbreth, Frank **21** 162-163

**Psychometry**  
see Psychology—testing

**PTOLEMY I** (367/366-283 B.C.), Macedonian general, king of Egypt 323-285 **12** 470-472

**PTOLEMY II** (308-246 B.C.), king of Egypt 285-246 **12** 472-473

**PTOLEMY, CLAUDIUS** (circa 100-circa 170), Greek astronomer and geographer **12** 473-474

**Public Enemy, The** (film)  
Cagney, James **21** 68-71

**Public Health** (medicine)  
Folks, Homer **21** 137-140  
Ramazzini, Bernardino **21** 362-364

**Public relations industry**  
Hays, Will **21** 197-199  
Johnson, Rafer **21** 225-227

**Public school** (United States)  
see Education (United States)

**Publishers**  
Italian

Aldus Manutius **21** 3-5

**Publishers, American**  
journals

Squibb, Edward Robinson **21**  
390-392

magazines

Gregg, John Robert **21** 178-180

newspapers

Sholes, Christopher Latham **21**  
383-385

**PUCCINI, GIACOMO** (1858-1924),  
Italian composer **12** 474-476

**PUFENDORF, BARON SAMUEL VON**  
(1632-1694), German jurist and  
historian **12** 477-478

**PUGACHEV, EMELYAN IVANOVICH**  
(1742-1775), Russian Cossack soldier  
**12** 478-479

**PUGIN, AUGUSTUS WELBY**  
**NORTHMORE** (1812-1852), English  
architect **12** 479-480

**PULASKI, CASIMIR** (1747/48-79), Polish  
patriot **12** 480-481

**PULCI, LUIGI** (1432-1484), Italian poet  
**12** 481

**PULITZER, JOSEPH** (1847-1911),  
American editor and publisher **12**  
481-482

**PULLMAN, GEORGE MORTIMER** (1831-  
1897), American industrial innovator  
**12** 482-483

**PUPIN, MICHAEL IDVORSKY** (1858-  
1935), Serbo-American physicist and  
inventor **12** 483-484

**PURCELL, HENRY** (1659-1695), English  
composer and organist **12** 484-485

**Puritanism** (religion)

New England

Harvard, John **21** 195-197

**PURVIS, ROBERT** (1810-1898), African  
American abolitionist **12** 485-486

**PURYEAR, MARTIN** (born 1941), African  
American artist **12** 486-487

**PUSEY, EDWARD BOUVERIE** (1800-  
1882), English clergyman and scholar  
**12** 488-489

**PUSHKIN, ALEKSANDR SERGEEVICH**  
(1799-1837), Russian poet and prose  
writer **12** 489-491

**PUTIN, VLADIMIR** (born 1952), Russian  
president **21** 355-358

**PUTNAM, ISRAEL** (1718-1790),  
American Revolutionary War general  
**12** 491-492

**PUVIS DE CHAVANNES, PIERRE** (1824-  
1898), French painter **12** 492-493

**PYLE, ERNIE** (Earnest Taylor Pyle; 1900-  
1945), American war correspondent  
during World War II **12** 493-494

**PYM, FRANCIS** (Francis Leslie Pym; born  
1922), British statesman **12** 494-495

**PYM, JOHN** (1584-1643), English  
statesman **12** 495-496

**PYNCHON, THOMAS** (Thomas Ruggles  
Pynchon, Jr.; born 1937), American  
writer **12** 496-498

**PYTHAGORAS** (circa 575-circa 495  
B.C.), Greek philosopher, scientist, and  
religious teacher **12** 498-499

**PYTHEAS** (c. 380 B.C.-c. 300 B.C.),  
Greek explorer **12** 499-500

## Q

**QABOOS IBN SA'ID** (born 1940), ruler  
of the Sultanate of Oman **12** 501-502

**QIANLONG** (Ch'ien-lung and Hung-li;  
1711-1799), Chinese emperor **12**  
502-505

**QUANT, MARY** (born 1934), British  
fashion designer and businesswoman  
**19** 303-305

**QUASIMODO, SALVATORE** (1901-  
1968), Italian poet, translator, and  
critic **12** 506

**QUAY, MATTHEW STANLEY** (1833-  
1904), American politician **12** 507

**QUAYLE, J(AMES) DANFORTH** (born  
1947), vice president under George  
Bush **12** 507-509

**QUERCIA, JACOPO DELLA** (1374?-  
1438), Italian sculptor and architect **12**  
509

**QUÉTELET, LAMBERT ADOLPHE**  
**JACQUES** (1796-1874), Belgian  
statistician and astronomer **12** 510-511

**QUEVEDO Y VILLEGAS, FRANCISCO**  
**GÓMEZ DE** (1580-1645), Spanish  
poet, satirist, and novelist **12** 511

**QUEZON, MANUEL LUIS** (1878-1944),  
Philippine statesman **12** 511-513

**QUINE, WILLARD VAN ORMAN** (born  
1908), American philosopher **12**  
514-515

**QUINN, ANTHONY** (Antonio Rudolph  
Oaxaca Quinn; born 1915), Hispanic  
American actor and artist **20** 302-304

**QUINTILIAN** (circa 35-circa 99), Roman  
rhetorician and literary critic **12**  
518-519

**QUIRINO, ELPIDIO** (1890-1956),  
Philippine statesman **12** 519-520

**QUIROGA, HORACIO** (1878-1937),  
Uruguayan writer **12** 520-521

**QUIROGA, JUAN FACUNDO** (1788/  
1790-1835), Argentine caudillo **12**  
521-522

**QUISLING, VIDKIN** (1887-1945),  
Norwegian traitor **20** 304-306

## R

**RABEARIVelo, JEAN JOSEPH** (1901-  
1937), Malagasy poet **12** 523-524

**RABELAIS, FRANÇOIS** (circa 1494-circa  
1553), French humanist, doctor, and  
writer **12** 524-526

**RABI, ISIDOR ISAAC** (1898-1988),  
American physicist **12** 526-527

**RABIN, YITZCHAK** (1922-1995), Israeli  
statesman **12** 527-529

**RACHMANINOV, SERGEI VASILIEVICH**  
(1873-1943), Russian composer,  
pianist, and conductor **12** 531-532

**RACINE, JEAN BAPTISTE** (1639-1699),  
French dramatist **12** 532-535

**RADCLIFFE-BROWN, A(LFRED)**  
**REGINALD** (1881-1955), English  
anthropologist **12** 535-536

**RADEK, KARL BERNARDOVICH** (1885-  
1939), Russian Communist leader **12**  
536-537

**RADHAKRISHNAN, SARVEPALLI** (1888-  
1995), Indian philosopher and  
statesman **12** 537-538

**RADIN, PAUL** (1883-1959), American  
anthropologist and ethnographer **12**  
538-539

**Radio** (communications)  
personalities  
Herrmann, Bernard **21** 199-202

**Radio astronomy** (science)  
Reber, Grote **21** 364-366

**Radio Corporation of America** (RCA)  
Lasker, Albert **21** 251-254

**RADISSON, PIERRE-ESPRIT** (circa 1636-  
1710), French explorer **12** 539-540

**RAFFLES, SIR THOMAS STAMFORD**  
(1781-1826), English colonial  
administrator **13** 1-2

**RAFINESQUE, CONSTANTINE SAMUEL**  
(1783-1840), French naturalist **21**  
359-361

**RAFSANJANI, AKBAR HASHEMI** (born  
1934), president of Iran **13** 3-4

**RAHNER, KARL** (1904-1984), German  
Catholic theologian **13** 4-5

**RAI, LALA LAJPAT** (1865-1928), Indian nationalist leader **13** 5-6

**Railroads** (United States)  
economics and statistics  
Fink, Albert **21** 133-135

**RAINEY, MA** (Gertrude Pridgett; 1886-1939), American singer **19** 306-308

**RAINIER III, PRINCE OF MONACO**  
(born 1923), ruler of the principality of Monaco **18** 335-337

**RAJAGOPALACHARI, CHAKRAVARTI**  
(1879-1972), Indian nationalist leader **13** 6-7

**RAJARAJA I** (985-1014), Indian statesman **13** 7

**RAJNEESH, BHAGWAN SHREE**  
(Rahneesh Chandra Mohan; 1931-1990), Indian religious leader **13** 7-9

**RALEIGH, SIR WALTER** (or Raleigh; circa 1552-1618), English statesman, soldier, courtier, explorer, and poet **13** 9-11

**RAMA KHAMHAENG** (circa 1239-circa 1299), king of Sukhothai in Thailand **13** 11

**RAMAKRISHNA, SRI** (1833-1886), Indian mystic, reformer, and saint **13** 11-13

**RAMAN, SIR CHANDRASEKHAR VENKATA** (1888-1970), Indian physicist **13** 13-14

**RAMANUJA** (Ramanujacarya; c. 1017-1137), Indian theologian and philosopher **21** 361-362

**RAMANUJAN AIYANGAR, SRINIVASA** (1887-1920), India mathematician **13** 14-15

**RAMAPHOSA, MATEMELA CYRIL** (born 1952), general secretary of the National Union of Mineworkers (NUM) in South Africa and secretary general of the African National Congress **13** 15-16

**RAMAZZINI, BERNARDINO** (1633-1714), Italian physician **21** 362-364

**RAMEAU, JEAN PHILIPPE** (1683-1764), French music theorist and composer **13** 17-18

**RAMOS, FIDEL VALDEZ** (born 1928), president of the Philippines (1992-) **13** 18-19

**RAMPHAL, SHRIDATH SURENDRANATH** (born 1928), Guyanese barrister, politician, and international civil servant **13** 19-20

**RAMSAY, DAVID** (1749-1815), American historian **13** 21

**RAMSAY, SIR WILLIAM** (1852-1916), British chemist and educator **13** 21-22

**RAMSES II** (ruled 1304-1237 B.C.), pharaoh of Egypt **13** 22-23

**RAMSEY, ARTHUR MICHAEL** (1904-1988), archbishop of Canterbury and president of the World Council of Churches **13** 23-25

**RAMSEY, FRANK PLUMPTON** (1903-1930), English mathematician and philosopher **13** 25

**RAMSEY, NORMAN FOSTER, JR.** (born 1915), American physicist **13** 25-27

**RAMUS, PETRUS** (1515-1572), French humanist, logician and mathematician **13** 27-28

**Ranching**  
see Cattle industry

**RAND, AYN** (1905-1982), American author and philosopher **20** 307-309

**RANDOLPH, A. PHILIP** (1889-1979), African American labor and civil rights leader **13** 28-29

**RANDOLPH, EDMUND** (1753-1813), American statesman **13** 29-30

**RANDOLPH, JOHN** (1773-1833), American statesman **13** 30

**RANDOLPH, PEYTON** (1721-1775), American statesman **18** 337-339

**RANGEL, CHARLES B.** (born 1930), Democratic U.S. representative from New York City **13** 31-32

**RANJIT SINGH** (1780-1839), ruler of the Punjab **13** 32-33

**RANK, OTTO** (1884-1939), Austrian psychotherapist **13** 33

**RANKE, LEOPOLD VON** (1795-1886), German historian **13** 33-35

**RANKIN, JEANNETTE PICKERING** (1880-1973), first woman elected to the U.S. Congress **13** 35-37

**RANNARIDH, PRINCE NORODOM** (born 1944), first prime minister of Cambodia **13** 37-39

**RANSOM, JOHN CROWE** (1888-1974), American poet and critic **13** 39-40

**RAPHAEL** (1483-1520), Italian painter and architect **13** 40-42

**RAPP, GEORGE** (1757-1847), German-American religious leader **13** 42-43

**RASHI** (1040-1105), French Jewish scholar and commentator **13** 43

**RASMUSSEN, KNUD JOHAN VICTOR** (1879-1933), Danish Arctic explorer and ethnologist **13** 44

**RASPUTIN, GRIGORI EFIMOVICH** (1872-1916), Russian monk **13** 44-45

**RATANA, TAUPOTIKI WIREMU** (1870-1939), spiritual and political leader of the New Zealand Maori people **13** 46

**RATHBONE, ELEANOR** (Eleanor Florence Rathbone; 1872-1946), British politician and social reformer **13** 47-48

**RATHENAU, WALTHER** (1867-1922), German industrialist and statesman **13** 48-49

**RATTLE, SIMON DENIS** (born 1955), conductor of England's City of Birmingham Symphony Orchestra **13** 49-50

**RATZEL, FRIEDRICH** (1844-1904), German geographer **13** 50-51

**RAU, JOHANNES** (born 1931), German Social Democrat politician **13** 51-52

**RAUSCHENBERG, ROBERT** (born 1925), American painter and printmaker **13** 52-53

**RAUSCHENBUSCH, WALTER** (1861-1918), American Baptist clergyman **13** 53-54

**RAVEL, MAURICE JOSEPH** (1875-1937), French composer **13** 54-55

**RAWLS, JOHN** (born 1921), American political philosopher **13** 55-56

**RAY, DIXY LEE** (1914-1994), marine biologist and governor of Washington **13** 56-57

**RAY, JOHN** (1627-1705), English naturalist **13** 57-59

**RAY, MAN** (1890-1976), American painter, photographer, and object maker **13** 59-60

**RAY, SATYAJIT** (1921-1992), Indian film director **13** 60-61

**RAYBURN, SAMUEL TALIAFERRO** (1882-1961), American statesman **13** 61-62

**RAYLEIGH, 3D BARON** (John William Strutt; 1842-1919), English physicist **13** 62

**RAZI** (Abu Bakr Muhammad ibn Zakariya al-Razi; circa 865-925), Persian physician **13** 63-64

**Razor blades**  
Gillette, King Camp **21** 163-166

**RCA**  
see Radio Corporation of America

**READING, 1ST MARQUESS OF** (Rufus Daniel Isaacs; 1860-1935), English lawyer and statesman **13** 64

**REAGAN, RONALD W.** (born 1911), governor of California (1967-1975) and U.S. president (1981-1989) **13** 65-68

**REBER, GROTE** (born 1911), American radio astronomer **21** 364-366

#### **Reconquista**

see Spain—Islamic

#### **Reconstruction** (United States)

military rule

Butler, Benjamin Franklin **21** 65-67

Sickles, Daniel Edgar **21** 385-388

Radical Republicans

Butler, Benjamin Franklin **21** 65-67

**RECORDE, ROBERT** (1510-1558), English mathematician **13** 68-69

#### **Recording Industry** (music)

Goldmark, Peter **21** 170-172

**RECTO, CLARO M.** (1890-1960), Philippine nationalist and statesman **13** 69-70

**RED CLOUD** (1822-1909), American Oglala Sioux Indian chief **13** 70-71

**RED JACKET** (Sagoyewatha; 1758-1830), Seneca tribal leader **13** 71-73

**REDFIELD, ROBERT** (1897-1958), American anthropologist **13** 73-74

**REDFORD, ROBERT** (Charles Robert Redford, Jr.; born 1937), American actor, producer, and director **18** 339-342

**REDGRAVE, VANESSA** (born 1937), British actress and political activist **13** 74-75

**REDON, ODILON** (1840-1916), French painter and graphic artist **13** 75-76

**REED, JOHN SILAS** (1887-1920), American revolutionist, poet, and journalist **13** 76-77

**REED, THOMAS BRACKETT** (1839-1902), American statesman and parliamentarian **13** 77

**REED, WALTER** (1851-1902), American military surgeon **13** 78

**REES, LLOYD FREDERIC** (1895-1988), Australian artist **13** 78-79

**REEVE, CHRISTOPHER** (born 1952), American actor and activist **18** 342-344

**REEVE, TAPPING** (1744-1823), American jurist **13** 79-80

#### **Reform, social**

see Social reform

#### **Reformers, economic**

American

Ely, Richard **21** 117-120

#### **Reformers, legal**

see Jurists

#### **Reformers, social**

American (19th-20th century)

Ely, Richard **21** 117-120

Folks, Homer **21** 137-140

#### **Refrigeration**

Gorrie, John **21** 172-174

**REGAN, DONALD** (Donald Thomas Regan; born 1918), American secretary of the treasury and White House chief of staff under Reagan **13** 80-81

**REGIOMONTANUS** (1436-1476), German astronomer and mathematician **13** 81-82

**REHNQUIST, WILLIAM HUBBS** (born 1924), U.S. Supreme Court chief justice **13** 82-84

**REICH, STEVE** (born 1936), American composer **13** 84-85

**REICHSTEIN, TADEUS** (1897-1996), Polish-Swiss chemist **13** 85-87

**REID, THOMAS** (1710-1796), Scottish philosopher, clergyman, and teacher **13** 87-88

**REID, WILLIAM RONALD** (Bill Reid; 1920-1998), Canadian artist **13** 88-89

**REINHARDT, MAX** (Max Goldman; 1873-1943), Austrian stage director **13** 89-90

#### **Religious leaders, Catholic** (since 1517)

archbishops

Bernadette of Lourdes **21** 34-36

nuns

Merici, Angela **21** 293-295

popes

Clement VII **21** 81-83

theologians

Martin, Gregory **21** 277-279

#### **Religious leaders, Christian** (to 1517)

archbishops

Langton, Stephen **21** 249-251

Doctors of the Church

Anthony of Padua **21** 7-9

nuns

Merici, Angela **21** 293-295

popes

Gregory IX **21** 180-183

theologians

Anthony of Padua **21** 7-9

Bartholomaeus Anglicus **21** 24-25

Langton, Stephen **21** 249-251

#### **Religious leaders, Hindu** (India)

Ramanuja **21** 361-362

#### **Religious leaders, Protestant**

Congregationalist ministers

Blackwell, Antoinette Brown **21**

41-43

Unitarians

Blackwell, Antoinette Brown **21**

41-43

**REMARQUE, ERICH MARIA** (Erich Paul Remark; 1898-1970), German novelist **13** 91

**REMBRANDT HARMENSZ VAN RIJN** (1606-1669), Dutch painter and etcher **13** 91-95

**REMINGTON, FREDERIC** (1861-1909), American painter, sculptor, and illustrator **18** 344-346 91-95

**REMOND, CHARLES LENNOX** (1810-1873), American black abolitionist **13** 95

#### **collectors of**

Gardner, Isabella Stewart **21** 152-155

**RENAN, ERNEST** (1823-1892), French author and philologist **13** 95-96

**RENDELL, RUTH** (Ruth Grasemann Rendell; born 1930), English writer of mysteries and suspense thrillers **13** 96-97

**RENI, GUIDO** (1575-1642), Italian painter **13** 97-98

**RENNER, KARL** (1870-1950), Austrian statesman, president 1945-50 **13** 98-99

**RENO, JANET** (born 1938), U.S. attorney general (1993-) **13** 99-101

**RENOIR, PIERRE AUGUSTE** (1841-1919), French impressionist painter **13** 101-102

**RENWICK, JAMES** (1818-1895), American architect **13** 102-103

#### **Republican party** (United States)

leaders (California)

Mathias, Bob **21** 284-286

leaders (Indiana)

Hays, Will **21** 197-199

leaders (Kansas)

Curtis, Charles Brent **21** 99-100

leaders (North Dakota)

Nye, Gerald **21** 320-323

leaders (Texas)

Bush, George Walker **21** 61-64

**RESPIGHI, OTTORINO** (1879-1936), Italian composer **13** 103-104

**RESTON, JAMES BARRETT** ("Scotty"; born 1909), American journalist and political commentator **13** 104-105

**RETIEF, PIETER** (1780-1838), South African Boer leader **13** 105-106

**REUCHLIN, JOHANN** (1455-1522), German humanist and jurist **13** 106-107

**REUTER, PAUL JULIUS VON** (Isreal Beer Josaphat; 1816-1899), French journalist **21** 366-367

**REUTHER, WALTER PHILIP** (1907-1970), American labor leader **13** 107-108

**REVEL, BERNARD** (1885-1940), Talmudic scholar and educator **13** 108-109

**REVELS, HIRAM RHOADES** (1822-1901), African American clergyman, statesman, and educator **13** 109-110

**REVERE, PAUL** (1735-1818), American patriot, silversmith, and engraver **13** 110-111

**REVILLAGIGEDO, CONDE DE** (Juan Vicente Güemes Pacheco y Padilla; 1740-1799), Spanish colonial administrator, viceroy of New Spain **13** 111-112

**REYES, ALFONSO** (1889-1959), Mexican author and diplomat **13** 112-113

**REYES, RAFAEL** (1850-1920), Colombian military leader, president 1904-09 **13** 113

**REYNOLDS, ALBERT** (born 1932), prime minister of Ireland **13** 113-115

**REYNOLDS, RICHARD JOSHUA JR.** (R.J. Reynolds; 1906-1964), American businessman and philanthropist **19** 308-310

**REYNOLDS, SIR JOSHUA** (1723-1792), English portrait painter **13** 115-116

**REZA SHAH PAHLAVI** (Reza Khan; 1878-1944), Shah of Iran 1925-41 **13** 116-117

**RHEE, SYNGMAN** (1875-1965), Korean independence leader, South Korean president 1948-60 **13** 117-120

**RHETT, ROBERT BARNWELL** (1800-1876) American statesman **13** 120

**RHODES, CECIL JOHN** (1853-1902), English imperialist and financier **13** 120-122

**RHODES, JAMES FORD** (1848-1927), American historian **13** 122

**RHYS, JEAN** (Ella Gwendolen Rees Williams; 1890-1979), English author **19** 310-312

**RIBERA, JOSEPE DE** (1591-1652), Spanish painter **13** 122-123

**RICARDO, DAVID** (1772-1823), English economist **13** 123-124

**RICCI, MATTEO** (1552-1610), Italian Jesuit missionary **13** 124-125

**RICE, ANNE** (born 1941), American author **13** 125-126

**RICE, ELMER** (1892-1967), American playwright and novelist **13** 126-127

**RICE, JOSEPH MAYER** (1857-1934), American education reformer **13** 127-128

**RICH, ADRIENNE** (born 1929), American poet **13** 128-130

**RICHARD I** (1157-1199), king of England 1189-99 **13** 130

**RICHARD II** (1367-1400), king of England 1377-99 **13** 130-131

**RICHARD III** (1452-1485), king of England 1483-85 **13** 132-133

**RICHARD, MAURICE** ("Rocket" Richard; born 1921), Canadian hockey player **19** 312-313

**RICHARDS, ANN WILLIS** (born 1933), Democratic governor of Texas **13** 133-134

**RICHARDS, ELLEN H.** (born Ellen Henrietta Swallow; 1842-1911), American chemist and educator **13** 134-136

**RICHARDS, IVOR ARMSTRONG** (1893-1979), English-born American semanticist and literary critic **13** 137

**RICHARDS, THEODORE WILLIAM** (1868-1928), American chemist **13** 137-138

**RICHARDSON, HENRY HANDEL** (pen name of Ethel Florence Lindesay Richardson; 1870-1946), expatriate Australian novelist **13** 139

**RICHARDSON, HENRY HOBSON** (1838-1886), American architect **13** 139-141

**RICHARDSON, SAMUEL** (1689-1761), English novelist **13** 141-142

**RICHELIEU, ARMAND JEAN DU PLESSIS DE** (1585-1642), French statesman and cardinal **13** 142-144

**RICHET, CHARLES ROBERT** (1850-1935), French physiologist **13** 144-145

**RICHIER, GERMAINE** (1904-1959), French sculptor **13** 145-146

**RICHTER, CHARLES F.** (1900-1985), American seismologist **13** 146-148

**RICHTER, CONRAD MICHAEL** (1890-1968), American novelist and short-story writer **13** 148-149

**RICHTER, HANS** (Johann Siegfried Richter; 1888-1976), German-born film director **13** 149-150

**RICHTER, JOHANN PAUL FRIEDRICH** (1763-1825), German humorist and prose writer **13** 150-151

**RICIMER, FLAVIUS** (died 472), Germanic Roman political chief **13** 151-152

**RICKENBACKER, EDWARD VERNON** (1890-1973), World War I fighter pilot and airline president **13** 152-153

**RICKEY, WESLEY BRANCH** (1881-1965), innovative baseball executive **13** 153-155

**RICKOVER, HYMAN GEORGE** (1900-1986), U.S. Navy officer **13** 155-157

**RICOEUR, PAUL** (born 1913), French exponent of hermeneutical philosophy **13** 157-158

**RIDE, SALLY** (born 1951), American astronaut and physicist **13** 158-160

**RIDGWAY, MATTHEW BUNKER** (1895-1993), American general **13** 160-161

**RIEFENSTAHL, LENI** (born 1902), German film director **13** 161-163

**RIEL, LOUIS** (1844-1885), Canadian rebel **13** 163-164

**RIEMANN, GEORG FRIEDRICH BERNARD** (1826-1866), German mathematician **13** 164-165

**RIEMENSCHNEIDER, TILMAN** (1468-1531), German sculptor **13** 166

**RIENZI, COLA DI** (or Rienzo; 1313/14-1354), Italian patriot, tribune of Rome **13** 166-167

**RIESMAN, DAVID** (born 1909), American sociologist, writer, and social critic **13** 167-168

**RIETVELD, GERRIT THOMAS** (1888-1964), Dutch architect and furniture designer **13** 169

**RIIS, JACOB AUGUST** (1849-1914), Danish-born American journalist and reformer **13** 169-170

**RILEY, JAMES WHITCOMB** (1849-1916), American poet **13** 170-171

**RILKE, RAINER MARIA** (1875-1926), German lyric poet **13** 171-172

**RILLIEUX, NORBERT** (1806-1894), American inventor **20** 309-311

**RIMBAUD, (JEAN NICOLAS) ARTHUR** (1854-1891), French poet **13** 172-174

**RIMMER, WILLIAM** (1816-1879), American sculptor, painter, and physician **13** 174

**RIMSKY-KORSAKOV, NIKOLAI ANDREEVICH** (1844-1908), Russian composer and conductor **13** 174-175

**RINGGOLD, FAITH** (Faith Jones; born 1930), African American painter, sculptress, and performer **13** 175-177

**RIO BRANCO, BARÃO DO** (José Maria da Silva Paranhos; 1845-1912), Brazilian political leader **13** 177

**RIORDAN, RICHARD JOSEPH** (born 1930), American politician; mayor of Los Angeles **13** 177-179

**RIPKEN, CAL, JR.** (Calvin Edwin Ripken, Jr.; born 1960), American baseball player **18** 346-349

**RIPLEY, GEORGE** (1802-1880), American Unitarian minister and journalist **13** 179-180

**RITSCHL, ALBRECHT BENJAMIN** (1822-1889), German theologian **13** 180

**RITTENHOUSE, DAVID** (1732-1796), American astronomer and instrument maker **13** 180-181

**RITTER, KARL** (1779-1859), German geographer **13** 181-182

**Ritz, Cesar**, Swiss hotelier  
Escoffier, Auguste **21** 122-124

**RIVADAVIA, BERNARDINO** (1780-1845), Argentine independence leader, president 1826-27 **13** 182-183

**RIVAS, DUQUE DE** (Angel de Saavedra; 1791-1865), Spanish poet, dramatist, and statesman **13** 398

**RIVERA, DIEGO** (1886-1957), Mexican painter **13** 183-184

**RIVERA, FRUCTUOSO** (circa 1788-1854), Uruguayan statesman **13** 184-185

**RIVERA, JOSÉ EUSTACIO** (1888-1928), Colombian novelist **13** 185-186

**RIVERS, LARRY** (Yitzroch Loiza Grossberg; born 1923), American artist **13** 186-187

**Riverside** (village; Illinois)  
Jenney, William Le Baron **21** 221-223

**RIVLIN, ALICE M.** (born 1931), American economist and political advisor **18** 349-350

**RIZAL, JOSÉ** (1861-1896), Philippine national hero **13** 187-189

**ROBBE-GRILLET, ALAIN** (born 1922), French novelist **13** 189-190

**ROBBIA, LUCA DELLA** (1400-1482), Italian sculptor **10** 19-20

**ROBBINS, JEROME** (Rabinowitz; 1918-1998), American director and choreographer **13** 190-192

**ROBERT I** (1274-1329), king of Scotland 1306-29 **13** 192-194

**ROBERT II** (1316-1390), king of Scotland 1371-90 **13** 194

**ROBERT III** (circa 1337-1406), king of Scotland 1390-1406 **13** 194-195

**ROBERT, HENRY MARTYN** (1837-1923), American engineer and parliamentarian **21** 367-370

**ROBERT, SHAABAN** (1909-1962), Tanzanian author who wrote in the Swahili language **14** 128-129

**Robert's Rules of Order** (book)  
Robert, Henry Martyn **21** 367-370

**ROBERTS, FREDERICK SLEIGH** (1st Earl Roberts of Kandhar, Pretoria, and

Waterford; 1832-1914), British field marshal **13** 195-196

**ROBERTSON, SIR DENNIS HOLME** (1890-1963), English economist **13** 196

**ROBERTSON, MARION G.** (Pat Robertson; born 1930), television evangelist who founded the Christian Broadcasting Network and presidential candidate **13** 196-198

**ROBERTSON, OSCAR** (born 1938), African American basketball player **20** 311-313

**ROBESON, PAUL LEROY** (1898-1976), American singer, actor, and political activist **13** 198-199

**ROBESPIERRE, MAXIMILIEN FRANÇOIS MARIE ISIDORE DE** (1758-1794), French Revolutionary leader **13** 199-201

**ROBINSON, EDDIE** (born 1919), African American college football coach **18** 351-352

**ROBINSON, EDWIN ARLINGTON** (1869-1935), American poet and playwright **13** 201-202

**ROBINSON, FRANK, JR.** (born 1935), African American baseball player and manager **13** 202-203

**ROBINSON, HARRIET HANSON** (1825-1911), American author and suffragist **13** 203-207

**ROBINSON, JACK ROOSEVELT** (Jackie Robinson; 1919-72), African American baseball player; first African American player in the major leagues **13** 207-208

**ROBINSON, JAMES HARVEY** (1863-1936), American historian **13** 208

**ROBINSON, JOAN VIOLET MAURICE** (1903-1983), English economist **13** 209-210

**ROBINSON, SIR JOHN BEVERLEY** (1791-1863), Canadian political leader and jurist **13** 215-217

**ROBINSON, JULIA** (1919-1985), American mathematician **13** 210-211

**ROBINSON, MARY BOURKE** (born 1944), first woman president of Ireland **13** 211-213

**ROBINSON, MAX** (1939-1988), African American television news anchor **13** 213-215

**ROBINSON, SMOKEY** (born 1940), African American performer and composer **13** 215-217

**ROBINSON, SUGAR RAY** (Walker Smith Jr.; 1921-1989), American boxer **19** 313-315

**ROBINSON, THEODORE** (1852-1896), American painter **13** 217

**ROCA, JULIO ARGENTINO** (1843-1914), Argentine general and president **13** 218

**ROCARD, MICHEL** (born 1930), French left-wing politician **13** 218-220

**ROCHAMBEAU, COMTE DE** (Jean Baptiste Donatien de Vimeur; 1725-1807), French general **13** 220-221

**ROCHBERG, GEORGE** (born 1918), American composer **13** 221-222

**ROCHE, KEVIN** (born 1922), Irish-American architect **13** 222-224

**ROCK, JOHN** (1825-1866), American physician, lawyer, and abolitionist **21** 370-372

**ROCK, ARTHUR** (born 1926), American businessman **19** 316-317

**ROCKEFELLER, DAVID** (born 1915), chairman of the Chase Manhattan Bank **13** 224-225

**ROCKEFELLER, JOHN D., JR.** (1874-1960), American philanthropist and industrial relations expert **13** 225-226

**ROCKEFELLER, JOHN DAVISON** (1839-1937), American industrialist and philanthropist **13** 226-228  
Flagler, Henry **21** 135-137

**ROCKEFELLER, NELSON ALDRICH** (1908-1979), four-term governor of New York and vice-president of the United States **13** 228-230

**ROCKINGHAM, 2D MARQUESS OF** (Charles Watson-Wentworth; 1730-82), English statesman **13** 230-231

**ROCKNE, KNUTE** (1888-1931), American football coach **13** 231

**ROCKWELL, NORMAN PERCEVEL** (1894-1978), American illustrator **13** 231-233

**Rocky and Bullwinkle** (television series)  
Ward, Jay **21** 421-423

**RODCHENKO, ALEXANDER MIKHAILOVICH** (1891-1956), Russian abstract painter, sculptor, photographer, and industrial designer **13** 233-234

**RODGERS, JIMMIE** (James Charles Rodgers; 1897-1933), American musician **19** 317-319

**RODGERS, RICHARD CHARLES** (1902-1972), American composer **13** 234-236  
Bennett, Robert Russell **21** 32-34

**RODIN, AUGUSTE** (1840-1917), French sculptor **13** 236-238

**RODINO, PETER WALLACE, JR.** (born 1909), Democratic U.S. representative from New Jersey **13** 238-239

**RODNEY, GEORGE BRYDGES** (1st Baron Rodney; 1718-92), British admiral **13** 239-240

**RODÓ, JOSÉ ENRIQUE** (1872-1917), Uruguayan essayist and literary critic **13** 240-241

**ROEBLING, JOHN AUGUSTUS** (1806-1869), German-born American engineer **13** 241-242

**ROEBLING, WASHINGTON AUGUSTUS** (1837-1926), American engineer and manufacturer **13** 243

**ROETHKE, THEODORE** (1908-1963), American poet and teacher **13** 243-244

**ROGER II** (1095-1154), king of Sicily 1130-54 **13** 244-245

**ROGERS, CARL RANSOM** (1902-1987), American psychotherapist **13** 245-247

**ROGERS, EDITH NOURSE** (1881-1960), U.S. congresswoman from Massachusetts **13** 247-248

**ROGERS, FRED** ("Mr." Rogers; born 1928), American television host **18** 352-354

**ROGERS, JOHN** (1829-1904), American sculptor **13** 248

**ROGERS, RICHARD** (born 1933), British architect **13** 248-250

**ROGERS, ROBERT** (1731-1795), American frontiersman and army officer **13** 250-251

**ROGERS, WILL** (1879-1935), American actor, humorist, journalist, and performer **13** 251-252

**ROH TAE WOO** (born 1932), president of the Republic of Korea **13** 253-255

**ROHDE, RUTH BRYAN OWEN** (1885-1954), U.S. congresswoman **13** 252-253

**ROJAS PINILLA, GUSTAVO** (1900-1975), Colombian general and politician **13** 255-256

**ROLAND, MADAME** (Marie-Jeanne Phlipon; 1754-1793), French author and revolutionary **13** 256-259

**ROLFE, JOHN** (1585-1622), English colonist in Virginia **13** 259-260

**ROLLAND, ROMAIN** (1866-1944), French writer **13** 260

**ROLLE OF HAMPOLE, RICHARD** (circa 1290-1349), English prose and verse writer **13** 260-261

**ROLLING STONES, THE** (formed in 1963), rock and roll band **13** 261-264

**ROLLO** (Rolf; circa 860-circa 932), Viking adventurer **13** 264-265

**RÖLVAAG, OLE EDVART** (1876-1931), Norwegian-American writer **13** 265

**Roman Catholic Church**  
and sack of Rome (1527)  
Clement VII **21** 81-83  
monks and abbots  
Torquemada, Tomas de **21** 407-409  
Vincent of Beauvais **21** 416-418

**Roman Catholic Church** (France)  
19th century  
Bernadette of Lourdes **21** 34-36

**Roman Empire**  
see Rome—217 B.C.-A.D. 476

**Roman Republic**  
see Rome—509-27 B.C.

**ROMANOV, ANASTASIA NICHOLAIEVNA** (1901-1918), Russian grand duchess **18** 354-357

**Rome**  
• 476- (MEDIEVAL and MODERN)  
sacked (1527)  
Clement VII **21** 81-83

**ROMERO, ARCHBISHOP OSCAR** (1917-1980), archbishop of San Salvador **13** 265-267

**ROMERO BARCELÓ, CARLOS** (born 1932), Puerto Rican political leader and governor **13** 267-268

**ROMMEL, ERWIN** (1891-1944), German field marshal **13** 268-269

**ROMNEY, GEORGE** (1734-1802), English painter **13** 269-270

**ROMNEY, GEORGE** (1907-1995), American businessman and politician **20** 313-316

**RÓMULO, CARLOS P.** (1899-1985), Filipino journalist and diplomat **13** 270-271

**RONDON, CANDIDO MARIANO DA SILVA** (1865-1958), Brazilian militarist **13** 271

**RONSARD, PIERRE DE** (1524-1585), French poet **13** 271-273

**RÖNTGEN, WILHELM CONRAD** (1845-1923), German physicist **13** 273-275

**ROOSEVELT, ANNA ELEANOR** (1884-1962), American lecturer and author, first lady 1933-45 **13** 275-277

**ROOSEVELT, FRANKLIN DELANO** (1882-1945), American statesman, president 1933-45 **13** 277-280  
vice presidents  
Garner, John **21** 155-157

**ROOSEVELT, THEODORE** (1858-1919), American statesman, president 1901-09 **13** 280-283  
supporters  
Perkins, George Walbridge **21** 344-347

**Roosevelt University** (Chicago, Illinois)  
Lee, Rose **21** 258-260

**ROOT, ELIHU** (1845-1937), American statesman **13** 283-284

**ROOT, JOHN WELLBORN** (1850-1891), American architect **21** 372-374

**ROREM, NED** (born 1923), American composer of art songs **13** 284-286

**RORSCHACH, HERMANN** (1884-1922), Swiss psychiatrist **13** 286-288

**RORTY, RICHARD** (born 1931), American philosopher and man of letters **13** 288-289

**ROSA, SALVATOR** (1615-1673), Italian painter and poet **13** 289-290

**ROSAS, JUAN MANUEL DE** (1793-1877), Argentine dictator 1829-52 **13** 290-291

**ROSE, PETE** (Peter Edward Rose; born 1941), American baseball player **21** 374-376

**ROSENBERG, JULIUS AND ETHEL** (died 1953), Americans executed for atomic espionage **13** 291-293

**ROSENWALD, JULIUS** (1862-1932), American retailer and philanthropist **13** 293

**ROSENZWEIG, FRANZ** (1886-1929), Jewish philosopher and writer **13** 294

**ROS-LEHTINEN, ILEANA** (born 1952) Hispanic American U.S. congresswoman **13** 294-296

**ROSMINI-SERBATI, ANTONIO** (1797-1855), Italian philosopher and priest **13** 296-297

**ROSS, BETSY** (Elizabeth Griscom; 1752-1836), American upholsterer who made the first U.S. flag **13** 297-298

**ROSS, DIANA** (born 1944), African American singer **13** 298-300

**ROSS, EDWARD ALSWORTH** (1866-1951), American sociologist **13** 300

**ROSS, HAROLD** (Harold Wallace Ross; 1892-1951), founder and editor of the *New Yorker* magazine **13** 300-302

**ROSS, SIR JAMES CLARK** (1800-1862), English admiral and polar explorer **13** 302-303

**ROSS, JOHN** (1790-1866), American Cherokee Indian chief **13** 303-304



**ROSS, MARY G.** (born 1908), Native American aerospace engineer **13** 304-305

**ROSS, NELLIE TAYLOE** (1876-1977), American politician **13** 305-306

**ROSSELLINI, ROBERTO** (1906-1977), Italian film director **20** 316-318

**ROSSETTI, CHRISTINA GEORGINA** (1830-1894), English poet **13** 307-308

**ROSSETTI, DANTE GABRIEL** (1828-1882), English painter and poet **13** 308-309

**ROSSI, ALDO** (born 1931), Italian architect **13** 309-310

**ROSSI, LUIGI** (circa 1598-1653), Italian composer **13** 310-311

**ROSSINI, GIOACCHINO** (1792-1868), Italian composer **13** 311-312

**ROSSO, IL** (Giovanni Battista di Jacopo; 1495-1540), Italian painter **13** 312-313

**ROSSO, MEDARDO** (1858-1928), Italian sculptor **13** 313-315

**ROSTOVITZ, MICHAEL IVANOVICH** (1870-1952), Russian-born American historian and classical scholar **13** 315

**ROSTOW, WALT WHITMAN** (born 1916), American educator, economist, and government official **13** 315-317

**ROSTROPOVICH, MSTISLAV LEOPOLDOVICH** (Slava Rostropovich; born 1927), Russian cellist and conductor **13** 317-318

**ROTH, PHILIP** (born 1933), American author **13** 318-320

**ROTHKO, MARK** (1903-1970), American painter **13** 320-321

**ROTHSCHILD, MAYER** (1744-1812), German merchant banker **20** 318-320

**ROTTMAYR, JOHANN MICHAEL** (1654-1730), Austrian painter **13** 321

**ROUAULT, GEORGES** (1871-1958), French painter and graphic artist **13** 321-322

**ROUS, FRANCIS PEYTON** (1879-1970), American pathologist and virologist **13** 322-323

**ROUSSEAU, HENRI** (1844-1910), French painter **13** 323-324

**ROUSSEAU, JEAN JACQUES** (1712-1778), Swiss-born French philosopher and author **13** 324-328

**ROUSSEAU, THÉODORE** (1812-1867), French painter and draftsman **13** 328

**ROUSSEL, ALBERT** (1869-1937), French composer **13** 328-329

**ROWAN, CARL T.** (born 1925), American journalist, author, and ambassador **13** 329-330

**ROWLAND, HENRY AUGUSTUS** (1848-1901), American physicist **13** 330-331

**ROXAS, MANUEL** (1892-1948), Filipino statesman, president 1946-48 **13** 331-332

**ROY, RAM MOHUN** (1772-1833), Bengali social and religious reformer **13** 18

**ROYBAL-ALLARD, LUCILLE** (born 1941), Hispanic American U.S. congresswoman **13** 332-334

**ROYCE, JOSIAH** (1855-1916), American philosopher **13** 334-335

**ROYDEN, AGNES MAUDE** (1876-1956), British preacher, lecturer, and author **13** 335-337

**ROYKO, MIKE** (1932-1997), American columnist **13** 337-339

**ROZELLE, PETE** (Alvin Ray Rozelle; 1926-1996), American commissioner of the National Football League (NFL) **19** 319-322

**RUBENS, PETER PAUL** (1577-1640), Flemish painter and diplomat **13** 339-342

**RUBENSTEIN, HELENA** (1870-1965), Polish-born beauty expert and businesswoman **13** 342-343

**RUBENSTEIN, RICHARD L.** (born 1924), American Jewish theologian and writer **13** 343-344

**RUBIN, JERRY** (1938-1994), activist, writer, lecturer, and businessman **13** 344-346

**RUDKIN, MARGARET FOGARTY** (1897-1976), founder and president of Pepperidge Farm Inc. **13** 346-347

**RUDOLF I** (Rudolf of Hapsburg; circa 1218-91), Holy Roman emperor-elect 1273-91 **13** 347-348

**RUDOLPH, PAUL MARVIN** (1918-1997), American architect **13** 348-350

**RUDOLPH, WILMA** (1940-1994), African American track and field athlete and coach **13** 350-352

**RUEF, ABRAHAM** (1864-1936), American political boss **13** 352-353

**RUETHER, ROSEMARY RADFORD** (born 1936), American church historian, theologian, writer, and teacher specializing in the area of women and religion **13** 353-354

**RUFFIN, EDMUND** (1794-1865), American agriculturist **13** 354-355

**RUGG, HAROLD** (1886-1960), American teacher, historian, and educational theorist **13** 355-357

**RUISDAEL, JACOB VAN** (1628/29-82), Dutch landscape painter **13** 357-358

**RUÍZ, JOSÉ MARTÍNEZ** (1873-1967), Spanish writer **13** 358

**RUIZ, JUAN** (1283?-1350?), Spanish poet **13** 358-359

**RUIZ CORTINES, ADOLFO** (1890-1973), president of Mexico (1952-1958) **13** 359-360

**RUMFORD, COUNT** (Benjamin Thompson; 1753-1814), American-born British physicist **13** 360-362

**RUMI, JALAI ED-DIN** (1207-1273), Persian poet and Sufi mystic **13** 362-363

**RUNDSTEDT, KARL RUDOLF GERD VON** (1875-1953), German field marshal **13** 363-364

**Runnymede**  
see Magna Carta (1215)

**RURIK** (died circa 873), Norman warrior **13** 364

**RUSH, BENJAMIN** (1745-1813), American physician **13** 364-365

**RUSH, WILLIAM** (1756-1833), American sculptor **13** 365-366

**RUSHDIE, AHMED SALMAN** (born 1947), Indian/British author **13** 366-368

**RUSK, DAVID DEAN** (1909-1994), American secretary of state (1961-1969) **13** 368-370

**RUSKA, ERNST AUGUST FRIEDRICH** (1906-1988), German engineer **13** 370-371

**RUSKIN, JOHN** (1819-1900), English critic and social theorist **13** 371-372

**RUSSELL, BERTRAND ARTHUR WILLIAM** (3rd Earl Russell; 1872-1970), British mathematician, philosopher, and social reformer **13** 373-374

**RUSSELL, BILL** (William Felton Russell; born 1934), African American basketball player and coach **20** 320-322

**RUSSELL, CHARLES EDWARD** (1860-1941), American journalist and reformer **13** 374-375

**RUSSELL, CHARLES MARION** (1864-1926), American painter **13** 375-376

**RUSSELL, CHARLES TAZE** (1852-1916), American religious leader **13** 376-377

**RUSSELL, ELIZABETH SHULL** (born 1913), American geneticist **13** 377-379

**RUSSELL, JAMES EARL** (1864-1945), educator and college dean who developed Teachers College **13** 379-380

**RUSSELL, JOHN** (1792-1878), English statesman, Prime minister 1846-52 **13** 380-381

**Russian art**  
Fabergé, Carl **21** 125-127

**RUSSWURM, JOHN BROWN** (1799-1851), African American and Liberian journalist, educator, and governor **13** 381-382

**RUSTIN, BAYARD** (1910-1987), American social activist **13** 382-383

**RUTAN, BURT** (Elbert L. Rutan; born 1943), American aeronautical engineer **20** 322-325

**RUTAN, DICK** (Richard Glenn Rutan; born 1938), American aviator **20** 325-326

**RUTH, GEORGE HERMAN, JR.** (Babe Ruth; 1895-1948), American baseball player **13** 384

**RUTHERFORD, ERNEST** (1st Baron Rutherford of Nelson; 1871-1937), British physicist **13** 384-387

**RUTLEDGE, JOHN** (1739-1800), American jurist and statesman **13** 387-388

**RUYSBROECK, JAN VAN** (1293-1381), Flemish mystic **13** 388-389

**RYAN, LYNN NOLAN** (born 1947), American baseball player and author **13** 389-391

**RYDER, ALBERT PINKHAM** (1847-1917), American painter **13** 391-392

**RYERSON, (ADOLPHUS) EGERTON** (1803-1882), Canadian Methodist clergyman and educator **13** 392-393

**RYLE, GILBERT** (1900-1976), English philosopher **13** 393-394

## S

**SÁ, MEM DE** (1504-1572), Portuguese jurist and governor general of Brazil **13** 395

**SAADIA BEN JOSEPH AL-FAYUMI** (882-942), Jewish scholar **13** 396

**SAARINEN, EERO** (1910-1961), Finnish-American architect and industrial designer **13** 396-398

**SAARINEN, ELIEL** (1873-1950), Finnish-American architect and industrial designer **13** 396-398

**SABATIER, PAUL** (1854-1941), French chemist **13** 398-399

**SÁBATO, ERNESTO** (born 1911), Argentine novelist and essayist **13** 399-400

**SABBATAI ZEVI** (1626-1676), Jewish mystic and pseudo-Messiah **13** 400-401

**SABIN, ALBERT BRUCE** (1906-1993), Polish-American physician and virologist who developed polio vaccine **13** 401-402

**SABIN, FLORENCE RENA** (1871-1953), American anatomist **13** 402-405

**SACAJAWEA** (c. 1784-c. 1812), Native American translator/interpreter, and guide **13** 405-408

**SACCO, NICOLA (1891-1927) AND VANZETTI, BARTOLOMEO** (1887-1927), Italian-born American anarchists **13** 408-410

**SACHS, HANS** (1494-1576), German poet **13** 410-411

**SACHS, NELLY** (1891-1970), German-born Jewish poet and playwright **13** 411-412

**SADAT, ANWAR** (1918-1981), Egyptian president **13** 412-414

**SADAT, JIHAN** (born 1933), Egyptian women's rights activist **13** 414-415

**SADDAM HUSSEIN** (born 1937), socialist president of the Iraqi Republic and strongman of the ruling Ba'th regime **13** 415-416

**SADE, COMTE DE** (Donatien Alphonse François, Marquis de Sade; 1740-1814), French writer **13** 416-418.

**SA'DI** (circa 1200-1291), Persian poet **13** 418-419

**SADR, MUSA AL-** (Imam Musa; 1928-?), Lebanese Shi'ite Moslem religious and political leader **13** 420-422

**Safety pin**  
Hunt, Walter **21** 210-212

**SAFIRE, WILLIAM** (born 1929), American journalist **13** 422-424

**SAGAN, CARL E.** (born 1934), American astronomer and popularizer of science **13** 424-425

**SAGER, RUTH** (1918-1997), American biologist and geneticist **13** 425-426

**SAICHO** (767-822), Japanese Buddhist monk **13** 426-428

**SAID, SEYYID** (1790-1856), Omani sultan **13** 428-429

**SAIGO, TAKAMORI** (1827-1877), Japanese rebel and statesman **13** 429

**ST. CLAIR, ARTHUR** (1736-1818), Scottish-born American soldier and politician **13** 429-430

**ST. DENIS, RUTH** (1878?-1968), American dancer and choreographer **13** 430-431

**Saint-Etienne, Cathedral of** (France)  
William of Sens **21** 432-434

**ST. LAURENT, LOUIS STEPHEN** (born 1882), Canadian statesman **13** 434

**St. Louis Cardinals** (baseball team; United States)  
Gibson, Bob **21** 159-162  
Hornsby, Rogers **21** 204-206

**SAINTE-BEUVE, CHARLES AUGUSTIN** (1804-1869), French literary critic **13** 438

**SAINT-EXUPÉRY, ANTOINE DE** (1900-1944), French novelist, essayist, and pilot **13** 431-432

**SAINT-GAUDENS, AUGUSTUS** (1848-1907), American sculptor **13** 432

**SAINT-JUST, LOUIS ANTOINE LÉON DE** (1767-1794), French radical political leader **13** 433

**ST. LAURENT, YVES** (born 1936), French fashion designer **20** 327-329

**SAINT-PIERRE, ABBÉ DE** (Charles Irénée Castel; 1658-1743), French political and economic theorist **13** 434-435

**SAINT-SAËNS, CHARLES CAMILLE** (1835-1921), French composer **13** 435-436

**SAINT-SIMON, COMTE DE** (Claude Henri de Rouvroy; 1760-1825), French social philosopher and reformer **13** 436-437

**SAINT-SIMON, DUC DE** (Louis de Rouvroy; 1675-1755), French writer **13** 436

**SAIONJI, KIMMOCHI** (1849-1940), Japanese elder statesman **13** 438-439

**SAKHAROV, ANDREI** (1921-1989), Russian theoretical physicist and "father of the Soviet atomic bomb" **13** 439-441

**SALADIN** (Salah-ad-Din Yusuf ibn Aiyub; 1138-93), Kurdish ruler of Egypt and Syria **13** 441-442

**SALAZAR, ANTÓNIO DE OLIVEIRA** (1889-1970), Portuguese statesman **13** 442-443

**SALIH, ALI'ABDALLAH** (born 1942), president of the Yemeni Arab Republic (North Yemen) and first president of the United Republic of Yemen **13** 443-445

**SALINAS DE GORTARI, CARLOS** (born 1948), president of Mexico (1988-) **13** 445-447

**SALINGER, J. D.** (born 1919), American author **13** 447-448

**SALISBURY, HARRISON EVANS** (born 1908), American journalist **13** 449-451

**SALISBURY, 3D MARQUESS OF** (Robert Arthur Talbot Gascoyne-Cecil; 1830-1903), English statesman and diplomat **13** 448-449

**SALK, JONAS EDWARD** (1914-1995), American physician, virologist, and immunologist **13** 451-452

**SALLE, DAVID** (born 1952), American artist **13** 452-453

**SALLUST** (Gaius Sallustius Crispus; 86-circa 35 B.C.), Roman statesman and historian **13** 454

**SALOMON, CHARLOTTE** (1917-1943), German artist **13** 454-455

**SALOMON, HAYM** (c. 1740-1785), American financier **20** 329-331

**SALVEMINI, GAETANO** (1873-1957), Italian historian **13** 455-456

**SAMUEL** (circa 1056-1004 B.C.), Hebrew prophet, last judge of Israel **13** 457-458

**SAMUELSON, PAUL ANTHONY** (born 1915), American economist **13** 458-459

**San Francisco** (city, California)  
Muybridge, Eadweard **21** 305-308

**SAN MARTÍN, JOSÉ DE** (1778-1850), Argentine soldier and statesman **13** 468-469

**SANCTORIUS** (1561-1636), Italian physician and physiologist **13** 459

**SAND, GEORGE** (1804-1876), French novelist **13** 459-461

**SANDBURG, CARL** (1878-1967), American poet, anthologist, and biographer **13** 461-462

**SANDERS, COLONEL** (Harland David Sanders; 1890-1980), American businessman **19** 323-325

**SANDINO, AUGUSTO C.** (1894-1934), Nicaraguan guerrilla leader **13** 462-463

**Sandwich Islands**  
Montagu, John, Fourth Earl of Sandwich **21** 301-303

**Sandwiches**  
Montagu, John, Fourth Earl of Sandwich **21** 301-303

**SANDYS, SIR EDWIN** (1561-1629), English statesman and colonizer in America **13** 463-464

**SANGALLO FAMILY** (flourished late 15th-mid-16th century), Italian artists and architects **13** 464-466

**SANGER, FREDERICK** (born 1918), English biochemist **13** 466-467

**SANGER, MARGARET HIGGINS** (1884-1966), American leader of birth control movement **13** 467-468

**SANMICHELI, MICHELE** (circa 1484-1559), Italian architect and military engineer **13** 469-470

**SANSOVINO, JACOPO** (1486-1570), Italian sculptor and architect **13** 470-471

**SANTA ANA, ANTONIO LÓPEZ DE** (1794-1876), Mexican general and statesman, six times president **13** 471-472

**SANTA CRUZ, ANDRÉS DE** (1792-1865), Bolivian general and statesman, president 1829-39 **13** 472-473

**SANTAMARIA, BARTHOLOMEW AUGUSTINE** (born 1915), Australian Roman Catholic publicist and organizer **13** 473-474

**SANTANA, PEDRO** (1801-1864), Dominican military leader, three times president **13** 474-475

**SANTANDER, FRANCISCO DE PAULA** (1792-1840), Colombian general and statesman **13** 475

**SANTAYANA, GEORGE** (Jorge Agustín de Santayana; 1863-1952), Spanish-American philosopher **13** 475-477

**SANTOS-DUMONT, ALBERTO** (1873-1932), Brazilian inventor **13** 477-478

**SAPIR, EDWARD** (1884-1939), American anthropologist **13** 478-479

**SAPPHO** (circa 625-570 B.C.), Greek lyric poet **13** 479-480

**SAPRU, SIR TEJ BAHADUR** (1875-1949), Indian lawyer and statesman **13** 480-481

**SARANDON, SUSAN** (Susan Abigail Tomalin; born 1946), American actress and activist **18** 358-360

**SARGENT, JOHN SINGER** (1856-1925), American portrait painter **13** 481-482

**SARGON II** (ruled 722-705 B.C.), king of Assyria **13** 482

**SARGON OF AGADE** (circa 2340-2284 B.C.), first Semitic king of Mesopotamia **13** 483

**SARIT THANARAT** (1908-1963), Thai army officer, prime minister 1957-63 **13** 483-484

**SARMIENTO, DOMINGO FAUSTINO** (1811-1888), Argentine statesman, president 1868-74 **13** 484-485

**SARNOFF, DAVID** (1891-1971), American television and radio broadcasting executive **13** 485-486

**SAROYAN, WILLIAM** (1908-1981), American short-story writer, dramatist, and novelist **13** 486-487

**SARPI, PAOLO** (1552-1623), Italian prelate and statesman **13** 487-488

**SARRAUTE, NATHALIE TCHERNIAK** (1900-1999), French author of novels, essays, and plays **13** 488-490

**SARTON, GEORGE** (1884-1956), Belgian-born American historian of science **13** 490-491

**SARTRE, JEAN PAUL** (1905-1980), French philosopher and author **13** 491-492

**SASSETTA** (circa 1400-50), Italian painter **13** 492

**SASSOON, SIEGFRIED** (1886-1967), English poet **13** 492-493

**SATANTA** (White Bear; 1830-1878), Native American orator and leader of the Kiowa tribe **13** 493-494

**Satellites, communications**  
Pierce, John Robinson **21** 349-351

**SATIE, ERIK** (1866-1925), French composer **13** 494-495

**SATO, EISAKU** (1901-1975), Japanese statesman, prime minister 1964-72 **13** 495-496

**SAUER, CARL ORTWIN** (1889-1975), American geographer and anthropologist **13** 496-497

**SAUGUET, HENRI** (born 1901), French composer, writer, and thinker on art and music **13** 497-498

**SAUL** (circa 1020-1000 B.C.), first King of Israel **13** 498

**SAUNDERS, SIR CHARLES EDWARD** (1867-1937), Canadian cerealist **13** 498-499

**SAVAGE, AUGUSTA CHRISTINE** (born Augusta Christine Fells; 1892-1962), African American sculptor and teacher **13** 499-501

**SAVAGE, MICHAEL JOSEPH** (1872-1940), New Zealand labor leader, prime minister 1935-40 **13** 501-502

**SAVIGNY, FRIEDRICH KARL VON** (1779-1861), German jurist **13** 502-503

**SAVIMBI, JONAS MALHEIROS** (born 1934), founder and leader of UNITA (National Union for the Total Independence of Angola) **13** 503-505

**SAVONAROLA, GIROLAMO** (1452-1498), Italian religious reformer and dictator of Florence **13** 505-506

**Savoy Hotel** (London, England) Escoffier, Auguste **21** 122-124

**SAW MAUNG** (born 1928), leader of armed forces that took power in Burma (now Myanmar) in a 1988 military coup **13** 506-507

**SAXE, COMTE DE** (1696-1750), marshal of France **13** 507-508

**Saxe-Coburg-Gotha dynasty** (Great Britain)  
see Great Britain-since 1901 (Windsor)

**SAY, JEAN BAPTISTE** (1767-1832), French economist **13** 508-509

**SAYERS, GALE** (born 1943), American football player **21** 377-379

**SAYRE, FRANCIS BOWES** (1885-1972), American lawyer and administrator **13** 509

**SAYYID QUTB** (1906-1966), Egyptian writer, educator, and religious leader **13** 509-511

**SCALFARO, OSCAR LUIGI** (born 1918), Christian Democratic leader and president of the Italian Republic **13** 511-512

**SCALIA, ANTONIN** (born 1936), U.S. Supreme Court justice **13** 513-514

**SCARGILL, ARTHUR** (born 1938), president of the British National Union of Mineworkers **13** 514-515

**SCARLATTI, DOMENICO** (1685-1757), Italian harpsichordist and composer **13** 515-517

**SCARLATTI, PIETRO ALESSANDRO GASPARE** (1660-1725), Italian composer **13** 517-518

**SCHACHT, HJALMAR HORACE GREELEY** (1877-1970), German economist and banker **13** 518-519

**SCHAFF, PHILIP** (1819-1893), Swiss-born American religious scholar **13** 519-520

**SCHAPIRO, MIRIAM** (born 1923), Artist **13** 520-521

**SCHARNHORST, GERHARD JOHANN DAVID VON** (1755-1813), Prussian general **13** 521-522

**SCHARPING, RUDOLF** (born 1947), minister-president of Rhineland-Palatinate and chairman of the German Social Democratic Party **13** 522-524

**SCHECHTER, SOLOMON** (1849-1915), Romanian-American Jewish scholar and religious leader **13** 524

**SCHEELE, KARL WILHELM** (1742-1786), Swedish pharmacist and chemist **13** 525-526

**SCHELLING, FRIEDRICH WILHELM JOSEPH VON** (1775-1854), German philosopher **13** 526-527

**SCHIELE, EGON** (1890-1918), Austrian Expressionist painter and draftsman **14** 1-2

**SCHIESS, BETTY BONE** (born 1923), American Episcopalian priest **18** 360-362

**SCHIFF, JACOB HENRY** (1847-1920), German-American banker **14** 2-3

**SCHILLEBEECKX, EDWARD** (born 1914), Belgian Roman Catholic theologian **14** 3-4

**SCHILLER, JOHANN CHRISTOPH FRIEDRICH VON** (1759-1805), German dramatist, poet, and historian **14** 4-7

**SCHINDLER, OSKAR** (1908-1974), German businessman and humanitarian **18** 362-365

**SCHINDLER, SOLOMON** (1842-1915), German-American rabbi and social theorist **14** 7-8

**SCHINKEL, KARL FRIEDRICH** (1781-1841), German architect, painter and designer **14** 8

**SCHLAFLY, PHYLLIS** (born 1924), American political activist and author **14** 9-10

**SCHLEGEL, FRIEDRICH VON** (1772-1829), German critic and author **14** 10-11

**SCHLEIERMACHER, FRIEDRICH ERNST DANIEL** (1768-1834), German theologian and philosopher **14** 11-12

**SCHLEMMER, OSKAR** (1888-1943), German painter, sculptor, and stage designer **14** 12-13

**SCHLESINGER, ARTHUR MEIER** (1888-1965), American historian **14** 13

**SCHLESINGER, ARTHUR MEIER, JR.** (born 1917), American historian and Democratic party activist **14** 13-15

**SCHLESINGER, JAMES RODNEY** (born 1929), American government official **14** 15-16

**SCHLICK, FRIEDRICH ALBERT MORITZ** (1882-1936), German physicist and philosopher **14** 16-17

**SCHLIEMANN, HEINRICH** (1822-1890), German merchant and archeologist **14** 17-18

**SCHLÜTER, ANDREAS** (circa 1660-1714), German sculptor and architect **14** 18-19

**SCHMIDT, HELMUT** (born 1918), Social Democrat and chancellor of the Federal Republic of Germany (the former West Germany), 1974-82 **14** 19-21

**SCHMOLLER, GUSTAV FRIEDRICH VON** (1838-1917), German economist **14** 21

**SCHNEIDERMAN, ROSE** (1882-1972), labor organizer and activist for the improvement of working conditions for women **14** 22-23

**SCHNITZLER, ARTHUR** (1862-1931), Austrian dramatist and novelist **14** 23-24

**SCHOENBERG, ARNOLD** (1874-1951), Austrian composer **14** 24-26

**SCHOLEM, GERSHOM** (1897-1982), Jewish scholar **14** 26

**SCHONGAUER, MARTIN** (circa 1435-91), German engraver and painter **14** 26-28

**SCHÖNHUBER, FRANZ XAVER** (born 1923), German right-wing political leader **14** 28-29

**SCHOOLCRAFT, HENRY ROWE** (1793-1864), American explorer and ethnologist **14** 29

**SCHOPENHAUER, ARTHUR** (1788-1860), German philosopher **14** 29-31

**SCHOUTEN, WILLIAM CORNELIUS** (circa 1580-1625), Dutch explorer and navigator **14** 31

**SCHREMPF, JUERGEN** (born 1944), German automobile industry executive **20** 331-332

**SCHRODER, GERHARD** (born 1944), German chancellor **19** 325-327

**SCHRÖDINGER, ERWIN** (1887-1961), Austrian physicist **14** 31-33

**SCHROEDER, PATRICIA SCOTT** (born 1940), first U.S. congresswoman from Colorado **14** 33-35

**SCHUBERT, FRANZ PETER** (1797-1828), Austrian composer **14** 35-37

**SCHULLER, GUNTHER** (born 1925), American musician **14** 37-38

**SCHULZ, CHARLES M.** (1922-2000), American cartoonist and creator of "Peanuts" **14** 38-39

**SCHUMACHER, KURT** (1895-1952), German socialist statesman **14** 40-41

**SCHUMAN, ROBERT** (1886-1963), French statesman **14** 41

**SCHUMANN, ROBERT ALEXANDER** (1810-1856), German composer and critic **14** 41-43

**SCHUMPETER, JOSEPH ALOIS** (1883-1950), Austrian economist **14** 43-44

**SCHURZ, CARL** (1829-1906), American soldier, statesman, and journalist **14** 44-45

**SCHUSCHNIGG, KURT VON** (1897-1977), Austrian statesman, chancellor of Austria 1934-38 **14** 45-46

**SCHÜSSLER FIORENZA, ELIZABETH** (born 1938), biblical scholar and theologian **14** 46-48

**SCHÜTZ, HEINRICH** (1585-1672), German composer **14** 48-49

**SCHUYLER, PHILIP JOHN** (1733-1804), American Revolutionary War general **14** 49-50

**SCHWAB, CHARLES MICHAEL** (1862-1939), American industrialist **14** 50-51

**SCHWANN, THEODOR** (1810-1882), German biologist **14** 51-52

**SCHWARTZ, DELMORE** (1913-1966), American poet **19** 327-329

**SCHWARZKOPF, NORMAN** (born 1934), American army general **14** 52-54

**SCHWEITZER, ALBERT** (1875-1965), Alsatian-German philosopher and medical missionary **14** 55-56

**SCHWENCKFELD, KASPER VON** (1489/90-1561), Silesian nobleman and theologian **14** 56-57

**SCHWIMMER, ROSIKA** (1877-1948), Hungarian women's rights activist **14** 57-60

**SCHWITTERS, KURT** (1887-1948), German painter, collagist, typographer, and poet and creator of MERZ-art **14** 60-61

#### Scientists, American

- archeologists
  - Albright, William Foxwell **21** 1-3
- astronomers
  - Peirce, Benjamin **21** 340-342
  - Reber, Grote **21** 364-366
- dieticians
  - Kellogg, John Harvey **21** 239-242
- ecologists
  - Marsh, George Perkins **21** 275-277
- engineers

Pierce, John Robinson **21** 349-351

engineers (civil)
 

- Fink, Albert **21** 133-135
- Gilbreth, Frank **21** 162-163
- Jenney, William Le Baron **21** 221-223

Robert, Henry Martyn **21** 367-370

Root, John Wellborn **21** 372-374

engineers (electrical)
 

- Goldmark, Peter Carl **21** 170-172

engineers (mechanical)
 

- Taylor, Frederick Winslow **21** 400-402

horticulturists
 

- Chapman, John **21** 77-78

inventors (18th-19th century)

Bushnell, David **21** 64-65

inventors (19th century)
 

- Drake, Edwin **21** 108-110
- Glidden, Joseph **21** 167-170
- Gorrie, John **21** 172-174
- Hunt, Walter **21** 210-212
- Sholes, Christopher Latham **21** 383-385

inventors (19th-20th century)
 

- Gillette, King Camp **21** 163-166
- Gregg, John **21** 178-180

inventors (20th century)
 

- Goldmark, Peter Carl **21** 170-172
- Pierce, John Robinson **21** 349-351
- Reber, Grote **21** 364-366
- Struss, Karl **21** 398-399
- Todd, Mike **21** 402-404

mathematicians (19th century)

Peirce, Benjamin **21** 340-342

pharmacists

Squibb, Edward Robinson **21** 390-392

physicians (19th century)
 

- Gorrie, John **21** 172-174
- Rock, John **21** 370-372

statisticians
 

- Neyman, Jerzy **21** 316-318

surgeons
 

- Gross, Samuel David **21** 183-185
- Starzl, Thomas **21** 393-395

#### Scientists, Danish

Fibiger, Johannes **21** 131-133

#### Scientists, Dutch

engineers
 

- Stevin, Simon **21** 395-398

mathematicians
 

- Stevin, Simon **21** 395-398

#### Scientists, English

engineers (mechanical)
 

- Maudslay, Henry **21** 286-288

inventors
 

- Booth, Hubert Cecil **21** 50-52
- Harington, John **21** 193-195
- Hill, Rowland **21** 202-204
- Maudslay, Henry **21** 286-288
- Muybridge, Eadweard **21** 305-308
- Parkes, Alexander **21** 334-336
- Starley, James **21** 392-393
- Tull, Jethro **21** 411-413

metallurgists
 

- Parkes, Alexander **21** 334-336

naturalists
 

- Bartholomaeus Anglicus **21** 24-25

statisticians
 

- Graunt, John **21** 176-178

#### Scientists, French

chemists
 

- Leblanc, Nicolas **21** 256-258

inventors
 

- Jacquard, Joseph Marie **21** 216-218
- Laennec, René **21** 247-249

mathematicians
 

- Germain, Sophie **21** 157-158

naturalists
 

- Rafinesque, Constantine Samuel **21** 359-361

obstetricians
 

- LaChapelle, Marie **21** 245-247

physicians
 

- Laennec, René **21** 247-249

#### Scientists, German

biochemists
 

- Marggraf, Andreas **21** 273-275

cartographers
 

- Behaim, Martin **21** 30-32

chemists
 

- Hahnemann, Samuel **21** 190-193
- Marggraf, Andreas **21** 273-275

engineers
 

- Lilienthal, Otto **21** 260-262
- Otto, Nikolaus **21** 331-333

inventors
 

- Otto, Nikolaus **21** 331-333

pharmacists
 

- Sertürner, Friedrich **21** 379-381

physicians
 

- Forssmann, Werner **21** 140-141
- Hahnemann, Samuel **21** 190-193

#### Scientists, Italian

astronomers
 

- Fracastoro, Girolamo **21** 144-147

inventors
 

- Cristofori, Bartolomeo **21** 94-96

physicians
 

- Fracastoro, Girolamo **21** 144-147
- Ramazzini, Bernardino **21** 362-364

**SCIPIO AFRICANUS MAJOR, PUBLIUS CORNELIUS** (236-184/183 B.C.), Roman general **14** 61-62

**SCIPIO AFRICANUS MINOR, PUBLIUS CORNELIUS AEMILIANUS** (185/184-129 B.C.), Roman general **14** 62-63

**SCORSESE, MARTIN** (born 1942), American filmmaker and screenwriter **14** 63-65

De Niro, Robert **21** 103-106

Herrmann, Bernard **21** 199-202

**SCOTT, DRED** (1795-1858), African American revolutionary **14** 65-66

**SCOTT, FRANCIS REGINALD** (1899-1985), Canadian poet, political activist, and constitutional theorist **14** 66-67

**SCOTT, ROBERT FALCON** (1868-1912), English naval officer and polar explorer **14** 67-68

**SCOTT, SIR WALTER** (1771-1832), Scottish novelist and poet **14** 68-70

**SCOTT, WINFIELD** (1786-1866), American general **14** 70-71

**SCRIABIN, ALEXANDER NIKOLAYEVICH** (1871-1915), Russian composer and pianist **14** 71-72

**SCRIPPS, EDWARD WYLLIS** (1854-1926), American newspaper publisher **14** 72-73

**Scripture studies**  
see Bible

**SCULLIN, JAMES HENRY** (1876-1953), Australian politician **14** 73

**SEABORG, GLENN THEODORE** (1912-1999), American chemist and chairman of the Atomic Energy Commission **14** 74-76

**SEABURY, SAMUEL** (1729-1796), American theologian **14** 76

**SEALE, ROBERT GEORGE** (Bobby; born 1936), militant activist and a founder of the Black Panther Party **14** 77-78

**SEAMAN, ELIZABETH COCHRANE** (1864-1922), American journalist and reformer **14** 78-80

**SEATTLE** (c. 1788-1866), Native American tribal chief **14** 80-81

**SEDDON, RICHARD JOHN** (1845-1906), New Zealand politician **14** 81-82

**SEDGWICK, ADAM** (1785-1873), English geologist **14** 82-83

**SEEGER, PETE** (born 1919), American folksinger and activist **14** 83-84

**SEFERIS, GEORGE** (Georgios Seferiadis; 1900-71), Greek poet and statesman **14** 84-85

**SEGAL, GEORGE** (born 1924), American sculptor **14** 85-87

**SEGOVIA, ANDRÉS** (1893-1987), Spanish guitarist **14** 87-88

**Segregation** (racial, United States)  
see African American history (United States)

**SEIBERT, FLORENCE B.** (1897-1991), American biochemist **14** 89-90

**SEJO** (1417-1468), king of Korea 1453-68 **14** 90-91

**SEJONG** (1397-1450), king of Korea 1418-50 **14** 91-92

**SELENA** (Selena Quintanilla-Perez; 1971-1995), Hispanic-American singer **18** 365-367

**SELEUCUS I** (circa 358-281 B.C.), Macedonian general, king of Babylonia and Syria **14** 92-93

**SELIGMAN, EDWIN ROBERT ANDERSON** (1861-1939), American economist and editor **14** 93-94

**SELIM I** (circa 1470-1520), Ottoman sultan 1512-20 **14** 94-95

**SELIM III** (1761-1808), Ottoman sultan 1789-1807 **14** 95-96

**SELKIRK, 5TH EARL OF** (Thomas Douglas; 1771-1820), Scottish colonizer in Canada **14** 96

**SELLARS, WILFRED** (1912-1989), American philosopher **14** 96-98

**SELLERS, PETER RICHARD HENRY** (1925-1980), British comedy genius of theater, radio, television, and movies **14** 98-99

**SELZNICK, DAVID OLIVER** (1902-1965), American filmmaker **20** 333-335

**SEMENTOV, NIKOLAI NIKOLAEVICH** (1896-1986), Russian physicist and physical chemist **14** 101

**SEMMELWEIS, IGNAZ PHILIPP** (1818-1865), Hungarian physician **14** 101-102

**SEMMES, RAPHAEL** (1809-1877), American Confederate naval officer **14** 102-103

**SEN, RAM CAMUL** (1783-1844), Bengali intellectual and entrepreneur **13** 16-17

**Senate, U.S.**  
see U.S. Senate

**SENDAK, MAURICE** (born 1928), American author, artist, and illustrator **19** 329-331

**Seneca Oil Company**  
Drake, Edwin **21** 108-110

**SENECA THE YOUNGER, LUCIUS ANNAEUS** (circa 4 B.C.-A.D. 65), Roman philosopher **14** 103-105

**SENFL, LUDWIG** (circa 1486-circa 1543), Swiss-born German composer **14** 105-106

**SENGHOR, LÉOPOLD SÉDAR** (born 1906), Senegalese poet, philosopher, and statesman **14** 106-107

**SENNACHERIB** (ruled 705-681 B.C.), king of Assyria **14** 108

**SENNETT, MACK** (1884-1960), American film producer and director **14** 108-109

**SEQUOYAH** (circa 1770-1843), American Cherokee Indian scholar **14** 110-111

**Serbian Republic** (former kingdom; former republic of Yugoslavia)  
Princip, Gavrilo **21** 353-355

**Sergeant York** (film)  
Cooper, Gary **21** 85-87

**SERRA, JUNIPERO** (Miguel José Serra; 1713-84), Spanish Franciscan

missionary, founder of California missions **14** 111-112

**SERRANO ELÍAS, JORGE ANTONIO** (born 1945), president of Guatemala (1991-1993) **14** 112-113

**SERTÜRNER, FRIEDRICH** (Friedrich Wilhelm Adam Ferdinand Sertürner; 1783-1841), Prussian pharmacist **21** 379-381

**SERVAN-SCHREIBER, JEAN-JACQUES** (born 1924), French journalist and writer on public affairs **14** 113-115

**SERVETUS, MICHAEL** (circa 1511-53), Spanish religious philosopher **14** 115-116

**SESSHU, TOYA** (1420-1506), Japanese painter and Zen priest **14** 116-117

**SESSIONS, ROGER HUNTINGTON** (1896-1985), American composer **14** 117-118

**SETON, ELIZABETH ANN BAYLEY** (1774-1821), American Catholic leader **14** 118-119

**SETON, ERNEST THOMPSON** (1860-1946), Canadian author and co-founder of the Boy Scouts of America **14** 119-120

**SETTIGNANO, DESIDERIO DA** (1428/31-1464), Italian sculptor **4** 509

**SEURAT, GEORGES PIERRE** (1859-1891), French painter **14** 120-122

**SEVERINI, GINO** (1883-1966), Italian painter **14** 122

**SEVERUS, LUCIUS SEPTIMIUS** (146-211), Roman emperor 193-211 **14** 109-110

**SEVIER, JOHN** (1745-1815), American frontiersman, soldier, and politician **14** 122-123

**SEWALL, SAMUEL** (1652-1730), American jurist and diarist **14** 123-124

**SEWARD, WILLIAM HENRY** (1801-1872), American statesman **14** 124-125

**Sewing machine**  
Hunt, Walter **21** 210-212  
Starley, James **21** 392-393

**SEXTON, ANNE** (Anne Gray Harvey; 1928-74), American "confessional" poet **14** 125-126

**SEYMOUR, HORATIO** (1810-1886), American politician **14** 126-127

**SEYMOUR, JANE** (1509-1537), third wife and queen consort of Henry VIII of England **18** 367-368

**SFORZA, LODOVICO** (1452-1508), duke of Milan **14** 127-128

**SHABAKA** (ruled circa 712-circa 696 B.C.), Nubian king, pharaoh of Egypt **14** 130

**SHABAZZ, BETTY** (1936-1997), African American educator, activist, and health administrator **14** 130-132

**SHACKLETON, SIR ERNEST HENRY** (1874-1922), British explorer **14** 132-133

**SHAFFER, PETER LEVIN** (born 1926), English/American playwright **14** 133-135

**SHAFTESBURY, 1ST EARL OF** (Anthony Ashley Cooper; 1621-83), English statesman **14** 135-136

**SHAFTESBURY, 3D EARL OF** (Anthony Ashley Cooper; 1671-1713), English moral philosopher **14** 136-137

**SHAFTESBURY, 7TH EARL OF** (Anthony Ashley Cooper; 1801-85), English social reformer **14** 137-138

**SHAH JAHAN** (1592-1666), Mogul emperor of India 1628-58 **14** 138-139

**SHAHN, BEN** (1898-1969), American painter, graphic artist, and photographer **14** 139-140

**SHAHPUR II** (310-379), king of Persia **14** 140-141

**SHAKA** (circa 1787-1828), African Zulu military monarch **14** 141-142

**SHAKESPEARE, WILLIAM** (1564-1616), English playwright, poet, and actor **14** 142-145  
performances  
Kean, Edmund **21** 237-239

**SHALIKASHVILI, JOHN MALCHASE DAVID** (born 1936), chairman of the U.S. Joint Chiefs of Staff **14** 145-147

**SHAMIR, YITZCHAK** (Yizernitsky; born 1914), Israeli prime minister and leader of the Likud Party **14** 147-149

**SHAMMAI** (flourished 1st century B.C.), Jewish sage **14** 149

**SHANG YANG** (circa 390-338 B.C.), Chinese statesman and political philosopher **14** 149-150

**SHANKARA** (Shankaracharya; circa 788-820), Indian philosopher and reformer **14** 150-151

**SHANKER, ALBERT** (1928-1977), American education leader **14** 151-153

**SHANNON, CLAUDE ELWOOD** (born 1916), American mathematician **14** 153-154

**SHAPEY, RALPH** (born 1921), American composer, conductor, and teacher **14** 154-155

**SHAPLEY, HARLOW** (1885-1972), American astronomer **14** 155-156

**SHARIATI, ALI** (1933-1977), "Ideologue of the Iranian Revolution" **14** 156-157

**SHARIF, NAWAZ** (Niam Nawaz Sharif; born 1949), Pakistani prime minister **19** 331-333

**SHARON, ARIEL** (Arik; born 1928), Israeli politician and defense minister **14** 157-159

**SHARPTON, AL** (born 1954), African American civil rights leader and minister **14** 159-162

**SHAW, ANNA HOWARD** (1847-1919), American suffragist leader, reformer, and women's rights activist **14** 162-163

**SHAW, GEORGE BERNARD** (1856-1950), British playwright, critic, and pamphleteer **14** 163-164

**SHAW, LEMUEL** (1781-1861), American jurist **14** 164-165

**SHAW, MARY** (born 1943), American computer science professor **14** 165-167

**SHAW, RICHARD NORMAN** (1831-1912), British architect **14** 167-168

**SHAWN, WILLIAM** (1907-1992), American editor **19** 333-335

**SHAYS, DANIEL** (circa 1747-1825), American Revolutionary War Captain **14** 168

**SHCHARANSKY, ANATOLY BORISOVICH** (born 1948), prominent figure of the Helsinki Watch Group **14** 168-170

**SHEELER, CHARLES** (1883-1965), American painter **14** 170-171

**SHEEN, FULTON J.** (1895-1979), American Roman Catholic bishop and television host **14** 171-172

**SHELDON, CHARLES M.** (1857-1946), American social reformer who also wrote *In His Steps* **14** 172-174

**SHELLEY, MARY WOLLSTONECRAFT** (1797-1851), English author **14** 174-176

**SHELLEY, PERCY BYSSHE** (1792-1822), English romantic poet **14** 176-178

**SHEPARD, ALAN** (1923-1998), American astronaut **14** 178-180

**SHEPARD, SAM** (Samuel Shepard Rogers VII; born 1943), American playwright, rock performer, and film actor **14** 180-181

**SHERATON, THOMAS** (1751-1806), English furniture designer **14** 181-182

**SHERIDAN, PHILIP HENRY** (1831-1888), American general **14** 182-183

**SHERIDAN, RICHARD BRINSLEY** (1751-1816), British playwright and orator **14** 183-184

**SHERMAN, CINDY** (Cynthia Morris Sherman; born 1954), American photographer **19** 335-337

**SHERMAN, JOHN** (1823-1900), American politician **14** 184-185

**SHERMAN, ROGER** (1721-1793), American patriot **14** 185-186

**SHERMAN, WILLIAM TECUMSEH** (1820-1891), American general **14** 186-187

**SHERRINGTON, SIR CHARLES SCOTT** (1857-1952), English physiologist **14** 187-189

**SHERWOOD, ROBERT EMMET** (1896-1955), American playwright **14** 189-190

**SHESTOV, LEV** (Lev Isaakovich Schwarzmann; 1866-1938), Russian Jewish thinker and literary critic **14** 190-191

**SHEVARDNADZE, EDUARD AMYROSEVICH** (born 1928), foreign minister of the U.S.S.R. (1985-1990) **14** 191-193

**SHIH KO-FA** (died 1644), Chinese scholar-soldier **14** 194-195

**SHIH LE** (274-333), Chinese emperor 330-333 **14** 195

**SHIHAB, FU'AD** (1903-1973), Father of the Lebanese Army and president of Lebanon (1958-1964) **14** 193-194

**SHILS, EDWARD ALBERT** (born 1911), American sociologist **14** 195-197

**SHINRAN** (1173-1262), Japanese Buddhist monk **14** 197

**SHIPPEN, EDWARD** (1728-1806), American jurist **14** 197-198

**SHIRER, WILLIAM L.** (born 1904), American journalist and historian who wrote on the history of Nazi Germany **14** 198-199

**SHOCKLEY, WILLIAM** (1910-1989), American physicist **14** 200-202

**SHOEMAKER, GENE** (Eugene Merle Shoemaker; 1928-1997), American geologist and planetary scientist **20** 335-338

**SHOEMAKER, WILLIE** (Billy Lee Shoemaker; born 1931), American jockey and horse trainer **21** 381-383

**SHOLEM ALEICHEM** (Sholem Rabinowitz; 1859-1916), Russian-born American author **14** 202-203

**SHOLES, CHRISTOPHER LATHAM** (1819-1890), American publisher, inventor, and social reformer **21** 383-385

**SHOLOKHOV, MIKHAIL ALEKSANDROVICH** (1905-1984), Russian novelist **14** 203-204

**SHORT, WALTER** (1880-1949), American army officer **19** 337-339

**Shorthand writing**  
Gregg, John Robert **21** 178-180

**SHOSTAKOVICH, DMITRI DMITRIEVICH** (1906-1975), Russian composer **14** 204-205

**SHOTOKU TAISHI** (573-621), Japanese regent, statesman, and scholar **14** 205-207

**SHREVE, HENRY MILLER** (1785-1851), American steamboat designer and builder **14** 207

**SHRIVER, EUNICE KENNEDY** (born 1921), American activist **19** 339-341

**SHUBERT BROTHERS** (1883-1963), theatrical managers **14** 207-209

**SHULTZ, GEORGE PRATT** (born 1920), labor and economics specialist, educator, businessman, and international negotiator **14** 209-211

**SIBELIUS, JEAN JULIUS CHRISTIAN** (1865-1957), Finnish composer **14** 211-212

**Sicard, Abbé** (1742-1822), French instructor for the deaf and mute  
Epée, Charles-Michel de l'**21** 120-122

**SICKERT, WALTER RICHARD** (1860-1942), English painter **14** 212-213

**SICKLES, DANIEL EDGAR** (1819-1914), American politician and diplomat **21** 385-388

**SIDGWICK, HENRY** (1838-1900), English philosopher and moralist **14** 213

**SIDNEY, SIR PHILIP** (1554-1586), English poet, courtier, diplomat, and soldier **14** 214-215

**SIEBERT, MURIEL** (born 1932), American businesswoman **18** 368-370

**SIEGEL, BENJAMIN** ("Bugsy"; 1906-1947), American gangster **14** 215-216

**SIENKIEWICZ, HENRYK** (1846-1916), Polish novelist and short-story writer **14** 216-217

**SIERRA, JUSTO** (1848-1912), Mexican educator, writer, and historian **14** 217

**SIEYÈS, COMTE EMMANUEL JOSEPH** (1748-1836), French statesman and political writer **14** 217-218

**SIFTON, SIR CLIFFORD** (1861-1929), politician who helped turn the Canadian West into a premier agricultural area **14** 219-220

**SIGISMUND** (1368-1437), Holy Roman emperor 1411-37, king of Bohemia 1420-37, and king of Hungary 1385-1437 **14** 220-221

**Sign language**  
Epée, Charles-Michel de l'**21** 120-122

**SIGNORELLI, LUCA** (circa 1445/50-1523), Italian painter **14** 221-222

**SIHANOUK, PRINCE NORODOM** (born 1922), Cambodian nationalist and political leader **14** 222-223

**SIKORSKY, IGOR** (1889-1972), Russian-American aeronautical engineer, aircraft manufacturer, and inventor **14** 223-224

**SIKORSKI, WLADYSLAW** (1881-1943), Polish military leader and prime minister **20** 338-340

**SILBER, JOHN** (born 1926), American philosopher and educator **14** 224-226

**SILES ZUAZO, HERNAN** (1914-1996), Bolivian politician **18** 370-373

**SILKO, LESLIE** (Leslie Marmon Silko; born 1948), Native American author and poet **14** 226-227

**SILKWOOD, KAREN** (1946-1974), American antinuclear activist **14** 227-229

**SILLIMAN, BENJAMIN** (1779-1864), American chemist, naturalist, and editor **14** 229-230

**SILLS, BEVERLY** (Belle Miriam Silverman; born 1929), American child performer, coloratura soprano, and operatic superstar **14** 230-231

**SILONE, IGNAZIO** (1900-1978), Italian novelist and essayist **14** 231-232

**SILVER, ABBA HILLEL** (1893-1963), American rabbi and Zionist leader **14** 232-233

**Silver mining**  
Guggenheim, Daniel **21** 185-187

**SILVERSTEIN, SHEL** (1932-1999), American author and poet **19** 341-343

**SIMENON, GEORGES** (1903-1989), Belgian novelist **14** 233-234

**SIMMEL, GEORG** (1858-1918), German sociologist and philosopher **14** 234-235

**SIMMS, WILLIAM GILMORE** (1806-1870), American author **14** 235-236

**SIMON, HERBERT ALEXANDER** (born 1916), American Nobelist in economics **14** 236-237

**SIMON, JULES FRANÇOIS** (1814-1896), French philosopher, writer, and statesman **14** 237-238

**SIMON, NEIL** (Marvin Neil Simon; born 1927), American playwright **18** 373-374

**SIMON, PAUL** (born 1928), newspaper publisher, Illinois state legislator, lieutenant governor, and U.S. representative and senator **14** 238-239

**SIMONOV, KONSTANTIN MIKHAILOVICH** (1915-1979), Soviet poet and novelist **14** 239-240

**SIMPSON, GEORGE GAYLORD** (1902-1984), American paleontologist **14** 240-242

**SIMPSON, LOUIS ASTON MARANTZ** (born 1923), American poet, critic, and educator **14** 243-244

**SIMPSON, WALLIS** (Bessie Wallis Warfield Simpson, Duchess of Windsor; 1896-1986), American socialite and wife of Edward VIII, King of England **19** 343-345

**SIMS, WILLIAM SOWDEN** (1858-1936), American admiral **14** 244

**SIN, JAIME L.** (born 1928), Filipino cardinal of the Roman Catholic Church **14** 244-245

**SINAN, KODJA MIMAR** (1489-1578), Ottoman architect **14** 245-246

**SINATRA, FRANCIS ALBERT** (Frank Sinatra; 1915-1998), American singer **14** 246-248

**SINCLAIR, UPTON BEALE, JR.** (1878-1968), American novelist and political writer **14** 248-249

**SINGER, ISAAC BASHEVIS** (1904-1991), Polish-American author **14** 249-250

**SINGER, ISAAC M.** (1811-1875), American inventor of the sewing machine **14** 250

**SINGER, MAXINE** (born Maxine Frank, 1931), American biochemist and geneticist **14** 251-252

**SINGER, PETER ALBERT DAVID** (born 1946), Australian philosopher and author of *Animal Liberation* **14** 253-254

**SINGH, VISHWANATH PRATAP** (born 1931), prime minister of India (1989-1990) **14** 254-256



**SIQUEIROS, DAVID ALFARO** (1896-1974), Mexican mural painter **14** 256

**SIRICA, JOHN JOSEPH** (1904-1992), U.S. district court judge who presided over the Watergate affair **14** 257-258

**SISMONDI, JEAN CHARLES LÉONARD SIMONDE DE** (1773-1842), Swiss-born historian and political economist **14** 258-259

**Sisters of Charity of Nevers** (religious congregation)  
Bernadette of Lourdes **21** 34-36

**SISULU, NONTSIKELELO ALBERTINA** (born 1918), leader of the anti-apartheid movement in South Africa **14** 259-261

**SISULU, WALTER MAX ULYATE** (born 1912), leader of the African National Congress (ANC) of South Africa **14** 261-262

**SITHOLE, NDABANINGI** (born 1920), African nationalist **14** 262-264

**SITTING BULL** (circa 1834-90), American Indian leader and medicine man **14** 264-265

**SITWELL, DAME EDITH** (1887-1964), English poet and critic **14** 265-266

**ŚIVAJI** (1627-1680), Indian warrior and leader of a Hindu nation **14** 266-267

**SIXTUS V** (Felice Perreti; 1520-90), pope 1585-90 **14** 267-268

**SIZA, ALVARO** (Alvaro Joaquim Melo Siza Vieira; born 1933), Portuguese architect **18** 375-376

**SKELTON, JOHN** (circa 1460-1529), English poet and humanist **14** 268-269

**SKINNER, BURRHUS FREDERIC** (1904-1990), American experimental psychologist **14** 269-270

**SKINNER, CORNELIA OTIS** (1901-1979), American actress and author **19** 346-348

**SLÁNSKÝ, RUDOLF SALZMANN** (1901-1952), founding member of the Czechoslovak Communist Party and vice-premier of the former Czechoslovakia **14** 270-271

**SLATER, SAMUEL** (1768-1835), English-born American manufacturer **14** 272-273

**SLIDELL, JOHN** (1793-1871), American politician **14** 273

**SLIM, WILLIAM JOSEPH** (a.k.a. Anthony Mills; 1891-1970), English general and governor-general of Australia **18** 377-378

**SLOAN, ALFRED PRITCHARD, JR.** (1875-1966), American automobile executive **14** 274

**SLOAN, JOHN** (1871-1951), American painter **14** 274-275

**SLUTER, CLAUS** (circa 1350-1405/1406), Dutch-Burgundian sculptor **14** 275-276

**SLYE, MAUD** (1879-1954), American pathologist **14** 276-277

**SMALL, ALBION WOODBURY** (1854-1926), American sociologist and educator **14** 277

**SMALLS, ROBERT** (1839-1916), African American statesman **14** 277-278

**SMEAL, ELEANOR** (Eleanor Marie Cutri Smeal; born 1939), American women's rights activist and president of the National Organization for Women **14** 278-280

**SMEATON, JOHN** (1724-1792), English civil engineer **14** 280-281

**SMETANA, BEDŘICH** (1824-1884), Czech composer **14** 281-282

**SMIBERT, JOHN** (1688-1751), Scottish-born American painter **14** 282

**SMITH, ADAM** (1723-1790), Scottish economist and moral philosopher **14** 283-284

**SMITH, ALFRED EMMANUEL** (1873-1944), American politician **14** 284-285

**SMITH, BESSIE** (1894-1937), African American blues singer **14** 285-287

**SMITH, DAVID** (1906-1965), American sculptor **14** 287-288

**SMITH, DEAN EDWARDS** (born 1931), American college basketball coach **18** 378-380

**SMITH, DONALD ALEXANDER** (1st Baron Strathcona and Mount Royal; 1820-1914), Canadian politician and philanthropist **14** 288-289

**SMITH, DORA VALENTINE** (1893-1985), American educator **14** 289-290

**SMITH, GERRIT** (1797-1874), American philanthropist and reformer **14** 290-291

**SMITH, IAN DOUGLAS** (born 1919), African prime minister **14** 291-293

**SMITH, JAMES MCCUNE** (1813-1865), African American physician and author **14** 293-294

**SMITH, JEDEDIAH S.** (1799-1831), American trapper, fur trader, and explorer **14** 294-295

**SMITH, JOHN** (circa 1580-1631), English colonist in America **14** 295-297

**SMITH, JOSEPH** (1805-1844), American Mormon leader **14** 297-298

**SMITH, LILLIAN EUGENIA** (1897-1966), Southern writer and critic of white supremacy and segregation **14** 298-299

**SMITH, MARGARET CHASE** (1897-1995), first woman elected to both houses of Congress **14** 299-300

**SMITH, WILLIAM** (1727-1803), American educator and churchman **14** 301

**SMITH, WILLIAM EUGENE** (1918-1978), American photojournalist **19** 348-350

**SMITHSON, ROBERT** (1938-1973), American sculptor, essayist, and filmmaker **14** 301-303

**SMOHALLA** (1815-1895), Native American warrior, medicine man, and spiritual leader **14** 303-305

**SMOLLETT, TOBIAS GEORGE** (1721-1771), English novelist and satirist **14** 305-307

**SMUIN, MICHAEL** (born 1938), American dancer-choreographer-director **14** 307-309

**SMUTS, JAN CHRISTIAN** (1870-1950), South African soldier and statesman **14** 309-310

**SNEAD, SAM** (Samuel Jackson Snead; born 1912), American golfer **21** 388-390

**SNOW, CHARLES PERCY** (1905-1972), English novelist and physicist **14** 311-312

**SNOW, EDGAR** (1905-1972), American journalist and author **14** 312-313

**SNOWE, OLYMPIA** (born Olympia Jean Bouchles, 1947), U.S. congresswoman and senator **14** 313-314

**SOANE, SIR JOHN** (1753-1837), English architect **14** 314-315

**SOARES, MÁRIO** (Mário Alberto Nobre Lopes Soares; born 1924), first socialist president of Portugal **14** 315-316

**SOBCHAK, ANATOLY ALEXANDROVICH** (1937-2000), popular democratic leader of Russia elected mayor of St. Petersburg in 1990 **14** 317-318

**SOBUKWE, ROBERT MANGALISO** (1924-1978), South African politician **14** 318-319

**Social reform**  
United States  
Folks, Homer **21** 137-140

**Social scientists, American**  
economists (18th-19th century)

- Fink, Albert **21** 133-135  
economists (19th-20th century)
- Ely, Richard **21** 117-120  
educators (19th-20th century)
- Barnett, Marguerite Ross **21** 22-24  
educators (20th century)
- Gregg, John Robert **21** 178-180  
parliamentarians
- Robert, Henry Martyn **21** 367-370  
philologists
- Marsh, George Perkins **21** 275-277  
sociologists (20th century)
- Lee, Rose **21** 258-260
- Wirth, Louis **21** 434-436
- Social scientists, Canadian**  
Naismith, James **21** 311-313
- Social scientists, French**  
educators
- Epée, Charles-Michel de l' **21**  
120-122
- Vincent of Beauvais **21** 416-418  
encyclopedists
- Vincent of Beauvais **21** 416-418
- Social Security Act** (United States; 1935)  
Ely, Richard **21** 117-120
- Sociology** (social science)  
assimilation of ethnic groups  
Lee, Rose **21** 258-260
- Chicago school  
Wirth, Louis **21** 434-436  
urban behavior  
Lee, Rose **21** 258-260
- Wirth, Louis **21** 434-436
- SOCRATES** (469-399 B.C.), Greek  
philosopher and logician **14** 320-321
- SODDY, FREDERICK** (1877-1956),  
English chemist **14** 321-323
- SÖDERBLOM, NATHAN** (Lars Jonathan  
Söderblom; 1866-1931), Swedish  
Lutheran archbishop **14** 323-324
- Sodium** (element—chemistry)  
Leblanc, Nicolas **21** 256-258
- SOELLE, DOROTHEE** (born 1929),  
German theologian, political activist,  
and feminist **14** 324-325
- SOL CH'ONG** (circa 680-750), Korean  
Confucian scholar **14** 325-326
- SOLÍS, JUAN DÍAZ DE** (circa 1470-  
1516), Spanish explorer **14** 326
- SOLOMON** (ruled circa 965-circa 925  
B.C.), king of the ancient Hebrews **14**  
326-327
- SOLON** (active 594 B.C.), Greek  
statesman and poet **14** 327-328
- SOLOVEITCHIK, JOSEPH BAER** (1903-  
1993), Jewish theologian and  
philosopher **14** 328-329
- SOLOVIEV, VLADIMIR SERGEEVICH**  
(1853-1900), Russian philosopher and  
religious thinker **14** 329-330

- SOLZHENITSYN, ALEXANDER  
ISAYEVICH** (born 1918), Soviet  
novelist **14** 330-332
- SOMBART, WERNER** (1863-1941),  
German economic historian **14**  
332-333
- Some Like It Hot** (film)  
Wilder, Billy **21** 430-432
- SOMERSET, DUKE OF** (Edward Seymour;  
1506-52), English statesman **14**  
333-334
- SOMERVILLE, EDITH ANNE CENONE**  
(1858-1949), Irish author **14** 334-335
- SOMERVILLE, MARY** (1780-1872),  
Scottish mathematician, physicist, and  
geographer **20** 340-342
- Somerville and Ross** (pseudonym)  
see Edith Anna O'Enone Somerville
- SOMOZA, ANASTASIO** (1896-1956),  
Nicaraguan dictator and military leader  
**14** 335-336
- SOMOZA DEBAYLE, ANASTASIO** (1925-  
1980), president of Nicaragua (1967-  
1979) **14** 336-337
- SONDHEIM, STEPHEN** (born 1930),  
American composer and lyricist **14**  
337-338
- SONG SISTERS** (Ailing Song, 1890-1973;  
Meiling Song, 1898-1919; and  
Qingling Song, 1890-1981) Chinese  
political and social activists **14**  
338-341
- SONJO** (1552-1608), king of Korea  
1567-1608 **14** 341-342
- SONTAG, SUSAN** (born 1933), American  
essayist **14** 342-343
- SOPHOCLES** (496-406 B.C.), Greek  
playwright **14** 343-345
- SOPWITH, THOMAS OCTAVE  
MURDOCH** (1888-1989), British  
aviation industrialist and pioneer pilot  
**14** 345-346
- Sorcier, Le** (opera)  
Philidor, François-André **21** 347-349
- SORDELLO** (ca. 1180-ca. 1269), Italian  
poet and troubadour **20** 342-343
- SOREL, ALBERT** (1842-1906), French  
diplomatic historian **14** 346-347
- SOREL, GEORGES** (1847-1922), French  
philosopher **14** 347-348
- SOROKIN, PITIRIM A.** (1889-1968),  
Russian-American sociologist **14**  
348-349
- Sorosis** (woman's club; United States)  
Croly, Jane **21** 96-96
- SOTATSU, TAWARAYA** (circa 1570-circa  
1643), Japanese painter **14** 349

- SOUFFLOT, JACQUES GERMAIN** (1713-  
1780), French architect **14** 349-350
- SOULAGES, PIERRE** (born 1919), French  
painter **14** 350-351
- SOULÉ, PIERRE** (1801-1870), American  
politician and diplomat **14** 351-352
- Sound of Music, The** (musical)  
Bennett, Robert Russell **21** 32-34
- SOUSA, HENRIQUE TEIXEIRA DE** (born  
1919), Cape Verdean novelist **14**  
352-353
- SOUSA, JOHN PHILIP** (1854-1932),  
American bandmaster and composer  
**14** 353-354
- SOUSA, MARTIM AFONSO DE** (circa  
1500-64), Portuguese colonizer and  
statesman **14** 354-355
- SOUTER, DAVID H.** (born 1939), U.S.  
Supreme Court justice **14** 355-356
- South African War** (1899-1902)  
see Boer War
- South Pacific** (musical)  
Bennett, Robert Russell **21** 32-34
- SOUTHEY, ROBERT** (1774-1843),  
English poet and author **18** 381-382
- SOUTINE, CHAIM** (1894-1943), Russian  
painter **14** 356-357
- SOUVANNA PHOUMA** (1901-1984),  
Laotian prince and premier **14**  
357-358
- SOWELL, THOMAS** (born 1930),  
American economist and author **19**  
350-352
- SOYINKA, WOLE** (Oluwole Akinwande  
Soyinka; born 1934), first African to  
win the Nobel Prize for Literature  
(1986) **14** 358-359
- SPAACK, PAUL HENRI** (1899-1972),  
Belgian statesman and diplomat **14**  
359-360
- SPAATZ, CARL** (1891-1974), American  
army and air force officer **19** 352-355
- Space communications**  
Pierce, John Robinson **21** 349-351
- Spain** (Spanish State; nation, Europe)  
• MONARCHY and REPUBLIC (1492-  
1939)  
expulsion of Jews (1492)  
Torquemada, Tomas de **21**  
407-409
- SPALLANZANI, LAZZARO** (Abbé  
Spallanzani; 1729-99) Italian naturalist  
**14** 360-361
- SPARK, MURIEL SARAH** (born 1918),  
British author **14** 361-362
- SPARKS, JARED** (1789-1866), American  
historian **14** 363

**SPARTACUS** (died 71 B.C.), Thracian gladiator **14** 363-364

**SPAULDING, CHARLES CLINTON** (1874-1952), African American business executive **14** 364-365

**Speakers of the House**  
see Statesmen, American

**Speculum majus** (encyclopedia)  
Vincent of Beauvais **21** 416-418

**SPEER, ALBERT** (1905-1981), German architect and Nazi **19** 355-356

**SPEKE, JOHN HANNING** (1827-1864), English explorer **14** 366-367

**SPELLMAN, CARDINAL FRANCIS JOSEPH** (1889-1967), Roman Catholic archbishop **14** 367

**SPEMANN, HANS** (1869-1941), German experimental embryologist **14** 368-369

**SPENCER, HERBERT** (1820-1903), English philosopher **14** 369-370

**SPENDER, STEPHEN HAROLD** (born 1909), English poet and critic **14** 370-371

**SPENER, PHILIPP JAKOB** (1635-1705), German theologian **14** 372

**SPENGLER, OSWALD** (1880-1936), German philosopher **14** 372-373

**SPENSER, EDMUND** (circa 1552-99), English poet **14** 373-376

**SPERANSKI, COUNT MIKHAIL MIKHAILOVICH** (1772-1839), Russian statesman and reformer **14** 376-377

**SPERRY, ELMER A.** (1860-1930), American inventor **14** 377-379

**SPIELBERG, STEVEN** (born 1947), American filmmaker **14** 379-381

**Spies**  
Dutch  
Mata Hari **21** 279-282  
for Germany  
Mata Hari **21** 279-282  
for the United States  
Marble, Alice **21** 271-273

**SPINOZA, BARUCH** (Benedict Spinoza; 1632-77), Dutch philosopher **14** 381-383

**SPOCK, BENJAMIN McLANE** (1903-1998), American pediatrician and political activist and author of *Baby and Child Care* **14** 383-385

**Sports**  
see Athletes, American

**SPOTSWOOD, ALEXANDER** (1676-1740), British general and colonial governor **14** 385

**SPRAGUE, FRANK JULIAN** (1857-1934), American electrical engineer and inventor **14** 385-386

**SQUIBB, EDWARD ROBINSON** (1819-1900), American physician and pharmacist **21** 390-392

**SSU-MA CH'ÏEN** (145-circa 90 B.C.), Chinese historian **14** 388-389

**SSU-MA HSIANG-JU** (circa 179-117 B.C.), Chinese poet **14** 389-390

**SSU-MA KUANG** (1019-1086), Chinese statesman **14** 390-391

**STAËL, GERMAINE DE** (1766-1817), French-Swiss novelist and woman of letters **14** 391-392

**STAËL, NICOLAS DE** (1914-1955), French painter **14** 392

**Stagecoach** (film)  
Canutt, Yakima **21** 71-72

**STAHL, GEORG ERNST** (1660-1734), German chemist and medical theorist **14** 392-393

**STALIN, JOSEPH** (1879-1953), Soviet statesman **14** 393-396

**Standard Oil Co.** (established 1870)  
Flagler, Henry **21** 135-137

**STANDISH, MYLES** (circa 1584-1656), English military adviser to the Pilgrims **14** 396-397

**STANFORD, LELAND** (1824-1893), American railroad builder and politician **14** 397-398

**STANISLAVSKY, CONSTANTIN** (1863-1938), Russian actor and director **14** 398-399

**STANLEY, SIR HENRY MORTON** (1841-1904), British explorer and journalist **14** 399-400

**STANLEY, WENDELL MEREDITH** (1904-1971), American virologist **14** 400-401

**STANTON, EDWIN McMASTERS** (1814-1869), American statesman **14** 401-402

**STANTON, ELIZABETH CADY** (1815-1902), American feminist and reformer **14** 402-403  
Blackwell, Antoinette Brown **21** 41-43

**STARHAWK** (Miriam Simos; born 1951), theoretician and practitioner of feminist Wicca (witchcraft) in the United States **14** 403-404

**STARLEY, JAMES** (1831-1881), British inventor and businessman **21** 392-393

**STARZL, THOMAS** (born 1926), American surgeon **21** 393-395

**State, U.S. Secretaries of**  
see Statesmen, American—Executive (secretaries of state)

#### Statesmen, American

- EXECUTIVE  
presidents (Republican; 20th century)  
Bush, George Walker **21** 61-64  
vice presidents (Democratic)  
Garner, John **21** 155-157  
vice presidents (Republican)  
Curtis, Charles Brent **21** 99-100
- INDIAN TRIBAL CHIEFS  
19th-20th century  
Captain Jack **21** 72-74
- LEGISLATIVE  
representatives (19th century)  
Butler, Benjamin Franklin **21** 65-67  
representatives (19th-20th century)  
Curtis, Charles Brent **21** 99-100  
representatives (20th century)  
Mathias, Bob **21** 284-286  
senators (18th-19th century)  
Ellsworth, Oliver **21** 115-117  
senators (20th century)  
Curtis, Charles Brent **21** 99-100  
Nye, Gerald **21** 320-323  
Speakers of the House  
Garner, John **21** 155-157

#### Statesmen, British

- lords of the admiralty  
Montagu, John, Fourth Earl of Sandwich **21** 301-303  
members of Parliament  
Baring, Francis **21** 20-22

#### Statesmen, Burgundian

- see Statesmen, French

#### Statesmen, Chinese

- emperors (10th-15th century)  
Chu Yuan-chang **21** 79-81  
emperors (17th-19th century)  
Chien-lung **21** 78-79

#### Statesmen, French

- queens  
Blanche of Castile **21** 45-47

#### Statesmen, Israelite

- see Bible—Old Testament; Jewish history

#### Statesmen, Mexican

- presidents  
Fox, Vicente **21** 142-143

#### Statesmen, Portuguese

- kings  
John II **21** 223-225

#### Statesmen, Russian

- presidents  
Putin, Vladimir **21** 355-358

#### Statistics (mathematics)

- Graunt, John **21** 176-178  
Neyman, Jerzy **21** 316-318

**STEEL, DANIELLE** (born 1947), American author and poet **14** 404-406

**STEEL, DAVID MARTIN SCOTT** (born 1938), Scottish member of Parliament and leader of the Liberal Party **14** 406-407

**STEEL, DAWN** (1946-1997), American movie producer and studio executive **18** 383-384

**STEELE, SIR RICHARD** (1672-1729), British essayist, dramatist, and politician **14** 407-409

**STEFANSSON, VILHJALMUR** (1879-1962), Canadian-American Arctic explorer and scientist **14** 409-410

**STEFFENS, LINCOLN** (1866-1936), American journalist **14** 410-411

**STEGNER, WALLACE** (1909-1993), American author **19** 356-358

**STEICHEN, EDWARD** (1879-1973), American photographer, painter, and museum curator **14** 411-412

**STEIN, EDITH** (1891-1942), German philosopher **14** 412-414

**STEIN, GERTRUDE** (1874-1946), American writer **14** 414-415

**STEIN, BARON HEINRICH FRIEDRICH KARL VOM UND ZUM** (1757-1831), Prussian statesman **14** 415-416

**STEINBECK, JOHN ERNST** (1902-1968), American author **14** 416-417

**STEINEM, GLORIA** (born 1934), American feminist and journalist **14** 418-419

**STEINITZ, WILHELM** (1836-1900), Bohemian American chess player **20** 343-346

**STEINMETZ, CHARLES PROTEUS** (Karl August Rudolf Steinmetz; 1865-1923), German-born American mathematician and electrical engineer **14** 419-420

**STELLA, FRANK** (born 1936), American painter **14** 420-422

**STELLA, JOSEPH** (1877-1946), Italian-born American painter **14** 422

**STENDHAL** (Marie Henri Beyle; 1783-1842), French author **14** 422-425

**STENGEL, CASEY** (Charles Dillon Stengel; 1890-1975), American baseball player and manager **19** 361-363

**STENO, NICOLAUS** (Niels Stensen; 1638-86), Danish naturalist **14** 425-426

**STEPHEN** (1096?-1154), king of England 1135-54 **14** 426-427

**STEPHEN I** (c. 973-1038), king of Hungary **14** 427-428

**STEPHEN, SIR LESLIE** (1832-1904), English historian **14** 429

**STEPHEN HARDING, ST.** (died 1134), English abbot and monastic reformer **14** 428-429

**STEPHENS, ALEXANDER HAMILTON** (1812-1883), American statesman **14** 429-430

**STEPHENS, HELEN** (1918-1994), American athlete **19** 363-365

**STEPHENS, JAMES** (1882-1950), Irish novelist and poet **14** 430-431

**STEPHENS, URIAH** (1821-1882), American labor leader **14** 431-432

**STEPHENSON, GEORGE** (1781-1848), English railway engineer **14** 432-433

**STEPHENSON, ROBERT** (1803-1859), English railway engineer **14** 432-433

**STEPINAC, ALOJZIJE** (1898-1960), Croatian nationalist, Catholic, and anti-Communist **14** 433-435

**STEPTOE, PATRICK** (1913-1988), British physician **20** 346-348

**STERN, ISAAC** (born 1920), American violinist **19** 365-367

**STERN, OTTO** (1888-1969), German-born American physicist **14** 435

**STERNE, LAURENCE** (1713-1768), British novelist **14** 435-437

**stethoscope** (medical instrument) Laennec, René **21** 247-249

**STETTINIUS, EDWARD R., JR.** (1900-1949), American industrialist and statesman **14** 437-438

**STEBEN, BARON FREDERICK WILLIAM AUGUSTUS VON** (1730-1794), German officer in the American Revolution **14** 438-439

**STEVENS, JOHN** (1749-1838), American engineer and inventor **14** 439-440

**STEVENS, JOHN PAUL** (born 1920), U.S. Supreme Court justice **14** 440-441

**STEVENS, NETTIE MARIA** (1861-1912), American biologist and geneticist **14** 441-442

**STEVENS, THADDEUS** (1792-1868), American politician **14** 442-443

**STEVENS, WALLACE** (1879-1955), American poet **14** 443-445

**STEVENSON, ADLAI EWING** (1900-1965), American statesman and diplomat **14** 445-446

**STEVENSON, ROBERT LOUIS** (1850-1894), Scottish novelist, essayist and poet **14** 446-448

**STEVIN, SIMON** (Simon Stevinus; 1548-1620), Dutch mathematician **21** 395-398

**STEWART, ALEXANDER TURNEY** (1803-1876), American dry-goods merchant **14** 448-449

**STEWART, DUGALD** (1753-1828), Scottish philosopher **14** 449

**STEWART, ELLEN** (born 1920), African-American theater founder and director **20** 348-352

**STEWART, JIMMY** (James Maitland Stewart; 1908-1997), American actor **18** 385-386

**STEWART, MARTHA** (nee Martha Kostyra; born 1941), American author, entertainer, and businesswoman **19** 367-369

**STEWART, POTTER** (1915-1985), liberal U.S. Supreme Court justice **14** 449-451

**STIEGEL, HENRY WILLIAM** (1729-1785), German born American iron founder and glassmaker **14** 451

**STIEGLITZ, ALFRED** (1864-1946), American photographer, editor, and art gallery director **14** 451-452 Struss, Karl **21** 398-399

**STILICHO, FLAVIUS** (died 408), Roman general **14** 452-453

**STILL, CLYFFORD** (1904-1980), American Abstract Expressionist artist **14** 453-454

**STILL, WILLIAM** (1821-1902), African American abolitionist, philanthropist, and businessman **14** 454-455

**STILL, WILLIAM GRANT** (born 1895), African American composer **14** 455-456

**STILWELL, JOSEPH WARREN** (1883-1946), American general **14** 456-457

**STIMSON, HENRY LEWIS** (1867-1950), American lawyer and statesman **14** 457-458

**STIRLING, JAMES** (1926-1992), British architect and city planner **14** 458-459

**STIRNER, MAX** (1806-1856), German philosopher **14** 459-460

**STOCKHAUSEN, KARLHEINZ** (born 1928), German composer **14** 460-461

**STOCKTON, ROBERT FIELD** (1795-1866), American naval officer and politician **14** 461-462

**STODDARD, SOLOMON** (1643-1728/29), American colonial Congregational clergyman **14** 462-463

**STOKER, BRAM** (Abraham Stoker; 1847-1912), Irish author **14** 463-464

**STOKES, CARL B.** (1927-1996), African American politician **14** 464-465

**STOLYPIN, PIOTR ARKADEVICH** (1862-1911), Russian statesman and reformer **14** 465-466

**STONE, EDWARD DURRELL** (1902-1978), American architect, educator, and designer **14** 466-468

**STONE, HARLAN FISKE** (1872-1946), American jurist; chief justice of U.S. Supreme Court 1914-46 **14** 468-470

**STONE, I. F.** (Isador Feinstein; 1907-1989), American journalist **14** 470-471

**STONE, LUCY** (1818-1893), American abolitionist and women's suffrage leader **14** 471-472  
Blackwell, Antoinette Brown **21** 41-43

**STONE, OLIVER** (born 1946), American filmmaker **14** 472-475

**STONE, ROBERT ANTHONY** (born 1937), American novelist **14** 475-476

**STOPES, MARIE** (1880-1958), British scientist and birth control advocate **14** 476-478

**STOPPARD, THOMAS** (Thomas Straussler; born 1937), English playwright **14** 478-479

**STORM, THEODOR** (1817-1888), German poet and novelist **14** 479-480

**STORY, JOSEPH** (1779-1845), American jurist and statesman **14** 480-481

**STOSS, VEIT** (circa 1445-1533), German sculptor **14** 481-482

**STOUFFER, SAMUEL A.** (1900-1960), American sociologist and statistician **14** 482-483

**STOVALL, LUTHER McKINLEY** (born 1937), American silkscreen artist **14** 483-484

**STOWE, HARRIET ELIZABETH BEECHER** (1811-1896), American writer **14** 484-485

**STRABO** (circa 64 B.C.-circa A.D. 23), Greek geographer and historian **14** 485-486

**STRACHAN, JOHN** (1778-1867), Canadian Anglican bishop **14** 486-487

**STRACHEY, GILES LYTTON** (1880-1932), English biographer and critic known for his satire of the Victorian era **14** 487-488

**STRACHEY, JOHN** (Evelyn John St. Loe Strachey; 1901-1963), British author and politician **20** 352-354

**STRADIVARI, ANTONIO** (circa 1644-1737), Italian violin maker **14** 488-490

**STRAFFORD, 1ST EARL OF** (Thomas Wentworth; 1593-1641), English statesman **14** 490-491

**STRAND, MARK** (born 1934), fourth Poet Laureate of the United States **14** 491-493

**STRAND, PAUL** (1890-1976), American photographer **19** 369-371

**STRANG, RUTH MAY** (1895-1971), American educator **14** 493-494

**STRASBERG, LEE** (Israel Strasberg; 1901-82), American acting instructor, director, and founding member of the Group Theatre **14** 494-495

**STRAUS, ISIDOR** (1845-1912), American merchant **14** 496

**STRAUSS, DAVID FRIEDRICH** (1808-1874), German historian and Protestant theologian **14** 496-497

**STRAUSS, FRANZ JOSEF** (1915-1988), West German politician **14** 497-498

**STRAUSS, JOHANN, JR.** (1825-1899), Austrian composer **14** 498-499

**STRAUSS, LEO** (1899-1973), German Jewish Socratic political philosopher **14** 499-500

**STRAUSS, LEVI** (Loeb Strauss; 1829-1902), American businessman **20** 354-356

**STRAUSS, RICHARD** (1864-1949), German composer and conductor **14** 500-501

**STRAUSS, ROBERT SCHWARZ** (born 1918), Democratic fundraiser and strategist **14** 501-502

**STRAVINSKY, IGOR FEDOROVICH** (1882-1971), Russian-born composer **14** 502-506

**STRAWSON, SIR PETER FREDRICK** (born 1919), English philosopher **14** 506-507

**STREETON, SIR ARTHUR ERNEST** (1867-1943), Australian landscape painter **14** 507-508

**STREISAND, BARBRA** (Barbara Joan Streisand; born 1942), American entertainer **18** 386-388

**STRESEMANN, GUSTAV** (1878-1929), German statesman and diplomat **14** 508-509

**STRINDBERG, AUGUST** (1849-1912), Swedish author **14** 509-511

**STROESSNER, ALFREDO** (born 1912), Paraguayan statesman **14** 511-512

**STRONG, JOSIAH** (1847-1916), American clergyman and social activist **14** 512-513

**STRUSS, KARL** (1886-1981), American photographer and cinematographer **21** 398-399

**STRUVE, FRIEDRICH GEORG WILHELM VON** (1793-1864), German-born Russian astronomer and geodesist **14** 513

**STUART, GILBERT** (1755-1828), American painter **14** 513-515

**Stuart, House of**  
see Great Britain—1603-1714;  
Scotland

**STUART, JAMES EWELL BROWN** (Jeb; 1833-64), Confederate cavalry officer **14** 515-516

**STUDENT, KURT** (1890-1978), German general **20** 356-358

**STUDI, WES** (born Wesley Studie; born circa 1944), Native American actor **15** 1-2

**STURGES, PRESTON** (Edmund Preston Biden; 1898-1959), American playwright, screenwriter, director, and businessman **19** 371-374

**STURLUSON, SNORRI** (1179-1241), Icelandic statesman and historian **14** 310-311

**STURT, CHARLES** (1795-1869), British officer, explorer, and colonial administrator **15** 2-3

**STURTEVANT, A. H.** (Alfred Henry Sturtevant; 1891-1970), American geneticist **15** 3-5

**STUYVESANT, PETER** (circa 1610-72), Dutch colonial administrator **15** 5-6

**STYRON, WILLIAM** (born 1925), American southern writer of novels and articles **15** 6-8

**SUÁREZ, FRANCISCO** (1548-1617), Spanish philosopher and theologian **15** 8

**SUAZO CÓRDOVA, ROBERTO** (born 1927), physician and president of Honduras (1982-1986) **15** 8-10

**Submarines**  
development  
Bushnell, David **21** 64-65

**SUCKLING, SIR JOHN** (1609-1642), English poet and playwright **15** 10-11

**SUCRE, ANTONIO JOSÉ DE** (1795-1830), Venezuelan general, Bolivian president 1826-28 **15** 11-12

**SUDERMANN, HERMANN** (1857-1928), German dramatist and novelist **15** 12-13

**SUETONIUS TRANQUILLUS, GAIUS** (circa 70-circa 135), Roman administrator and writer **15** 13

**Sugar**  
scientific research  
Marggraf, Andreas **21** 273-275

**SUHARTO** (born 1921), second president after Indonesia's independence **15** 14-15

**SUI WEN-TI** (541-604) Chinese emperor **15** 16-18

**SUIKO** (554-628), empress of Japan 593-628 **15** 15-16

**SUKARNO** (1901-1970), Indonesian statesman, president 1945-66 **15** 18-20

**SULEIMAN I** (the Magnificent; 1494-1566), Ottoman sultan 1520-66 **15** 20-21

**SULLA, LUCIUS CORNELIUS I** (138-78 B.C.), Roman general, dictator 82-79 B.C. **15** 21-22

**SULLIVAN, ED** (Edward Vincent Sullivan; 1902-1974), American television emcee, screenwriter, and author **19** 374-376

**SULLIVAN, SIR ARTHUR SEYMOUR** (1842-1900), English composer **15** 23

**SULLIVAN, HARRY STACK** (1892-1949), American psychiatrist **15** 23-24

**SULLIVAN, JOHN LAWRENCE** (1858-1918), American boxer **15** 24-25

**SULLIVAN, LEON HOWARD** (born 1922), African American civil rights leader and minister **15** 25-27

**SULLIVAN, LOUIS HENRI** (1856-1924), American architect **15** 27-28

**SULZBERGER, ARTHUR OCHS** (born 1926), publisher of the *New York Times* **15** 28-30

**SULZBERGER, ARTHUR OCHS JR.** (born 1951), American newspaper publisher **19** 376-378

**SUMNER, CHARLES** (1811-1874), American statesman **15** 30-31

**SUMNER, WILLIAM GRAHAM** (1840-1910), American sociologist and educator **15** 32

**SUN YAT-SEN** (1866-1925), Chinese statesman, leader of republican revolution **15** 35-39

**SUNDAY, WILLIAM ASHLEY** ("Billy"; 1862-1935), American evangelist **15** 32-33

**SUNDIATA KEITA** (circa 1210-circa 1260), founder of Mali empire in West Africa **15** 33-34

**Sunset Boulevard** (film)  
Von Stroheim, Erich **21** 418-420  
Wilder, Billy **21** 430-432

**Supreme Court** (United States)  
role and power  
Ellsworth, Oliver **21** 115-117

**Surgery** (medical)  
Gross, Samuel David **21** 183-185  
Kellogg, John Harvey **21** 239-242  
Starzl, Thomas **21** 393-395

**SU-SHIH** (Su Tung-p'o; 1037-1101), Chinese author and artist **15** 39-40

**SUTHERLAND, GRAHAM** (1903-1980), English painter **15** 40-41

**SUTTER, JOHN AUGUSTUS** (1803-1880), German-born American adventurer and colonizer **15** 41-42

**SUTTNER, BERTHA VON** (born Countess Bertha Kinsky; 1843-1914), Austrian author and activist **15** 42-44

**SUVOROV, ALEKSANDR VASILIEVICH** (1730-1800), Russian general **15** 44-45

**SUZMAN, HELEN** (born 1917), member of the South African House of Assembly for the Progressive Party **15** 45-46

**SUZUKI, DAISETZ TEITARO** (1870-1966), Japanese translator, teacher, and interpreter of Zen Buddhist thought **15** 46-47

**SVEVO, ITALO** (pseudonym of Ettore Schmitz; 1861-1928), Italian novelist **15** 47-48

**SWAMMERDAM, JAN** (1637-1680), Dutch naturalist **15** 48-49

**SWEDENBORG, EMANUEL** (1688-1772), Swedish scientist, theologian, and mystic **15** 49-50

**SWEELINCK, JAN PIETERSZON** (1562-1621), Dutch composer, organist, and teacher **15** 50-51

**Sweet Sweetback's Baadasssss Song** (film)  
Van Peebles, Melvin **21** 414-416

**SWIFT, JONATHAN** (1667-1745), English-Irish poet, political writer, and clergyman **15** 51-54

**Swimming** (sport)  
Weissmuller, Johnny **21** 425-427

**SWINBURNE, ALGERNON CHARLES** (1837-1909), English poet, dramatist, and critic **15** 54-55

**SWITZER, MARY E.** (1900-1971), American champion of rehabilitation **15** 55-56

**SWOPE, GERARD** (1872-1957), president of General Electric **15** 56-58

**SYDENHAM, BARON** (Charles Edward Poulett Thomson; 1799-1841), English merchant and politician **15** 59-60

**SYDENHAM, THOMAS** (1624-1689), English physician **15** 59-60

**SYED AHMED KHAN** (1817-1898), Moslem religious leader, educationalist, and politician **15** 60

**SYLVIS, WILLIAM** (1828-1869), American labor leader **15** 60-61

**SYNGE, EDMUND JOHN MILLINGTON** (1871-1909), Irish dramatist **15** 61-62

**Syphilis** (medical)  
Fracastoro, Girolamo **21** 144-147

**SZENT-GYÖRGYI, ALBERT VON** (1893-1986), Hungarian-American biochemist **15** 62-64

**SZILARD, LEO** (1898-1964), Hungarian-born nuclear physicist **15** 64-66

**SZOLD, HENRIETTA** (1860-1945), American Jewish leader **15** 66-67

**SZYMANOWSKI, KAROL** (1882-1937), Polish composer **15** 67-68

## T

**TABARI, MUHAMMAD IBN JARIR AL-** (839-923), Moslem historian and religious scholar **15** 69-70

**TABOR, HORACE AUSTIN WARNER** (1830-1899), American mining magnate and politician **15** 70

**TACITUS** (56/57-circa 125), Roman orator and historian **15** 70-72

**TAEUBER-ARP, SOPHIE** (1889-1943), Swiss-born painter, designer, and dancer **15** 73-74

**TAEWON'GUN, HŬNGSON** (1820-1898), Korean imperial regent **15** 74-75

**TAFAWA BALEWA, SIR ABUBAKAR** (1912-1966), Nigerian statesman, prime minister 1957-1966 **15** 75

**TAFT, LORADO** (1860-1936), American sculptor **15** 75-76

**TAFT, ROBERT ALPHONSO** (1889-1953), American senator **15** 76-78

**TAFT, WILLIAM HOWARD** (1857-1930), American statesman, president 1909-1913 **15** 78-81

**TAGORE, RABINDRANATH** (1861-1941), Bengali poet, philosopher, social reformer, and dramatist **12** 529-531

**TAHARQA** (reigned circa 688-circa 663 B.C.), Nubian pharaoh of Egypt **15** 81-82

**TAINÉ, HIPPOLYTE ADOLPHE** (1828-1893), French critic and historian **15** 82-83

**T'AI-TSUNG, T'ANG** (600-649), Chinese emperor **15** 83-84

**TAKAHASHI, KOREKIYO** (1854-1936), Japanese statesman **15** 84-85

**TAL, JOSEF** (Josef Gruenthal; born 1910), Israeli composer, pianist, and professor of music **15** 85-86

**TALBERT, MARY MORRIS BURNETT** (1866-1923), American educator, feminist, civil rights activist, and lecturer **15** 86-88

**TALLCHIEF, MARIA** (born 1925), Native American prima ballerina **15** 88-89

**TALLEYRAND, CHARLES MAURICE DE** (Duc de Tallyrand-Périgord; 1754-1838), French statesman **15** 89-90

**TALLIS, THOMAS** (circa 1505-85), English composer and organist **15** 91

**TALON, JEAN** (1626-1694), French intendant of New France **15** 91-92

**TAMBO, OLIVER REGINALD** (1917-1993), serves as acting president of the African National Congress **15** 92-94

**TAMERLANE** (1336-1405), Turko-Mongol conqueror **15** 94-95

**TAN, AMY** (born 1952), American author **15** 95-96

**TANAKA, KAKUEI** (1918-1993), prime minister of Japan (1972-1974) **15** 96-98

**TANEY, ROGER BROOKE** (1777-1864), American political leader, chief justice of U.S. Supreme Court **15** 98-99

**TANGE, KENZO** (born 1913), Japanese architect and city planner **15** 99-101

**TANGUY, YVES** (1900-1955), French painter **15** 101

**TANIZAKI, JUNICHIRO** (1886-1965), Japanese novelist, essayist, and playwright **15** 101-102

**TANNER, HENRY OSSAWA** (1859-1937), African American painter **15** 102-103

**T'AO CH'ÏEN** (365-427), Chinese poet **15** 104-105

**TAO-AN** (312-385), Chinese Buddhist monk **15** 103-104

**TAO-HSÜAN** (596-667), Chinese Buddhist monk **15** 105

**TAPPAN BROTHERS** (19th century), American merchants and reformers **15** 105-106

**TAQI KHAN AMIR-E KABIR, MIRZA** (circa 1806-52), Iranian statesman **15** 106-107

**TARBELL, IDA MINERVA** (1857-1944), American journalist **15** 107-108

**TARDE, JEAN GABRIEL** (1843-1904), French philosopher and sociologist **15** 108-109

**TARKINGTON, NEWTON BOOTH** (1869-1946), American author **15** 109

**TARLETON, SIR BANASTRE** (1754-1833), English soldier; fought in American Revolution **15** 110

**TARSKI, ALFRED** (1902-1983), Polish-American mathematician and logician **15** 110-111

**TARTAGLIA, NICCOLO** (1500-1557), Italian mathematician **15** 111-112

**TARTINI, GIUSEPPE** (1692-1770), Italian violinist, composer, and theorist **15** 112-113

**Tarzan** (movie character)  
Weissmuller, Johnny **21** 425-427

**TASMAN, ABEL JANSZON** (circa 1603-59), Dutch navigator **15** 113-114

**TASSO, TORQUATO** (1544-1595), Italian poet **15** 114-116

**TATE, ALLEN** (1899-1979), American poet, critic and editor **15** 116

**TATLIN, VLADIMIR EVGRAFOVICH** (1885-1953), Russian avant garde artist **15** 117-118

**TAUSSIG, HELEN BROOKE** (1898-1986), American physician **15** 118-120

**TAWNEY, RICHARD HENRY** (1880-1962), British economic historian and social philosopher **15** 120-121

**TAYLOR, BROOK** (1685-1731), English mathematician **15** 121-122

**TAYLOR, EDWARD** (circa 1642-1729), American Puritan poet and minister **15** 122-123

**TAYLOR, EDWARD PLUNKET** (1901-1989), Canadian-born financier and thoroughbred horse breeder **15** 123-124

**TAYLOR, ELIZABETH ROSEMUND** (born 1932), American film actress **15** 124-125  
Todd, Mike **21** 402-404

**TAYLOR, FREDERICK WINSLOW** (1856-1915), American industrial manager and production engineer **21** 400-402

**TAYLOR, JOHN** (1753-1824), American politician and political theorist **15** 126

**TAYLOR, MAXWELL** (1901-1987), American soldier-statesman-scholar **15** 126-127

**TAYLOR, SUSIE KING** (1848-1912), African American nurse **15** 127-128

**TAYLOR, ZACHARY** (1784-1850), American statesman; president 1849-50 **15** 128-130  
as president  
Marsh, George Perkins **21** 275-277

**TCHAIKOVSKY, PETER ILYICH** (1840-1893), Russian composer **15** 130-132

**TCHEREPNIN, ALEXANDER** (Nikolayevich; 1899-1977), Russian-French and later American composer **15** 132-133

**TE KANAWA, KIRI** (born 1944), lyric soprano from New Zealand **15** 136-137

**Teapot Dome scandal** (United States; 1923)  
Nye, Gerald **21** 320-323

**Technicolor**  
Kalmus, Natalie **21** 233-235

**TECUMSEH** (circa 1768-1813), American Shawnee Indian tribal chief **15** 133

**TEDDER, ARTHUR** (1890-1967), British military leader **19** 379-381

**TEGGART, FREDERICK J.** (1870-1946), comparative historian, librarian, sociologist, and educator who initiated sociology at the University of California **15** 133-134

**TEILHARD DE CHARDIN, MARIE JOSEPH PIERRE** (1881-1955), French theologian and paleontologist **15** 134-136

**TELEMANN, GEORG PHILIPP** (1681-1767), German composer **15** 137-138

**Telescope** (astronomy)  
Reber, Grote **21** 364-366

**TELESIO, BERNARDINO** (1509-1588), Italian philosopher of nature **15** 138-139

**Television** (United States)  
development of  
Goldmark, Peter Carl **21** 170-172  
music for  
Kander, John **21** 235-237  
personalities  
Nelson, Rick **21** 314-316  
producers  
Ward, Jay **21** 421-423  
scriptwriters for  
Peckinpah, Sam **21** 338-340  
sportscasters  
Cousy, Bob **21** 92-94

**TELLER, EDWARD** (born 1908), Hungarian-American physicist **15** 139-141

**Temperance movement** (United States) supporters  
Blackwell, Antoinette Brown **21** 41-43

**TEMPLE, WILLIAM** (1881-1944), ecumenist and archbishop of Canterbury **15** 141-143

**TENGKU, ABDUL RAHMAN** ("the Tengku"; born 1903), first prime minister of the Federation of Malaya and later of Malaysia **15** 340-341

**TENNENT, GILBERT** (1703-1764), American Presbyterian clergyman and evangelist **15** 143-144

**Tennis** (sport)  
Budge, Don **21** 57-59  
Marble, Alice **21** 271-273

**TENNYSON, ALFRED** (1st Baron Tennyson; 1809-92), English poet **15** 144-146

**TENSKWATAWA** (Lalewithaka; 1775-1836), Shawnee religious leader **20** 359-362

**TENZING NORGAY** (born 1914), Nepalese mountain climber **20** 362-364

**TER BORCH, GERARD** (1617-1681), Dutch painter **15** 146

**TERENCE** (Publius Terentius Afer; 195-159 B.C.), Roman comic playwright **15** 146-148

**TERESA** (Mother Teresa; Agnes Gonxha Bojaxhiu; 1910-1997), Catholic nun and missionary; Noble Prize for Peace recipient **15** 148-151

**TERESA OF AVILA** (Teresa Sanchez de Cepeda y Ahumada; 1515-1582), Spanish nun **20** 364-366

**TERESHKOVA, VALENTINA** (born 1937), Russian cosmonaut **15** 151-152

**TERKEL, LOUIS** ("Studs"; born 1912), American radio personality and author **15** 152-153

**TERMAN, LEWIS MADISON** (1877-1956), American psychologist **15** 153-154

**TERRA, GABRIEL** (1873-1942), Uruguayan politician, president 1933-38 **15** 154-155

**Terrorists**  
Europe  
Princip, Gavrilo **21** 353-355

**TERTULLIAN** (Quintus Septimius Florens Tertullianus; circa 160-circa 220), North African theologian and apologist **15** 155-156

**TESLA, NIKOLA** (1856-1943), Croatian-American inventor and electrical engineer **15** 156-157

**TEWODROS II** (1820-1868), emperor of Ethiopia **15** 158-159

**Texas** (state, United States)  
governors  
Bush, George Walker **21** 61-64

**THACKERAY, WILLIAM MAKEPEACE** (1811-1863), British novelist **15** 159-161

**THALBERG, IRVING** (1899-1936), American filmmaker **20** 366-368

**THALES** (circa 624-circa 545 B.C.), Greek natural philosopher **15** 161

**THANT, U** (1909-1974), Burmese statesman and UN secretary general **15** 161-162

**THARP, MARIE** (born 1920), American geologist and oceanographic cartologist **15** 162-164

**THARP, TWYLA** (born 1941), American dancer and choreographer **15** 164-165

**THATCHER, MARGARET HILDA** (born 1925), prime minister of Great Britain (1979-1990) **15** 165-168

**THAYER, ELI** (1819-1899), American reformer, agitator, and promoter **15** 168

**THAYER, SYLVANUS** (1785-1872), American educator and engineer **15** 168-169

**THEILER, MAX** (1899-1972), American epidemiologist and microbiologist **15** 169-170

**THEMISTOCLES** (circa 528-462 B.C.), Athenian politician **15** 170-171

**THEOCRITUS** (circa 310-circa 245 B.C.), Greek poet **15** 171-172

**THEODORIC THE GREAT** (453/454-526), king of the Ostrogoths **15** 175-176

**THEODOSIUS** (circa 346-395), Roman emperor 379-395 **15** 176

**THEORELL, AXEL HUGO THEODOR** (born 1903), Swedish biochemist **15** 176-177

**THERESA, ST.** (Theresa of Ávila; 1515-82), Spanish nun **15** 178-179

**THEROUX, PAUL** (born 1941), expatriate American writer of fiction and of chronicles of train travels **15** 179-180

**THIBAUT IV** (Thibaut I of Navarre; 1201-53), Count of Champagne and Brie **15** 180-181

**THIERS, LOUIS ADOLPHE** (1797-1877), French journalist, historian, and statesman **15** 181-182

**THIEU, NGUYEN VAN** (born 1923), South Vietnamese president **15** 182-183

**THOMAS, CLARENCE** (born 1948), U.S. Supreme Court justice **15** 186-188

**THOMAS, DAVE** (R. David Thomas; born 1932), American businessman **18** 389-397

**THOMAS, DYLAN MARLAIS** (1914-1953), British poet **15** 188-190

**THOMAS, GEORGE HENRY** (1816-1870), American general **15** 190-191

**THOMAS, HELEN** (born 1920), American journalist **19** 381-384

**THOMAS, NORMAN MATTOON** (1884-1968), American Socialist politician, author, and lecturer **15** 191-192

**THOMAS, THEODORE** (1835-1905), American orchestral conductor **15** 192-193

**THOMAS, WILLIAM ISAAC** (1863-1947), American sociologist and educator **15** 193

**THOMAS AQUINAS, ST.** (circa 1224-74), Italian philosopher and theologian **15** 183-186

**THOMASIU** (1655-1728), German philosopher and jurist **15** 193-194

**THOMPSON, DALEY** (Francis Ayodele Thompson; born 1958), English track and field athlete **20** 368-370

**THOMPSON, DAVID** (1770-1857), Canadian explorer, cartographer, and surveyor **15** 194-195

**THOMPSON, DOROTHY** (1894-1961), conservative American journalist **15** 195-196

**THOMPSON, HUNTER STOCKTON** (born 1939), American journalist **15** 196-198

**THOMSON, SIR GEORGE PAGET** (1892-1975), English atomic physicist **15** 198-199

**THOMSON, JAMES** (1700-1748), British poet **15** 199-200

**THOMSON, SIR JOSEPH JOHN** (1856-1940), English physicist **15** 200-201

**THOMSON, KENNETH** (born 1923), Canadian print and broadcast journalism magnate **15** 201-202

**THOMSON, TOM** (1877-1917), Canadian painter **15** 202

**THOMSON, VIRGIL** (1896-1989), American composer, critic, and conductor **15** 202-203



**THOREAU, HENRY DAVID** (1817-1862), American writer and transcendentalist **15** 203-205

**THOREZ, MAURICE** (1900-1964), headed the French Communist Party from 1930 to 1964 **15** 206-207

**THORN, GASTON** (born 1928), prime minister of Luxembourg **15** 207-208

**THORNDIKE, EDWARD LEE** (1874-1949), American psychologist and educator **15** 208-209

**THORPE, JIM** (James Francis Thorpe; 1888-1953), American track star and professional football and baseball player **15** 209-211

**THUCYDIDES** (circa 460-circa 401 B.C.), Greek historian **15** 211-212

**THUKU, HARRY** (1895-1970), Kenyan politician **15** 212-213

**THURBER, JAMES GROVE** (1894-1961), American writer and artist **15** 213-214

**THURMOND, JAMES STROM** (born 1902), American lawyer and statesman **15** 214-215

**THURSTONE, LOUIS LEON** (1887-1955), American psychologist **15** 215-216

**THUTMOSE III** (1504-1450 B.C.), Egyptian king **15** 216-217

**TIBERIUS JULIUS CAESAR AUGUSTUS** (42 B.C. -A.D. 37), emperor of Rome 14-37 **15** 217-218

**TIECK, LUDWIG** (1773-1853), German author **15** 218-219

**TIEPOLO, GIOVANNI BATTISTA** (1696-1770), Italian painter **15** 219-220

**TIFFANY, LOUIS COMFORT** (1848-1933), American painter and designer **15** 220-221

**TIGLATH-PILESER III** (ruled 745-727 B.C.), king of Assyria **15** 221-222

**TILDEN, BILL** (William Tatem Tilden II; 1893-1953), American tennis player **20** 370-372

**TILDEN, SAMUEL JONES** (1814-1886), American politician **15** 222-223

**TILLEY, SIR SAMUEL LEONARD** (1818-1896), Canadian statesman **15** 223-224

**TILLICH, PAUL JOHANNES** (1886-1965), German-American Protestant theologian and philosopher **15** 224-225

**TILLMAN, BENJAMIN RYAN** (1847-1918), American statesman and demagogue **15** 225-226

**TILLY, GRAF VON** (Johann Tserclaes; 1559-1632), Flemish general **20** 372-374

**TIMERMAN, JACOBO** (1923-1999), Argentine journalist and human rights advocate **15** 226-228

**TINBERGEN, JAN** (1903-1994), Dutch economist **15** 228-229

**TINBERGEN, NIKOLAAS** (1907-1988), English ethologist and zoologist **15** 229-230

**TINGUELY, JEAN** (1925-1991), Swiss sculptor **15** 230-232

**TINTORETTO** (1518-1594), Italian painter **15** 232-234

**TIPPETT, MICHAEL KEMP, SIR** (1905-1998), English composer and conductor **15** 234-235

**TIPPU TIP** (Hamed bin Mohammed bin Juma bin Rajab el Murjebi; circa 1840-1905), Zanzibari trader **15** 235-236

**TIPU SULTAN** (1750-1799), Moslem ruler of Mysore **15** 236

**TIRADENTES** (José Joaquim da Silva Xavier; 1748-92), Brazilian national hero **15** 237

**TIRPITZ, ALFRED VON** (1849-1930), German admiral and politician **20** 374-376

**TIRSO DE MOLINA** (1584-1648), Spanish dramatist **15** 237-238

**TISCH BROTHERS** (1923-), real estate developers **15** 238-240

**TISELIUS, ARNE WILHELM KAURIN** (1902-1971), Swedish biochemist **15** 240-241

**TITCHENER, EDWARD BRADFORD** (1867-1927), English-American psychologist **15** 241-242

**TITIAN** (1488/90-1576), Italian painter **15** 242-244

**TITO, MARSHAL** (1892-1980), Yugoslav president **15** 244-246

**TITULESCU, NICOLAE** (1882-1941), Romanian statesman **15** 246-247

**TITUS FLAVIUS VESPASIANUS** (39-81), Roman general, emperor 79-81 **15** 247-248

**TOBA SOJO** (1053-1140), Japanese painter-priest **15** 248-249

**TOBEY, MARK** (1890-1976), American painter **15** 249-250

**TOCQUEVILLE, ALEXIS CHARLES HENRI MAURICE CLÉREL DE** (1805-1859), French statesman and historian **15** 250-251

**TODD, ALEXANDER** (1907-1997), English chemist **15** 251-253

**TODD, MIKE** (Avron Hirsch Goldenbogen; 1907-1958), American theater and film producer **21** 402-404

**TODD, REGINALD STEPHEN GARFIELD** (born 1908), prime minister of Southern Rhodesia and supporter of Zimbabwean independence **18** 391-393

**TOGLIATTI, PALMIRO** (1893-1964), Italian statesman and a founder of the Italian Communist Party **15** 253-254

**TOGO, HEIHACHIRO** (1847-1934), Japanese admiral **20** 376-379

**TOJO, HIDEKI** (1884-1948), Japanese general, premier 1941-44 **15** 254-256

**TOKUGAWA IEYASU** (1542-1616), founder of Tokugawa shogunate **8** 103-106

**TOLAND, GREGG** (1904-1948), American cinematographer **21** 405-407

**TOLAND, JOHN** (1670-1722), British scholar **15** 256

**TOLEDANO, VICENTE LOMBARDO** (1894-1968), Mexican intellectual and politician **15** 256-257

**TOLEDO, FRANCISCO DE** (1515-1584), Spanish viceroy of Peru **15** 257-259

**TOLKIEN, J. R. R.** (1892-1973), English author **15** 259-261

**TOLLER, ERNST** (1893-1939), German playwright **15** 261

**TOLMAN, EDWARD CHACE** (1886-1959), American psychologist **15** 261-262

**TOLSTOY, LEO** (1828-1910), Russian novelist and moral philosopher **15** 262-265

**TOMONAGA, SIN-ITIRO** (1906-1979), Japanese physicist **15** 265-266

**TÖNNIES, FERDINAND** (1855-1936), German sociologist **15** 266-267

**TOOMBS, ROBERT AUGUSTUS** (1810-1885), American statesman **15** 267-268

**TORQUEMADA, TOMAS DE** (1420-1498), leader of the Spanish Inquisition **21** 407-409

**TORRENCE, JACKIE** (born 1944), American storyteller **19** 384-386

**TORRICELLI, EVANGELISTA** (1608-1647), Italian mathematician and physicist **15** 268-269

**TORRIJOS, OMAR** (1929-1981), Panamanian strongman **15** 269-270

**TORSTENSSON, LENNART** (1603-1651), Swedish military leader **20** 379-381

**TOSCANINI, ARTURO** (1867-1957), Italian conductor **15** 270-271

**TOSOVSKY, JOSEF** (born 1950), banker and prime minister of the Czech Republic **18** 393-395

**TOLMIN, STEPHEN EDELSTON** (born 1922), British-American ethical philosopher **15** 271-273

**TOULOUSE-LAUTREC, HENRI DE** (1864-1901), French painter **15** 273-274

**TOURAINÉ, ALAIN** (born 1925), French sociologist **15** 274-275

**TOURÉ, SAMORY** (1830-1900), Sudanese ruler and state builder **15** 275-277

**TOURÉ, SÉKOU** (1922-1984), African statesman, president of Guinea **15** 275-277

**TOURGÉE, ALBION WINEGAR** (1838-1905), American jurist and writer **15** 277-278

**TOUSSAINT L'OUVERTURE, FRANÇOIS DOMINIQUE** (1743-1803), Haitian military leader **15** 278-279

**TOWER, JOAN** (born 1938), American composer **15** 279-281

**Town planning**  
Wirth, Louis **21** 434-436

**TOWNES, CHARLES HARD** (born 1915), American physicist **15** 281-282

**TOWNSEND, FRANCIS EVERITT** (1867-1960), American physician **15** 282-283

**TOYNBEE, ARNOLD JOSEPH** (1889-1975), English historian and philosopher of history **15** 283-284

**TOYODA, EIJI** (born 1913), Japanese automobile manufacturing executive **15** 284-286

**TOYOTOMI HIDEYOSHI** (1536-1598), Japanese warrior commander **15** 286-289

**Track and field sports**  
Cunningham, Glenn **21** 96-99  
Jenner, Bruce **21** 218-221  
Johnson, Rafer **21** 225-227  
Mathias, Bob **21** 284-286  
Oerter, Al **21** 326-328  
Warmerdam, Dutch **21** 423-425

**TRACY, SPENCER BONAVENTURE** (1900-1967), American film actor **15** 289-290

**Trail of Tears** (United States)  
Boudinot, Elias **21** 52-54

**TRAILL, CATHARINE PARR** (1802-1899), Canadian naturalist and author **15** 291

**TRAJAN** (Marcus Ulpius Trajanus; circa 53-117), Roman emperor 98-117 **15** 291-292

**Trapassi, Pietro**  
see Metatasio

**TRAVIS, WILLIAM BARRET** (1809-1836), American cavalry commander **15** 292-293

**TREITSCHKE, HEINRICH VON** (1834-1896), German historian and publicist **15** 293-294

**TREVELYAN, GEORGE MACAULAY** (1876-1962), English historian **15** 294-295

**TREVOR, WILLIAM** (born 1928), British novelist, television dramatist, playwright, and short-story writer **15** 295-297

**TRIMBLE, DAVID** (William David Trimble; born 1944), Irish political leaders **19** 386-388

**TRIPPE, JUAN TERRY** (1899-1981), American overseas aviation industry pioneer **15** 297-298

**TRIST, NICHOLAS PHILIP** (1800-1874), American lawyer and diplomat **15** 298-299

**Triumvirates** (Rome)  
see Rome—Roman Republic

**TROELTSCH, ERNST** (1865-1923), German theologian, historian, and sociologist **15** 299-300

**TROGER, PAUL** (1698-1762), Austrian painter **15** 300

**TROLLOPE, ANTHONY** (1815-1882), English novelist **15** 300-302

**TROTSKY, LEON** (1879-1940), Russian revolutionist **15** 302-305 associates

**TROTTER, MILDRED** (1899-1991), American anatomist **15** 305-306

**TROTTER, WILLIAM MONROE** (1872-1934), African American newspaper editor and protest leader **15** 306-307

**TRUDEAU, GARRETSON BEEKMAN** ("Garry"; born 1948), comic-strip artist, playwright, and animator **15** 308-309

**TRUDEAU, PIERRE ELLIOTT** (born 1919), leader of the Liberal Party and Canada's prime minister (1968-1984) **15** 309-311

**TRUFFAUT, FRANÇOIS** (1932-1984), French film director and critic **15** 311-313

**TRUJILLO MOLINA, RAFAEL LEONIDAS** (1891-1961), dictator of the Dominican Republic **15** 313-314

**TRUMAN, HARRY S.** (1884-1972), American statesman, president 1945-53 **15** 314-316

**TRUMBO, DALTON** (James Dalton Trumbo; 1905-1976), American screenwriter **21** 409-411

**TRUMBULL, JOHN** (1756-1843), American painter **15** 316-317

**TRUMBULL, LYMAN** (1813-1896), American statesman **15** 317-318

**TRUMP, DONALD JOHN** (born 1946), American real estate developer **15** 318-319

**TRUONG CHINH** (1909-1988), Vietnamese Communist leader **15** 319-320

**TRUTH, SOJOURNER** (circa 1797-1883), African American freedom fighter and orator **15** 320-321

**TRYON, WILLIAM** (1729-1788), English colonial governor in America **15** 321

**TS'AI YÜAN-P'EI** (1867-1940), Chinese educator **15** 322

**TS'AO TS'AO** (155-220), Chinese general, statesman, and folk hero **15** 322-323

**TSCERNICHOWSKY, SAUL** (1875-1943), Hebrew poet, translator, and physician **15** 323

**TSENG KUO-FAN** (1811-1872), Chinese statesman, general and scholar **15** 324-325

**TSHOMBE, MOÏSE KAPENDA** (1919-1969), Congolese political leader **15** 325-326

**TSIOLKOVSKY, KONSTANTIN EDUARDOVICH** (1857-1935), Russian scientist **15** 326-328

**TSO TSUNG-T'ANG** (1812-1885), Chinese general and statesman **15** 328-329

**TSOU YEN** (flourished late 4th century B.C.), Chinese philosopher **15** 329-330

**TU FU** (712-770), Chinese poet **15** 335-336

**Tuberculosis** (medical)  
Fibiger, Johannes **21** 131-133  
Folks, Homer **21** 137-140  
Laennec, René **21** 247-249

**Tuberculosis victims**  
19th century  
Laennec, René **21** 247-249  
Rock, John **21** 370-372

**TUBMAN, HARRIET ROSS** (circa 1820-1913), African American Underground Railroad agent **15** 330-331

**TUBMAN, WILLIAM VACANARAT SHADRACH** (1895-1971), Liberian statesman, president 1943-71 **15** 331

**TUCHMAN, BARBARA** (born 1912), American Pulitzer Prize-winning historian and journalist **15** 331-332

**TUCKER, C. DELORES** (Cynthia DeLores Nottage; born 1927), African American civil rights activist **18** 395-397

**TUCKER, GEORGE** (1775-1861), American historian **15** 332-333

**TUCKER, PRESTON** (1903-1956), American businessman and automobile designer **18** 397-399

**TUDJMAN, FRANJO** (1922-1999), Croatian president **15** 333-335

**Tudor dynasty**  
see England—1485-1603 (Tudor)

**TUGWELL, REXFORD GUY** (1891-1979), American politician, educator, and public servant **15** 336-339

**TULL, JETHRO** (1674-1741), English agriculturist and inventor **21** 411-413

**TUNG CH'I-CH'ANG** (1555-1636), Chinese calligrapher, painter, and historian **15** 339-340

**TÚPAC AMARU, JOSÉ GABRIEL** (1742-1781), Peruvian revolutionist, last of the Incas **15** 341

**TUPOLEV, ANDREI NIKOLAEVICH** (1888-1972), Soviet aeronautical engineer and army officer **15** 341-342

**TUPPER, SIR CHARLES** (1821-1915), Canadian statesman, prime minister 1896 **15** 342-343

**TURA, COSIMO** (1430-1495), Italian painter **15** 343-344

**TURABI, HASSAN ABDULLAH AL-** (born 1932), major leader of the Sudan's Islamic fundamentalist movement **15** 344-345

**TURENNE, VICOMTE DE** (Henri de la Tour d'Auvergne; 1611-1675), French military commander **20** 381-383

**TURGENEV, IVAN SERGEYEVICH** (1818-1883), Russian novelist, dramatist, and short-story writer **15** 345-348

**TURGOT, ANNE ROBERT JACQUES** (Baron de l'Aulne; 1721-81), French economist **15** 348-349

**TURING, ALAN MATHISON** (1912-1954), British mathematician **15** 349-350

**TURNER, FREDERICK JACKSON** (1861-1932), American historian **15** 350-351

**TURNER, HENRY MCNEAL** (1834-1915), African American racial leader **15** 351-352

**TURNER, JOSEPH MALLORD WILLIAM** (1775-1851), English painter **15** 352-354

**TURNER, LANA** (Julia Jean Mildred Frances Turner; 1920-1995), American actress **19** 388-390

**TURNER, NATHANIEL** (1800-1831), African American slave leader **15** 354

**TURNER, TED** (Robert Edward Turner; born 1938), American television entrepreneur **15** 355-357

**TURNER, TINA** (Anna Mae Bullock; born 1939), African American singer, dancer, and actress **15** 357-359

**TUTANKHAMEN** (reigned 1361-1352 B.C.), twelfth king of the Eighteenth Egyptian Dynasty **15** 359-360

**TUTU, ARCHBISHOP DESMOND** (born 1931), South African Anglican archbishop and opponent of apartheid **15** 360-361

**TUTUOLA, AMOS** (born 1920), Nigerian writer **15** 361-362

**TWACHTMAN, JOHN HENRY** (1853-1902), American painter **15** 362-363

**TWAIN, MARK** (Samuel Langhorne Clemens; 1835-1910), American humorist and novelist **15** 363-366

**TWEED, WILLIAM MARCY** (1823-1878), American politician and leader of Tammany Hall **15** 366-367

**TYLER, ANNE** (born 1941), American author **15** 367-368

**TYLER, JOHN** (1790-1862), American statesman, president 1841-45 **15** 368-369

**TYLER, MOSES COIT** (1835-1900), American historian **15** 369-370

**TYLER, RALPH W.** (born 1902), American educator/scholar **15** 370-371

**TYLER, ROYALL** (1757-1826), American playwright, novelist, and jurist **15** 371-372

**TYLOR, SIR EDWARD BURNETT** (1832-1917), English anthropologist **15** 372-373

**TYNDALE, WILLIAM** (circa 1495-1536), English biblical scholar **15** 373-374

**TYNDALL, JOHN** (1820-1893), Irish physicist **15** 374

## Typewriter

Sholes, Christopher Latham **21** 383-385

## Typhoid fever (medical)

Mallon, Mary **21** 266-268

## Typhoid Mary

see Mallon, Mary

**TYRRELL, GEORGE** (1861-1909), Irish-English Jesuit priest and theologian **15** 374-375

**TZ'U-HSI** (1835-1908), empress dowager of China 1860-1908 **15** 375-376

# U

**UBICO Y CASTAÑEDA, GENERAL JORGE** (1878-1946), president of Guatemala (1931-1944) **15** 377-378

**UCCELLO, PAOLO** (1397-1475), Italian painter **15** 378-379

**UEBERROTH, PETER VICTOR** (born 1937), Former baseball commissioner **15** 379-381

**UELSMANN, JERRY** (born 1934), American photographer **20** 384-385

**UHLENBECK, KAREN** (born 1942), American mathematician **15** 381-382

**ULANOVA, GALINA** (1910-1998), Russian ballerina **15** 382-383

**ULBRICHT, WALTER** (1893-1973), East German political leader **15** 383-384

**ULFILAS** (circa 311-circa 382), Arian bishop of the Visigoths **15** 384

**ULPIAN, DOMITIUS** (died 228), Roman jurist **15** 385-386

**UNAMUNO Y JUGO, MIGUEL DE** (1864-1936), Spanish philosopher and writer **15** 386-387

**UNÁNUE, JOSÉ HIPÓLITO** (1755-1833), Peruvian intellectual, educator, and scientist **15** 387-388

## Underground Railroad

see African American history—Slavery and abolition (Underground Railroad)

**UNDERHILL, JOHN** (circa 1597-1672), American military leader and magistrate **15** 388

**UNDSET, SIGRID** (1882-1949), Norwegian novelist **15** 388-389

**UNGARETTI, GIUSEPPE** (1888-1970), Italian poet **15** 389-390

**UNITAS, JOHNNY** (John Constantine Unitas; born 1933), American football player **20** 385-387

**United Kingdom**  
see Great Britain; Northern Ireland

**United States Air Force** (U.S.A.F.)  
Blanchard, Felix **21** 43-45

**United States Army**  
Signal Corps and Engineers  
Bushnell, David **21** 64-65

**U.S. Coast Guard Academy**  
Graham, Otto **21** 174-176

**U.S. House of Representatives**  
House Committee on Un-American Activities (HUAC)  
Hubley, John **21** 208-210  
Trumbo, Dalton **21** 409-411

**U.S. Military Academy** (West Point, New York)  
football players  
Blanchard, Felix **21** 43-45  
Davis, Glenn **21** 101-103

**U.S. navy**  
aircraft and rocketry  
Moffett, William Adger **21** 299-301

**U.S. Senate**  
investigations by  
Nye, Gerald **21** 320-323

**UPDIKE, JOHN** (born 1932), American author of poems, short stories, essays, and novels **15** 390-392

**UPJOHN, RICHARD** (1802-1878), English-born American architect **15** 392

**Uranus** (planet)  
Peirce, Benjamin **21** 340-342

**URBAN II** (Otto de Lagery; 1042-99), pope 1088-99 **15** 393

**URBAN VI** (Bartolomeo Prignano; 1318-89), pope 1378-89 **15** 394

**URBAN, MATT** (1919-1995), American solidier **19** 391-392

**Urban planning**  
see Town planning

**Urban sociology**  
Lee, Rose **21** 258-260

**UREY, HAROLD CLAYTON** (1893-1981), American chemical physicist and geochemist **15** 394-396

**URQUIZA, JUSTO JOSÉ** (1801-1870), Argentine dictator, general, and statesman **15** 396-397

**Ursulines** (religious congregation)  
Merici, Angela **21** 293-295

**U.S. Coast Survey**  
Peirce, Benjamin **21** 340-342

**UTAMARO, KITAGAWA** (1753-1806), Japanese printmaker **15** 397

**UTHMAN DON FODIO** (1755-1816), Moslem teacher and theologian **15** 397-398

**Utopian literature**  
Gillette, King Camp **21** 163-166

## V

**Vacuum cleaners**  
Booth, Hubert Cecil **21** 50-52

**Vaishnavism** (religion)  
Ramanuja **21** 361-362

**VAJPAYEE, ATAL BEHARI** (born 1926), prime minister of India **19** 393-395

**VALDEZ, LUIS** (born 1940), Hispanic American playwright and filmmaker **15** 399-400

**VALDIVIA, PEDRO DE** (circa 1502-53), Spanish conquistador and professional soldier **15** 400-401

**VALENTI, JACK JOSEPH** (born 1921), presidential adviser and czar of the American film industry **15** 401-403

**VALENTINO, RUDOLPH** (Rodolfo Alfonso Raffaello Pierre Filibert de Valentina d'Antonguolla Guglielmi; 1895-1926), Italian/American actor **20** 388-390

**VALERA Y ALCALÁ GALIANO, JUAN** (1824-1905), Spanish novelist and diplomat **15** 403

**VALERIAN** (Publius Licinius Valerianus; circa 200-circa 260), Roman emperor 253-260 **15** 404-405

**VALÉRY, PAUL AMBROISE** (1871-1945), French poet, philosopher, and critic **15** 405-406

**VALLA, LORENZO** (circa 1407-57), Italian humanist **15** 406

**VALLANDIGHAM, CLEMENT LAIRD** (1820-1871), American politician **15** 406-407

**VALLE INCLÁN, RAMÓN MARIA DEL** (circa 1866-1936), Spanish novelist, playwright, and poet **15** 407-408

**VALLEJO, CÉSAR ABRAHAM** (1892-1938), Peruvian poet **15** 408-409

**VAN BUREN, MARTIN** (1782-1862), American statesman, president 1837-41 **15** 410-411

**Van Dahorst, Anthonis Mor**  
see Moro, Antonio

**VAN DER GOES, HUGO** (flourished 1467-82), Flemish painter **15** 416-417

**VAN DIEMEN, ANTHONY MEUZA** (1593-1645), Dutch colonial official and merchant **15** 420

**VAN DOESBURG, THEO** (1883-1931), Dutch painter **15** 421

**VAN DONGEN, KEES** (Cornelis Theodorus Marie Van Dongen; 1877-1968), Fauvist painter, portraitist, and socialite **15** 421-422

**VAN DUYN, MONA** (born 1921), first woman to be appointed poet laureate of the United States **15** 422-423

**VAN DYCK, ANTHONY** (1599-1641), Flemish painter **15** 423-425

**VAN EEKELLEN, WILLEM FREDERIK** (born 1931), Dutch secretary-general of the Western European Union **15** 426-427

**VAN GOGH, VINCENT** (1853-1890), Dutch painter **15** 427-429

**VAN HORNE, SIR WILLIAM CORNELIUS** (1843-1915), American-born Canadian railroad entrepreneur **15** 429-430

**VAN PEEBLES, MELVIN** (Melvin Peebles; born 1932), American film director and producer, actor, author, and musician **21** 414-416

**VAN RENSSELAER, KILIAEN** (circa 1580-1643), Dutch merchant and colonial official in America **15** 430-431

**VAN VECHTEN, CARL** (1880-1964), American writer and photographer **18** 400-402

**VANBRUGH, SIR JOHN** (1664-1726), English architect and dramatist **15** 409-410

**VANCE, CYRUS R.** (born 1917), American secretary of the army and secretary of state **15** 411-413

**VANCE, ZEBULON BAIRD** (1830-1894), American politician **15** 413-414

**VANCOUVER, GEORGE** (1758-1798), English explorer and navigator **15** 414-415

**VANDER ZEE, JAMES** (1886-1983), photographer of the people of Harlem **15** 418-419

**VANDERBILT, CORNELIUS** (1794-1877), American financier, steamship and railroad builder **15** 415-416

**VANDERBILT, GLORIA** (born 1924), American designer, artist, and author **19** 395-397

**VANDERLYN, JOHN** (1775-1852), American painter **15** 417

**VANE, SIR HENRY** (1613-1662), English statesman **15** 425-426

**VAN'T HOFF, JACOBUS HENDRICUS** (1852-1911), Dutch physical chemist **15** 431-432

**VARDHAMANA MAHAVIRA** (circa 540-470 B.C.), Indian ascetic philosopher **10** 135-137

**VARÈSE, EDGARD** (1883-1965), French-American composer **15** 432-433

**VARGAS, GETULIO DORNELLES** (1883-1954), Brazilian political leader **15** 433-434

**VARGAS LLOSA, MARIO** (born 1936), Peruvian novelist, critic, journalist, screenwriter, and essayist **15** 434-436

**VARMUS, HAROLD ELIOT** (born 1939), medical research expert and director of the National Institutes of Health (1993-) **15** 436-437

**VARNHAGEN, FRANCISCO ADOLFO DE** (1816-1878), Brazilian historian **15** 437-438

**VARRO, MARCUS TERENTIUS** (116-27 B.C.), Roman scholar and writer **15** 438-439

**VARTHEMA, LUDOVICO DI** (circa 1470-circa 1517), Italian traveler and adventurer **15** 439-440

**VASARELY, VICTOR** (1908-1997), Hungarian-French artist **15** 440-442

**VASARI, GIORGIO** (1511-1570), Italian painter, architect, and author **15** 442-443

**VASCONCELOS, JOSÉ** (1882-1959), Mexican educator and author **15** 443-444

**VAUBAN, SEBASTIEN LE PRESTRE DE** (1633-1707), French military engineer **18** 402-404

**VAUDREUIL-CAVAGNAL, MARQUIS DE** (Pierre François de Regaud; 1698-1778), Canadian-born governor of New France **15** 444

**VAUGHAN, HENRY** (1621/22-95), British poet **15** 444-445

**VAUGHAN, SARAH LOIS** (1924-1990), jazz singer **15** 445-446

**VAUGHAN WILLIAMS, RALPH** (1872-1958), English composer **15** 446-447

**VAVILOV, NIKOLAI IVANOVICH** (1887-1943), Russian botanist and geneticist **15** 447-448

**VÁZQUEZ, HORACIO** (1860-1936), president of the Dominican Republic 1903-04 and 1924-30 **15** 448-449

**VEBLEN, THORSTEIN BUNDE** (1857-1929), American political economist and sociologist **15** 449-450

**VELASCO, JOSÉ MARÍA** (1840-1912), Mexican painter **15** 450-451

**VELASCO, LUIS DE** (1511-1564), Spanish colonial administrator **15** 450-451

**VELASCO ALVARADO, JUAN** (1910-1977), Peruvian army officer who seized power in 1968 **15** 451-452

**VELASCO IBARRA, JOSÉ MARÍA** (1893-1979), Ecuadorian statesman, five time president **15** 452-454

**VELÁZQUEZ, DIEGO RODRÍGUEZ DE SILVA Y** (1599-1660), Spanish painter **15** 454-456

**VELÁZQUEZ, NYDIA MARGARITA** (born 1953), Hispanic American politician **15** 456-459

**VELÁZQUEZ DE CUÉLLAR, DIEGO** (circa 1465-1523), Spanish conqueror, founder of Cuba **15** 459

**VELDE, HENRY VAN DE** (1863-1957), Belgian painter, designer, and architect **15** 419-420

**Venezia, Domenico di Bartolomeo da** see Domenico Veneziano

**VENEZIANO, DOMENICO** (Domenico di Bartolomeo da Venezia; 1410?-1461), Italian painter **15** 459-460

**VENIZELOS, ELEUTHERIOS** (1864-1936), Greek statesman **15** 460-461

**VENTURI, ROBERT** (born 1925), American architect **15** 461-463

**VERCINGETORIX** (circa 75-circa 46 B.C.), Celtic chieftain and military leader **19** 397-399

**VERDI, GIUSEPPE FORTUNINO FRANCESCO** (1813-1901), Italian opera composer **15** 463-465

**VERLAINE, PAUL MARIE** (1844-1896), French poet **15** 465-466

**VERMEER, JAN** (1632-1675), Dutch painter **15** 466-467

**VERNE, JULES** (1828-1905), French novelist **15** 467-469

**VERONESE, PAOLO** (1528-1588), Italian painter **15** 469-470

**VERRAZANO, GIOVANNI DA** (circa 1485-circa 1528), Italian navigator and explorer **15** 470-471

**VERROCCHIO, ANDREA DEL** (1435-1488), Italian sculptor and painter **15** 471-472

**VERSACE, GIANNI** (1946-1997), Italian fashion designer **19** 399-401

**VERWOERD, HENDRIK FRENCH** (1901-1966), South African statesman, prime minister 1958-66 **15** 472-473

**VESALIUS, ANDREAS** (1514-1564), Belgian anatomist **15** 473-475

**VESEY, DENMARK** (1767-1822), American slave leader **15** 475

**VESPASIAN** (9-79), Roman emperor 69-79 **15** 475-476

**VESPUCCI, AMERIGO** (1454-1512), Italian navigator **15** 476-478

**VIANNEY, ST. JEAN BAPTISTE** (1786-1859), French priest **15** 478-479

**VICENTE, GIL** (circa 1465-circa 1536), Portuguese dramatist and poet **15** 479-480

**Vichy France** see France—1940-46

**VICO, GIAMBATTISTA** (1668-1744), Italian philosopher and jurist **15** 480-481

**VICTOR AMADEUS II** (1666-1732), Duke of Savoy, king of Sicily, and king of Sardinia **15** 482-483

**VICTOR EMMANUEL II** (1820-1878), king of Sardinia 1849-61 and of Italy 1861-78 **15** 483-484

**VICTOR EMMANUEL III** (1869-1947), king of Italy 1900-46 **15** 484-485

**VICTORIA** (1819-1901), queen of Great Britain and Ireland 1837-1901 and empress of India 1876-1901 **15** 485-487

**VICTORIA, TOMÁS LUIS DE** (circa 1548-1611), Spanish composer **15** 487-488

**Victorian literature** see English literature—Victorian

**VIDAL, EUGENE LUTHER GORE** (born 1925), American author of novels, essays, plays, and short stories **15** 488-490

**VIDAL DE LA BLACHE, PAUL** (1845-1918), French geographer **15** 490

**VIDELA, JORGE RAFAÉL** (born 1925), military president of Argentina (1976-1981) who violated human rights **15** 490-492

**VIEIRA, ANTÔNIO** (1608-1697), Portuguese orator and Jesuit missionary **15** 492

**VIGEE LEBRUN, ELISABETH** (1755-1842), French painter **19** 402-403

**VIGNOLA, GIACOMO DA** (1507-1573), Italian architect **15** 493-494

**VIGNY, COMTE DE** (Alfred Victor Vigny; 1797-1863), French poet **15** 494-495

**VILLA, PANCHO** (Francisco Villa; 1878-1923), Mexican revolutionary **15** 495-496

**VILLA-LOBOS, HEITOR** (1887-1959), Brazilian composer **15** 496-497

**VILLANI, GIOVANNI** (circa 1270-1348), Italian chronicler **15** 497-498

**VILLARD, OSWALD GARRISON** (1872-1949), American journalist **15** 498-499

**VILLEHARDOUIN, GEFROI DE** (circa 1150-1213), French historian and soldier **15** 499

**VILLEDA MORALES, RAMON** (1909-1971), Honduran president, 1957-1963 **20** 390-392

**VILLON, FRANÇOIS** (1431-after 1463), French poet **15** 499-501

**Vincent, Edgar**  
see D'Abernon, 1st Viscount

**VINCENT, JOHN HEYL** (1832-1920), American educator and religious leader **15** 502-503

**VINCENT DE PAUL, ST.** (1581-1660), French priest **15** 501-502

**VINCENT OF BEAUVAIS** (circa 1190-1264), French writer and theologian **21** 416-418

**VINOGRADOFF, SIR PAUL GAVRILOVITCH** (1854-1925), Russian educator and historian **15** 503

**VINSON, FRED** (Frederic Moore Vinson; 1890-1953), chief justice of the U.S. Supreme Court **15** 503-505

**VIOLET-LE-DUC, EUGÈNE EMMANUEL** (1814-1879), French architect and theorist **15** 505-506

**VIRCHOW, RUDOLF LUDWIG CARL** (1821-1902), German medical scientist, anthropologist, and politician **15** 506-507

**VIRGIL** (Publius Vergilius Maro; 70-19 B.C.), Roman poet **15** 507-510

**VISCONTI, GIAN GALEAZZO** (Duke of Milan; 1351-1402), Italian despot **15** 510-511

**VISSER 'T HOOFT, WILLEM ADOLF** (1900-1985), Reformed churchman and ecumenist who was the first general secretary of the World Council of Churches **15** 511-512

**VITORIA, FRANCISCO DE** (circa 1483-1546), Spanish theologian and political theorist **16** 1-2

**VITRY, PHILIPPE DE** (1291-1360), French poet, composer, and churchman-statesman **16** 2

**VITTORINI, ELIO** (1908-1966), Italian novelist, editor, and journalist **16** 2-3

**VIVALDI, ANTONIO** (1678-1741), Italian violinist and composer **16** 3-4

**VIVEKANANDA** (1863-1902), Indian reformer, missionary, and spiritual leader **16** 4-5

**VLADIMIR I** (died 1015), grand prince of Kievan Russia 980-1015 **16** 5-6

**VLAMINCK, MAURICE** (1876-1958), French painter **16** 6

**VOEGELIN, ERIC** (1901-1985), German-Austrian political theorist **16** 6-8

**VOGEL, HANS-JOCHEN** (born 1926), West German political leader **16** 8-9

**VOGEL, SIR JULIUS** (1835-1899), New Zealand statesman, twice prime minister **16** 9-10

**VOGELWEIDE, WALTHER VON DER** (circa 1170-1229), German poet, composer, and singer **16** 10-11

**VOLCKER, PAUL** (born 1927), chairman of the U.S. Federal Reserve Board (1979-1987) **16** 11-12

**VOLTA, ALESSANDRO** (1745-1827), Italian physicist **16** 12-14

**VOLTAIRE** (1694-1778), French poet, dramatist, historian, and philosopher **16** 14-16

**VON BRAUN, WERNHER** (1912-1977), German-born American space scientist **16** 17-18

**VON FURSTENBERG, DIANE** (Diane Simone Michelle Halfin; born 1946), American fashion designer and businesswoman **16** 20-21

**VON HÜGEL, BARON FRIEDRICH** (1852-1925), philosopher of Christianity **16** 21-22

**VON LAUE, MAX** (1879-1960), German physicist **16** 23-24

**VON MEHREN, ROBERT BRANDT** (born 1922), American lawyer who helped create the International Atomic Energy Agency **16** 24-25

**VON MISES, LUDWIG** (born 1881), Austrian economist and social philosopher **16** 25

**VON NEUMANN, JOHN** (1903-1957), Hungarian-born American mathematician **16** 27-28

**VON PAPEN, FRANZ** (1879-1969), conservative German politician who helped prepare the way for the Third Reich **16** 28-29

**VON RAD, GERHARD** (1901-1971), German theologian **16** 29-30

**VON STROHEIM, ERICH** (Erich Oswald Stroheim; 1885-1957), Austrian actor and director **21** 418-420

**VONDEL, JOOST VAN DEN** (1587-1679), Dutch poet and dramatist **16** 19-20

**VONNEGUT, KURT, JR.** (born 1922), American author **16** 25-27

**VORSTER, BALTHAZAR JOHANNES** (1915-1983), South African political leader **16** 30-32

**VOS SAVANT, MARILYN** (born 1946), American columnist and consultant **16** 32-33

**VUILLARD, JEAN ÉDOUARD** (1868-1940), French painter **16** 36

**VYSHINSKY, ANDREI** (1883-1954), state prosecutor in Stalin's purge trials and head of the U.S.S.R.'s foreign ministry (1949-1953) **16** 36-37

## W

**WAALS, JOHANNES DIDERIK VAN DER** (1837-1923), Dutch physicist **15** 417-418

**WADE, BENJAMIN FRANKLIN** (1800-1878), American lawyer and politician **16** 38-39

**WAGNER, HONUS** (Johannes Peter Wagner; 1874-1955), American baseball player **20** 393-395

**WAGNER, OTTO** (1841-1918), Austrian architect and teacher **16** 39-40

**WAGNER, RICHARD** (1813-1883), German operatic composer **16** 40-43

**WAGNER, ROBERT F.** (1910-1991), New York City Tammany Hall mayor (1954-1965) **16** 44-45

**WAGNER, ROBERT FERDINAND** (1877-1953), American lawyer and legislator **16** 43

**WAINWRIGHT, JONATHAN MAYHEW** (1883-1953), American general **16** 45-46

**WAITE, MORRISON REMICK** (1816-1888), American jurist, chief justice of U.S. Supreme Court 1874-88 **16** 46

**WAITE, TERRY** (born 1939), official of the Church of England and hostage in Lebanon **16** 47-48

**WAKEFIELD, EDWARD GIBBON** (1796-1862), British colonial reformer and promoter **16** 48-49  
Hill, Rowland **21** 202-204

**WAKSMAN, SELMAN ABRAHAM** (1888-1973), American microbiologist **16** 49-50

**WALCOTT, DEREK ALTON** (born 1930), West Indian poet and dramatist **16** 50-51

**WALD, GEORGE** (born 1906), American biochemist interested in vision **16** 51-53

**WALD, LILLIAN** (1867-1940), American social worker and reformer **16** 53-54

**WALDEMAR IV** (Wlademar Atterdag; 1320-1375), King of Denmark, 1340-1375 **20** 395-397

**WALDHEIM, KURT** (born 1918), Austrian statesman and president **16** 54-55

**WALDO, PETER** (flourished 1170-84), French religious leader **16** 55-56

**WALDSEEMÜLLER, MARTIN** (circa 1470-circa 1518), German geographer and cartographer **16** 56

**WALESA, LECH** (born 1943), Polish Solidarity leader and former president **16** 57-59

**WALKER, ALICE MALSENIOR** (born 1944), African American novelist, poet, and short story writer **16** 59-61

**WALKER, C. J.** (Sarah Breedlove; 1867-1919), African American entrepreneur **16** 61-62

**WALKER, DAVID** (1785-1830), African American pamphleteer and activist **16** 62-63

**WALKER, JOSEPH REDDEFORD** (1798-1876), American fur trader **16** 63-64

**WALKER, LEROY TASHREAU** (born 1918), U.S. sports official, university chancellor, educator, and track coach **16** 64-65

**WALKER, MAGGIE LENA** (1867-1934), American entrepreneur and civic leader **16** 65-66

**WALKER, MARGARET** (born 1915), American novelist, poet, scholar, and teacher **16** 67

**WALKER, ROBERT JOHN** (1801-1869), American politician **16** 67-68

**WALKER, WILLIAM** (1824-1860), American adventurer and filibuster **16** 68-69

**WALLACE, ALFRED RUSSEL** (1823-1913), English naturalist and traveler **16** 69-70

**WALLACE, DeWITT** (1889-1981), American publisher and founder of *Reader's Digest* **16** 70-71

**WALLACE, GEORGE CORLEY** (1919-1998), American political leader **16** 71-72

**WALLACE, HENRY** (1836-1916), American agricultural publicist and editor **16** 73

**WALLACE, HENRY AGARD** (1888-1965), American statesman, vice-president 1940-44 **16** 73-74

**WALLACE, LEWIS** (1827-1905), American general and author **16** 74-75

**WALLACE, SIR WILLIAM** (circa 1270-1305), Scottish soldier **16** 75-76

**WALLACE-JOHNSON, ISAAC THEOPHILUS AKUNNA** (1895-1965), West African political leader and pan-Africanist **16** 76-77

**WALLAS, GRAHAM** (1858-1932), English sociologist and political scientist **16** 77-78

**WALLENBERG, RAOUL** (1912-?), Swedish diplomat **16** 78-80

**WALLENSTEIN, ALBRECHT WENZEL EUSEBIUS VON** (1583-1634), Bohemian soldier of fortune **16** 80-81

**WALLER, THOMAS WRIGHT** (Fats; 1904-43), American jazz singer, pianist, organist, bandleader, and composer **16** 81-82

**WALPOLE, ROBERT** (1st Earl of Oxford; 1676-1745), English statesman **16** 82-84

**WALRAS, MARIE ESPRIT LÉON** (1834-1910), French economist **16** 84-85

**WALSH, STELLA** (Stanisława Walasiewiczówna; 1911-1980), Polish American athlete **19** 404-406

**WALSH, THOMAS JAMES** (1859-1933), American statesman **16** 85-86

**WALTER, JOHANN** (1496-1570), German composer **16** 86

**WALTERS, BARBARA** (born 1931), American network newscast anchor **16** 86-88

**WALTON, ERNEST** (1903-1995), Irish physicist **16** 88-90

**WALTON, IZAAK** (1593-1683), English writer and biographer **16** 90-91

**WALTON, SAM MOORE** (1918-1992), American businessman who co-founded Wal-Mart **16** 91-92

**WALTON, SIR WILLIAM TURNER** (1902-1983), English composer **16** 91-92

**WANG, AN** (1920-1990), Chinese-American inventor, electronics expert, and businessman **16** 93-95

**WANG AN-SHIH** (1021-1086), Chinese reformer, poet, and scholar **16** 95-97

**WANG CHING-WEI** (1883-1944), Chinese revolutionary leader **16** 98

**WANG CH'UNG** (27-circa 100), Chinese philosopher **16** 98-99

**WANG FU-CHIH** (1619-1692), Chinese philosopher **16** 99-101

**WANG KON** (877-943), Korean king **16** 101

**WANG MANG** (45 B.C. -A.D. 23), Chinese statesman, emperor 9-23 **16** 101-103

**WANG MING** (Chen Shaoyu; 1904-74), leader of the "Internationalist" group within the Chinese Communist Party **16** 103-104

**WANG PI** (226-249), Chinese philosopher **16** 104-105

**WANG T'AO** (1828-1897), Chinese reformer and scholar **16** 105-106

**WANG WEI** (699-759), Chinese poet and painter **16** 106-108

**WANG YANG-MING** (1472-1529), Chinese philosopher and government official **16** 108-109

**WARBURG, OTTO** (1883-1970), German biochemist **16** 109-111

**WARBURG, PAUL MORITZ** (1868-1932), German-American banker **16** 111-112

**WARD, AARON MONTGOMERY** (1843-1913), American merchant **16** 112

**WARD, ARTEMUS** (1834-1867), American journalist and humorist **16** 112-113

**WARD, JAY** (J Troplong Ward; 1920-1989), American television producer **21** 421-423

**WARD, LESTER FRANK** (1841-1913), American paleobotanist and sociologist **16** 113-114

**WARHOL, ANDY** (Andrew Warhola; ca. 1927-1987), American pop artist and film maker **16** 114-115

**WARMERDAM, DUTCH** (Cornelius Warmerdam; born 1915), American pole vaulter **21** 423-425

**WARNER, JACK** (Jacob Eichelbaum; 1892-1978), American film producer and studio executive **19** 406-408

**Warner Brothers** (film studio) Cagney, James **21** 68-71

**WARNOCK, HELEN MARY WILSON** (born 1924), British philosopher **16** 115-117

**WARREN, EARL** (1891-1974), American jurist, chief justice of U.S. Supreme Court 1953-69 **16** 117-120

**WARREN, MERCY OTIS** (1728-1814), American writer **16** 120-121

**WARREN, ROBERT PENN** (1905-1989), American man of letters **16** 121-122

**WARWICK AND SALISBURY, EARL OF** (Richard Neville; 1428-71), English military and political leader **16** 122-123

**WASHAKIE** (circa 1804-1900), Native American Shoshoni tribal leader **16** 123-125

**WASHINGTON, BOOKER TALIAFERRO** (1856-1915), African American educator and racial leader **16** 125-126

**WASHINGTON, GEORGE** (1732-1799), American Revolutionary commander in chief, president 1789-97 **16** 126-129  
Continental Army  
Bushnell, David **21** 64-65

**Washington Redskins** (football team)  
Graham, Otto **21** 174-176

**Washington Senators** (baseball team)  
Johnson, Walter **21** 228-230

**WASMOSY, JUAN CARLOS** (born 1939), president of Paraguay (1993-) **16** 129-130

**WASSERMANN, JAKOB** (1873-1934), German author **16** 130-131

**WATERHOUSE, BENJAMIN** (1754-1846), American physician **16** 131-132

**WATERS, MAXINE** (born 1938), African American congresswoman **16** 132-134

**WATERS, MUDDY** (born McKinley Morganfield; 1915-1983), African American blues musician **16** 134-136

**WATSON, ELKANAH** (1758-1842), American merchant and banker **16** 136

**WATSON, JAMES DEWEY** (born 1928), American biologist **16** 137-138

**WATSON, JOHN BROADUS** (1878-1958), American psychologist **16** 138-139

**WATSON, THOMAS EDWARD** (1856-1922), American lawyer and politician **16** 139

**WATSON, THOMAS J.** (1874-1956), American business executive **16** 140

**WATSON, THOMAS J. JR.** (1914-1993), American businessman **19** 408-410

**WATSON-WATT, SIR ROBERT ALEXANDER** (1892-1973), British scientific civil servant **16** 140-141

**WATT, JAMES** (1736-1819), British instrument maker and engineer **16** 141-143

**WATTEAU, ANTOINE** (1684-1721), French painter **16** 143-144

**WATTLETON, FAYE** (Alyce Faye Wattleton, born 1943), African

American women's rights activist **18** 405-407

**WATTS, ALAN WILSON** (1915-1973), naturalized American author and lecturer **16** 144-145

**WATTS, J.C.** (Julius Caesar Watts, Jr.; born 1957), African American politician **18** 407-409

**WAUGH, EVELYN ARTHUR ST. JOHN** (1903-1966), English author **16** 145-147

**WAUNKA, ANNIE DODGE** (1910-1997), Navajo nation leader and Native American activist **18** 409-410

**WAVELL, ARCHIBALD PERCIVAL** (1st Earl Wavell; 1883-1950), English general, statesman, and writer **16** 147-148

**WAYLAND, FRANCIS** (1796-1865), American educator and clergyman **16** 148-149

**WAYNE, ANTHONY** (1745-1796), American soldier **16** 149-150

**WAYNE, JOHN** (Marion Mitchell Morrison; 1907-79), American actor **16** 150-151  
Canutt, Yakima **21** 71-72

**WEAVER, JAMES BAIRD** (1833-1912), American political leader **16** 151-152

**WEAVER, PAT** (Sylvester Laflin Weaver, Jr.; born 1908), American television executive **19** 410-413

**WEAVER, ROBERT C.** (1907-1997), first African American U.S. cabinet officer **16** 152-153

**WEBB, BEATRICE POTTER** (1858-1943), English social reformer **16** 153-154

**WEBB, SIDNEY JAMES** (Baron Passfield; 1859-1947), English social reformer, historian, and statesman **16** 154-155

**WEBBER, ANDREW LLOYD** (born 1948), British composer **16** 155-156

**WEBER, CARL MARIA FRIEDRICH ERNST VON** (1786-1826), German composer and conductor **16** 156-157

**WEBER, MAX** (1864-1920), German social scientist **16** 157-160

**WEBER, MAX** (1881-1961), American painter **16** 160

**WEBERN, ANTON** (1883-1945), Austrian composer **16** 160-162

**WEBSTER, DANIEL** (1782-1852), American lawyer, orator, and statesman **16** 162-164

**WEBSTER, JOHN** (circa 1580-circa 1634), English dramatist **16** 164

**WEBSTER, NOAH** (1758-1843), American lexicographer **16** 164-166

**WEDEKIND, FRANK** (Benjamin Franklin Wedekind; 1864-1918), German dramatist, cosmopolite, and libertarian **16** 166-167

**WEDGWOOD, CICELY VERONICA** (1910-1997), British writer and historian **16** 167-168

**WEDGWOOD, JOSIAH** (1730-1795), English potter **16** 168-169

**WEED, THURLOW** (1797-1882), American politician **16** 169-170

**WEEMS, MASON LOCKE** (1759-1825), American Episcopal minister and popular writer **16** 170

**WEGENER, ALFRED LOTHAR** (1880-1930), German meteorologist, Arctic explorer, and geophysicist **16** 170-171

**WEI HSIAO-WEN-TI** (467-499), Chinese emperor **8** 5

**WEI JINGSHENG** (born 1950), Chinese human rights activist **18** 410-412

**WEI YÜAN** (1794-1856), Chinese historian and geographer **16** 180-181

**WEIDENREICH, FRANZ** (1873-1948), German anatomist and physical anthropologist **16** 171-172

**Weight Watchers International** (support group program)  
Nidetch, Jean **21** 318-320

**WEIL, SIMONE** (1909-1943), French thinker, political activist, and religious mystic **16** 172-174

**WEILL, KURT** (1900-1950), German-American composer **16** 174-175

**WEINBERG, STEVEN** (born 1933), Nobel Prize-winning physicist **16** 175-177

**WEINBERGER, CASPER WILLARD** (born 1917), U.S. public official under three presidents **16** 177-178

**WEISMANN, AUGUST FREIDRICH LEOPOLD** (1834-1914), German biologist **16** 178-180

**WEISSMULLER, JOHNNY** (Peter John Weissmuller; 1904-1984), American swimmer and actor **21** 425-427

**WEIZMAN, EZER** (born 1924), Israeli air force commander and president of Israel (1993-) **16** 181-182

**WEIZMANN, CHAIM** (1874-1952), Israeli statesman, president 1949-52 **16** 183-184

**WELCH, JACK** (John Francis Welch, Jr.; born 1935), American businessman **19** 413-415



**WELCH, ROBERT** (1899-1985), founder of the John Birch Society **16** 184-185

**WELCH, WILLIAM HENRY** (1850-1934), American pathologist, bacteriologist, and medical educator **16** 185-186

**WELD, THEODORE DWIGHT** (1803-1895), American reformer, preacher, and editor **16** 186

**WELDON, FAY BIRKINSHAW** (born 1931 or 1933), British novelist, dramatist, essayist, and feminist **16** 186-188

**WELENSKY, SIR ROY** (1907-1991), Rhodesian statesman **16** 188

**WELLES, GIDEON** (1802-1878), American statesman **16** 188-190

**WELLES, ORSON** (1915-1985), Broadway and Hollywood actor, radio actor, and film director **16** 190-191  
Herrmann, Bernard **21** 199-202  
Toland, Gregg **21** 405-407

**WELLES, SUMNER** (1892-1961), American diplomat **16** 191-192

**WELLESLEY, RICHARD COLLEY** (1st Marquess Wellesley; 1760-1842), British colonial administrator **16** 192-193

**WELLHAUSEN, JULIUS** (1844-1918), German historian **20** 397-400

**WELLS, HERBERT GEORGE** (1866-1946), English author **16** 195-196

**WELLS, HORACE** (1815-1848), American dentist **16** 196

**WELLS, MARY GEORGENE BERG** (born 1928), American businesswoman **16** 197-198

**WELLS-BARNETT, IDA B.** (1862-1931), American journalist and activist **16** 198-199

**WELTY, EUDORA** (born 1909), American author and essayist **16** 199-201

**WEN T'IENT-HSIANG** (1236-1283), Chinese statesman **16** 203

**WENCESLAS** (Vaclav; 903?-935?), Czech feudal lord **20** 400-402

**WENCESLAUS** (Wenceslaus IV of Bohemia; 1361-1419), Holy Roman emperor 1376-1400, and king of Bohemia 1378-1419 **16** 201-202

**WEN-HSIANG** (1818-1876), Manchu official and statesman **16** 202-203

**WENTWORTH, WILLIAM CHARLES** (1790-1872), Australian statesman, writer, and explorer **16** 203-204

**WERFEL, FRANZ** (1890-1945), Austrian poet, novelist, and playwright **16** 204-205

**WERNER, ABRAHAM GOTTLÖB** (1749-1817), German naturalist **16** 205-207

**WERNER, HELMUT** (born 1936), German business executive **19** 415-417

**WERTHEIMER, MAX** (1880-1943), German psychologist **16** 207-208

**WESLEY, CHARLES** (1707-1788), English hymn writer and preacher **16** 208-209

**WESLEY, JOHN** (1703-1791), English evangelical clergyman, preacher, and writer **16** 209-210

**WEST, BENJAMIN** (1738-1820), English American painter **16** 210-212

**WEST, CORNEL** (born 1953), American philosopher **16** 212-213

**WEST, JERRY** (born 1938), American basketball player and coach **21** 428-430

**WEST, MAE** (Mary Jane West; 1893-1980), American actress **19** 417-419

**WEST, NATHANAEAL** (1903-1940), American novelist **16** 213-214

#### **West Point**

see U.S. Military Academy (West Point, New York State)

#### **Western Roman Empire**

see Holy Roman Empire

#### **Westerns** (movie genre)

Ince, Thomas **21** 213-215

**WESTHEIMER, RUTH KAROLA** (a.k.a. "Dr. Ruth;" born 1928), German American psychologist, author, and media personality **16** 214-215

**WESTINGHOUSE, GEORGE** (1846-1914), American inventor and manufacturer **16** 215

**WESTMORELAND, WILLIAM CHILDS** (born 1914), commander of all American forces in the Vietnam War (1964-1968) and chief of staff of the U.S. Army **16** 216-217

**WESTON, EDWARD** (1886-1958), American photographer **19** 419-421

**WESTWOOD, VIVIENNE** (born 1941), British designer **16** 217-218

**WEXLER, NANCY** (born 1945), American psychologist **16** 218-219

**WEYDEN, ROGIER VAN DER** (1399-1464), Flemish painter **16** 219-221

**WHARTON, EDITH** (1861-1937), American author **16** 221

**WHEATLEY, PHILLIS** (circa 1753-84), African American poet **16** 221-222

**WHELOCK, ELEAZAR** (1711-1779), American clergyman and educator **16** 222-223

**WHEELWRIGHT, WILLIAM** (1798-1873), American entrepreneur **16** 223-224

**WHIPPLE, GEORGE HOYT** (1878-1976), American pathologist **16** 224-225

#### **Whist** (card game)

Hoyle, Edmond **21** 206-208

#### **WHISTLER, JAMES ABBOTT MCNEILL**

(1834-1903), American painter, etcher, and lithographer **16** 225-226

**WHITE, ANDREW DICKSON** (1832-1918), American educator and diplomat **16** 226-227

**WHITE, BYRON R.** (born 1917), deputy U.S. attorney general and associate justice of the U.S. Supreme Court **16** 227-228

**WHITE, E. B.** (Elwyn Brooks White; 1899-1985), American essayist and author of children's books **16** 228-230

**WHITE, KEVIN H.** (born 1929), mayor of Boston (1967-1983) **16** 231-232

**WHITE, LESLIE A.** (1900-1975), American anthropologist **16** 232-233

#### **WHITE, PATRICK VICTOR**

**MARTINDALE** (1912-1990), Australian novelist and playwright **16** 233-235

**WHITE, RYAN** (1971-1990), American AIDS activist **19** 421-423

**WHITE, STANFORD** (1853-1906), American architect **16** 235-236

**WHITE, T. H.** (1915-1986), American journalist **16** 236-237

**WHITE, WALTER FRANCIS** (1893-1955), general secretary of the National Association for the Advancement of Colored People **16** 238-239

**WHITE, WILLIAM ALANSON** (1870-1937), American psychiatrist **16** 239-240

**WHITE, WILLIAM ALLEN** (1868-1944), American journalist **16** 240-241

**WHITEFIELD, GEORGE** (1714-1770), English evangelist **16** 241-242

**WHITEHEAD, ALFRED NORTH** (1861-1947), English-American mathematician and philosopher **16** 242-244

**WHITLAM, EDWARD GOUGH** (Gof; born 1916), prime minister of Australia (1972-1975) **16** 244-245

**WHITMAN, CHRISTINE TODD** (born c. 1947), American politician **16** 245-248

**WHITMAN, MARCUS** (1802-1847), American physician, missionary, and pioneer **16** 248-249

**WHITMAN, WALT** (1819-1892), American poet **16** 249-251

**WHITMIRE, KATHRYN JEAN NIEDERHOFER** (born 1946), first female mayor of Houston, Texas (1982-1992) **16** 252-253

**WHITNEY, ELI** (1765-1825), American inventor and manufacturer **16** 253-254

**WHITNEY, JOSIAH DWIGHT** (1819-1896), American chemist and geologist **16** 254-255

**WHITTAKER, CHARLES EVANS** (1901-1973), U.S. Supreme Court justice **16** 255-256

**WHITTIER, JOHN GREENLEAF** (1807-1892), American poet **16** 256-257

**WHITTLE, SIR FRANK** (1907-1996), English Air Force officer and engineer **16** 257-258

**WIDNALL, SHEILA E.** (born 1938), American aeronautical engineer **16** 258-259

**WIELAND, CHRISTOPH MARTIN** (1733-1813), German poet and author **16** 260-261

**WIEMAN, HENRY NELSON** (1884-1975), American philosopher and theologian **16** 261-262

**WIENER, NORBERT** (1894-1964), American mathematician **16** 262-263

**WIESEL, ELIE** (born 1928), writer, orator, teacher, and chairman of the United States Holocaust Memorial Council **16** 263-264

**WIESENTHAL, SIMON** (born 1908), Ukrainian Jew who tracked down Nazi war criminals **16** 264-266

**WIGGLESWORTH, MICHAEL** (1631-1705), American Puritan poet and minister **16** 266-267

**WIGMAN, MARY** (Marie Wiegmann; 1886-1973), German dancer, choreographer, and teacher **16** 267-268

**WIGNER, EUGENE PAUL** (1902-1995), Hungarian-born American physicist **16** 268-269

**WILBERFORCE, WILLIAM** (1759-1833), English statesman and humanitarian **16** 269-270

**WILBUR, RICHARD PURDY** (born 1921), translator and poet laureate of the United States (1987-1988) **16** 271-272

**Wild Bunch, The** (film)  
Peckinpah, Sam **21** 338-340

**WILDE, OSCAR FINGALL O'FLAHERTIE WILLS** (1854-1900), British author **16** 272-273

**WILDER, AMOS NIVEN** (1895-1993), American New Testament scholar, poet, minister, and literary critic **16** 273-274

**WILDER, BILLY** (Samuel Wilder; born 1906), American film director, screenwriter, and producer **21** 430-432

**WILDER, LAURA INGALLS** (1867-1957), American author and pioneer **18** 413-414

**WILDER, LAWRENCE DOUGLAS** (born 1931), first African American elected governor in the United States **16** 274-276

**WILDER, THORNTON NIVEN** (1897-1975), American novelist and playwright **16** 276-277

**WILEY, HARVEY WASHINGTON** (1844-1930), American chemist **16** 277-278

**WILHELMINA** (1880-1962), queen of the Netherlands 1890-1948 **16** 278-279

**WILKES, CHARLES** (1798-1877), American naval officer **16** 279-280

**WILKES, JOHN** (1727-1797), English politician **16** 280-281

**WILKINS, SIR GEORGE HUBERT** (1888-1958), Australian explorer, scientist, and adventurer **16** 281-282

**WILKINS, MAURICE HUGH FREDERICK** (born 1916), English biophysicist **18** 415-416

**WILKINS, ROY** (1901-1981), African American civil rights leader **16** 282-283

**WILKINSON, ELLEN** (1891-1947), British Labour politician and crusader for the unemployed **16** 283-284

**WILKINSON, JAMES** (1757-1825), American army general and frontier adventurer **16** 284-286

**WILL, GEORGE FREDERICK** (born 1941), syndicated columnist and television commentator **16** 286-287

**WILLAERT, ADRIAN** (circa 1480-1562), Franco-Flemish composer active in Italy **16** 287-288

**WILLARD, EMMA HART** (1787-1870), American educator and author **16** 288-289

**WILLARD, FRANCES ELIZABETH CAROLINE** (1839-1898), American temperance and women's suffrage leader **16** 289-290

**WILLIAM I** (the Conqueror; 1027/28-1087), king of England 1066-1087 **16** 290-291

**WILLIAM I** (1772-1843), king of the Netherlands 1815-40 **16** 291-292

**WILLIAM I** (1797-1888), emperor of Germany 1871-88 and king of Prussia 1861-88 **16** 292-293

**WILLIAM II** (William Rufus; circa 1058-1100), king of England 1087-1100 **16** 293-294

**WILLIAM II** (1859-1941), emperor of Germany and king of Prussia 1888-1918 **16** 294-295

**WILLIAM III** (1650-1702), king of England, Scotland, and Ireland 1689-1702 **16** 295-296  
as king  
Kidd, William **21** 242-244

**WILLIAM IV** (1765-1837), king of Great Britain and Ireland 1830-37 **16** 296-297

**WILLIAM OF MALMESBURY** (circa 1090-circa 1142), English historian **16** 297-298

**WILLIAM OF OCKHAM** (circa 1284-1347), English philosopher and theologian **16** 298-299

**WILLIAM OF SENS** (Guillaume de Sens;? - 1180), French architect **21** 432-434

**WILLIAM OF TYRE** (circa 1130-84/85), French archbishop, chancellor of the Latin Kingdom of Jerusalem **16** 299-300

**WILLIAM THE SILENT** (1533-1584), prince of Orange and stadholder of the Netherlands **16** 300-302

**WILLIAMS, DANIEL HALE** (1856-1931), African American surgical pioneer **16** 302-303

**WILLIAMS, HANK** (Hiram King Williams; 1923-1953), American singer and songwriter **20** 402-404

**WILLIAMS, HENRY SYLVESTER** (1869-1911), Trinidadian lawyer and pan-African leader **16** 303-304

**WILLIAMS, JOE** (Joseph Goreed; 1918-1999), American singer **20** 404-407

**WILLIAMS, ROGER** (circa 1603-83), Puritan clergyman in colonial America **16** 304-305

**WILLIAMS, SHIRLEY VIVIEN TERESA BRITAIN** (born 1930), British politician **16** 305-306

**WILLIAMS, TED** (Theodore Samuel Williams; born 1918), American baseball player **19** 423-426

**WILLIAMS, TENNESSEE** (Thomas Lanier Williams; born 1914), American dramatist and fiction writer **16** 306-308

**WILLIAMS, WILLIAM CARLOS** (1883-1963), American poet and pediatrician **16** 308-309

**WILLS, HELEN** (1905-1998), American tennis player **19** 426-428

**WILLYS, JOHN** (1873-1935), American businessman **20** 407-409

**WILMOT, DAVID** (1814-1868), American politician **16** 312-313

**WILMUT, IAN** (born 1944), British embryologist **20** 409-411

**WILSON, ALEXANDER** (1766-1813), Scottish-American ornithologist and poet **16** 313-314

**WILSON, AUGUST** (Frederick August Kittell; born 1945), African American playwright **16** 314-316

**WILSON, CHARLES ERWIN** (1890-1961), engineer, businessman, and secretary of defense **16** 316-317

**WILSON, CHARLES THOMSON REES** (1869-1959), Scottish physicist **16** 317-318

**WILSON, EDMUND** (1895-1972), American critic **16** 318-319

**WILSON, EDWARD OSBORNE** (born 1929), American biologist **16** 319-320

**WILSON, HARRIET E.** (circa 1827-circa 1863), African American author **16** 320-322

**WILSON, HENRY** (1812-1875), American politician **16** 322-323

**WILSON, JAMES** (1742-1798), American statesman **16** 323-324

**WILSON, JAMES HAROLD** (born 1916), English statesman, prime minister 1964-70 **16** 324-325

**WILSON, JOSEPH CHAMBERLAIN** (1909-1971), American businessman **16** 325-326

**WILSON, PETE** (born 1933), American politician **16** 326-329

**WILSON, RICHARD** (1713/14-82), British painter **16** 329-330

**WILSON, THOMAS WOODROW** (1856-1924), American statesman, president 1913-21 **16** 330-332

**WINCKELMANN, JOHANN JOACHIM** (1717-1768), German archeologist **16** 332-333

**Windsor** (royal house)  
see Great Britain

**Windsor, Duchess of**  
see Simpson, Wallis

**Windsor dynasty** (Great Britain)  
see Great Britain—since 1901 (Windsor)

**WINFREY, OPRAH GAIL** (born 1954), America's first lady of talk shows **16** 333-336

**WINNEMUCCA, SARAH** (a.k.a. Thocmetony; circa 1844-1891), Native American rights activist **16** 336-338

**WINSLOW, EDWARD** (1595-1655), Pilgrim leader in colonial America **16** 338-339

**WINTHROP, JOHN** (1588-1649), American colonial politician and historian **16** 339-341

**WINTHROP, JOHN** (1606-1676), American colonial statesman and scientist **16** 341

**WINTHROP, JOHN** (1714-1779), American educator and scientist **16** 341-342

**WIRTH, LOUIS** (1897-1952), American sociologist and activist **21** 434-436

**Wisconsin** (state, United States)  
Sholes, Christopher Latham **21** 383-385

**Wisconsin, University of** (Madison)  
Ely, Richard **21** 117-120

**WISE, ISAAC MAYER** (1819-1900), American Jewish religious leader **16** 342-343

**WISE, JOHN** (1652-1725), American Congregational minister **16** 343-344

**WISE, STEPHEN SAMUEL** (1874-1949), American Jewish religious leader **16** 344-345

**WISEMAN, FREDERICK** (born 1930), American documentary filmmaker **16** 345-346

**WITHERSPOON, JOHN** (1723-1794), Scottish-born American Presbyterian divine and educator **16** 346-348

**WITT, JOHAN DE** (1625-1672), Dutch statesman **16** 348-349

**WITTE, COUNT SERGEI YULYEVICH** (1849-1915), Russian statesman **16** 349-350

**WITTGENSTEIN, LUDWIG** (1889-1951), Austrian philosopher **16** 350-351

**WITZ, KONRAD** (circa 1410-46), German painter **16** 351-352

**Wizard of Oz, The** (film)  
Kalmus, Natalie **21** 233-235

**WO-JEN** (1804-1871), Chinese official **16** 352

**WOLF, FRIEDRICH AUGUST** (1759-1824), German classical scholar and philologist **16** 352-353

**WOLFE, JAMES** (1727-1759), English general **16** 354-355

**WOLFE, THOMAS CLAYTON** (1900-1938), American novelist **16** 355-356

**WOLFE, THOMAS KENNERLY, JR.** ("Tom"; born 1931), American journalist and novelist **16** 356-357

**WOLFF, BARON CHRISTIAN VON** (1679-1754), German philosopher **16** 358

**WOLFF, HUGH** (born 1953), American conductor **16** 358-360

**WOLFRAM VON ESCHENBACH** (circa 1170-circa 1230), German writer **16** 360-361

**WOLFSON, HARRY AUSTRYN** (1887-1974), American scholar and educator **16** 361-362

**WOLPE, STEFAN** (1902-1972), German-born composer **16** 362-364

**WOLSELEY, GARNET** (1833-1913), Irish army officer **20** 411-413

**WOLSEY, THOMAS** (circa 1475-1530), English statesman and cardinal **16** 364-366

**Women artists, French**  
Morisot, Berthe **21** 303-305

**Women athletes**  
Marble, Alice **21** 271-273

**Women business leaders**  
Nidetch, Jean **21** 318-320  
Pinkham, Lydia **21** 351-353

**Women educators**  
Barnett, Marguerite Ross **21** 22-24

**Women journalists**  
Croly, Jane **21** 96-96

**Women physicians**  
LaChapelle, Marie **21** 245-247

**Women scientists**  
mathematicians  
Germain, Sophie **21** 157-158

**Women's Press Club** (United States)  
Croly, Jane **21** 96-96

**Women's rights**  
social reformers  
Sholes, Christopher Latham **21** 383-385

**Women's suffrage** (United States)  
leaders  
Blackwell, Antoinette Brown **21** 41-43

**WONDER, STEVIE** (Stevland Judkins Morris; born 1950), American singer, songwriter, and musician **19** 428-430

**WONG, ANNA MAY** (born Wong Liu Tsong; 1905-1961), Asian American actress **16** 366-367

**WOOD, FERNANDO** (1812-1881), American politician **16** 367-368

**WOOD, GRANT** (1891-1942), American painter **16** 368-369

**WOOD, LEONARD** (1860-1927), American Army officer and colonial administrator **16** 369-370

**WOOD, ROBERT ELKINGTON** (1879-1969), American Army officer and business executive **16** 370-371

**WOODHULL, VICTORIA C.** (1838-1927), American women's rights activist **16** 371-372

**WOODRUFF, ROBERT W.** (1889-1985), American businessman and philanthropist **16** 372-374

**WOODS, ROBERT ARCHEY** (1865-1925), American social worker **16** 374

**WOODS, TIGER** (born 1975), African American/Asian American golfer **18** 416-418

**WOODSON, CARTER GODWIN** (1875-1950), African American historian **16** 374-376

**WOODSWORTH, JAMES SHAVER** (1874-1942), Canadian humanitarian, reformer, and political leader **16** 376

**WOODWARD, COMER VANN** (born 1908), American historian **16** 378-379

**WOODWARD, ELLEN S.** (1887-1971), director of work relief programs for women during the New Deal **16** 379-381

**WOODWARD AND BERNSTEIN**, investigative reporting team of Woodward, Robert Upshur (born 1943), and Bernstein, Carl (born 1944) **16** 376-378

**WOOLF, VIRGINIA STEPHEN** (1882-1941), English novelist, critic, and essayist **16** 381-382

**WOOLMAN, JOHN** (1720-1772), American Quaker merchant and minister **16** 382-383

**WOOLWORTH, FRANK WINFIELD** (1852-1919), American merchant **16** 383-384

**WOOTTON, BARBARA ADAM** (1897-1988), British social scientist and member of Parliament **16** 384-385

**WORDSWORTH, WILLIAM** (1770-1850), English poet **16** 385-388

**WORK, MONROE** (1866-1945), American sociologist and publisher **16** 388-389

**World War I** (1914-1918)

- ALLIES
  - United States (industry and finance) Nye, Gerald **21** 320-323
- CENTRAL POWERS
  - spies for

Mata Hari **21** 279-282

**World War II** (1939-1945)

- ALLIES
  - Serbia and spark for war Princip, Gavrilo **21** 353-355
  - United States (opponents) Nye, Gerald **21** 320-323

**WORNER, MANFRED** (born 1934), West German statesman **16** 389-390

**WORTH, CHARLES FREDERICK** (1825-1895), English-born French fashion designer **21** 436-438

**WOVOKA** (a.k.a. Jack Wilson; circa 1856-1932), Native American religious leader and mystic **16** 390-393

**WOZNIAK, STEVE** (Stephen Gary Wozniak; born 1950), American inventor and computer designer **19** 430-432

**WREN, SIR CHRISTOPHER** (1632-1723), English architect **16** 393-394

**Wrestling** (sport)
 

- Nagurski, Bronko **21** 309-311

**WRIGHT, CARROLL DAVIDSON** (1840-1909), American statistician and social economist **16** 396

**WRIGHT, ELIZUR** (1804-1885), American reformer **16** 396-397

**WRIGHT, FRANCES** (1795-1852), Scottish-American socialist, feminist, and reformer **16** 397-398

**WRIGHT, FRANK LLOYD** (1869-1959), American architect **16** 398-401

**WRIGHT, RICHARD** (1908-1960), African American author **16** 401-402

**WRIGHT, WILBUR (1867-1919) AND ORVILLE** (1871-1948), American aviation pioneers **16** 394-396
 

- Lilienthal, Otto **21** 260-262

**WRIGLEY, WILLIAM, JR.** (1861-1932), American businessman and baseball team owner **20** 413-415

**WU CHAO** (Wu Hou/Wu Tse T'ien; 625-705), Empress of China, 690-705 **20** 415-417

**WU CHIEN-SHIUNG** (1912-1997), American physicist **19** 432-434

**WU P'EI-FU** (1874-1939), Chinese warlord **16** 404-405

**WU TAO-TZU** (circa 689-after 758), Chinese painter **16** 405-406

**WU TSE-T'EN** (623-705), empress of China **16** 408

**WU WANG** (died circa 1116 B.C.), first ruler of the Chou dynasty of China 1122-1116 B.C. **16** 408-409

**WUNDT, WILHELM MAX** (1832-1920), German psychologist and philosopher **16** 402-403

**WUORINEN, CHARLES** (born 1938), American composer, conductor, and pianist **16** 404

**WU-TI** (a.k.a. Han Wuti; 156 B.C.-circa 87 B.C.), Chinese emperor **16** 406-408

**WYANT, ALEXANDER HELWIG** (1836-1892), American painter **16** 409-410

**WYATT, SIR THOMAS** (1503-1542), English poet and diplomat **16** 410-411

**WYCHERLEY, WILLIAM** (circa 1640-1716), English dramatist **16** 411-412

**WYCLIF, JOHN** (1330/32-84), English theologian and reformer **16** 412-413

**WYETH, ANDREW NEWELL** (born 1917), American painter **16** 413-415

**WYNN, EARLY** (Gus Wynn; 1920-1999), American baseball player **20** 417-419

**WYTHE, GEORGE** (1726-1806), American jurist **16** 415

## X

**Xena (fictional character)**

- Amina of Zaria **21** 5-7

**XENAKIS, IANNIS** (born 1922), Greek-French composer and architect **16** 416-418

**XENOPHON** (circa 430-circa 355 B.C.), Greek historian, essayist, and military expert **16** 418-420

**XERXES** (ruled 486-465 B.C.), king of Persia **16** 420

**XIANG JINGYU** (born Xiang Qunxian; 1895-1928), Chinese feminist **16** 421-422

**XU GUANGQI** (a.k.a. Kuang-ch'i Hsü; 1562-1633), Chinese politician **16** 422-425

## Y

**YAKUB AL-MANSUR, ABU YUSUF** (reigned 1184-99), Almohad caliph in Spain **16** 426

**YALOW, ROSALYN S.** (Sussman; born 1921), American physicist who developed radioimmunoassay **16** 427-428

**YAMAGATA, ARITOMO** (1838-1922), Japanese general **16** 428-429

**YAMAMOTO, ISOROKU** (born Takano Isoroku; 1884-1943), Japanese admiral **16** 429-433

**YAMANI, AHMED ZAKI** (born 1930), Saudi Arabian lawyer and minister of petroleum and mineral resources (1962-1986) **16** 433-435

**YAMASHITA, TOMOYUKI** (1885-1946), Japanese general **16** 435-436

**YANCEY, WILLIAM LOWNDES** (1814-1863), American politician **16** 436-437

**YANG, CHEN NING** (born 1922), Chinese-born American physicist **16** 437-438

**YARD, MARY ALEXANDER** ("Molly"; born 1912), American feminist, political organizer, and social activist **16** 438-439

**YASUI, MINORU** (1917-1987), Asian American attorney **16** 440-444

**YEAGER, CHUCK** (born 1923), American pilot **16** 444-445

**YEATS, WILLIAM BUTLER** (1865-1939), Irish poet and dramatist **16** 445-447

**YEH-LÜ CH'U-TS'AI** (1189-1243), Mongol administrator **16** 447-449

**YEKUNO AMLAK** (ruled circa 1268-1283), Ethiopian king **16** 449

**YELTSIN, BORIS NIKOLAEVICH** (born 1931), president of the Russian Republic (1990-) **16** 449-452

**YEN FU** (1853-1921), Chinese translator and scholar **16** 452

**YEN HSI-SHAN** (1883-1960), Chinese warlord **16** 452-453

**YEN LI-PEN** (died 673), Chinese painter **16** 453-454

**YERKES, ROBERT MEARNs** (1876-1956), American psychologist **16** 454-455

**YEVTUSHENKO, YEVGENY ALEXANDROVICH** (born 1933), Soviet poet **16** 455-456

**YI HWANG** (1501-1570), Korean philosopher, poet, scholar, and educator **16** 457

**YI SNG-GYE** (1335-1408), Korean military leader, founder of the Yi dynasty **16** 458-459

**YI SUNSIN** (1545-1598), Korean military strategist and naval hero **16** 459-461

**YO FEI** (Yo P'eng-chü; 1103-41), Chinese general **16** 462

**Yoga** (Hindu philosophy) Ramanuja **21** 361-362

**YOGANANDA** (Mukunda Lal Ghose; 1893-1952), Indian yogi **16** 462-463

**YÔNGJO** (1694-1776), king of Korea 1724-76 **16** 461-462

**YORITOMO, MINAMOTO** (1147-1199), Japanese warrior chieftain **16** 463-464

**York, House of**  
see England—1461-85 (Yorkist)

**YOSHIDA, SHIGERU** (1878-1967), Japanese diplomat and prime minister **16** 464-465

**YOSHIMUNE, TOKUGAWA** (1684-1751), Japanese shogun **16** 465-466

**YOULOU, FULBERT** (1917-1972), Congolese president **16** 466-467

**YOUNG, ANDREW JACKSON JR.** (born 1932), African American preacher, civil rights activist, and politician **16** 467-469

**YOUNG, BRIGHAM** (1801-1877), American Mormon leader and colonizer **16** 469-470

**YOUNG, COLEMAN ALEXANDER** (1918-1997), first African American mayor of Detroit **16** 470-471

**YOUNG, LESTER WILLIS** ("Prez"; 1909-59), American jazz musician **16** 471-473

**YOUNG, OWEN D.** (1874-1962), American industrialist and monetary authority **16** 473-474

**YOUNG, STARK** (1881-1963), drama critic, editor, translator, painter, playwright, and novelist **16** 474-475

**YOUNG, THOMAS** (1773-1829), English physicist **16** 475-476

**YOUNG, WHITNEY MOORE, JR.** (1921-1971), African American civil rights leader and social work administrator **16** 476-477

**YOUNGHUSBAND, SIR FRANCIS EDWARD** (1863-1942), English soldier and explorer **16** 477

**YOURCENAR, MARGUERITE** (Marguerite Antoinette Ghislaine; 1903-87), French novelist, poet, essayist, dramatist, world traveller, and translator **16** 477-479

**YÜAN, MA** (flourished circa 1190-circa 1229), Chinese painter **10** 379

**YÜAN MEI** (1716-1798), Chinese author **16** 479-480

**YÜAN SHIH-K'AI** (1859-1916), Chinese military leader **16** 480-481

**YUKAWA, HIDEKI** (1907-1981), Japanese physicist **16** 481-482

**YUN SONDO** (1587-1671), Korean sijo poet **16** 483

**Yung-chêng** (1678-1735), Chinese emperor 1723-35  
Chien-lung **21** 78-79

**YUNG-LO** (1360-1424), Chinese emperor **16** 482-483

## Z

**ZADKINE, OSSIP JOSELYN** (1890-1967), Russian sculptor **16** 484

**ZAGHLUL PASHA, SAAD** (1859-1927), Egyptian political leader **16** 485-486

**ZAH, PETERSON** (born 1937), Native American leader and activist **16** 486-487

**ZAHARIAS, MILDRED DIDRIKSON** ("Babe"; 1913-56), Olympic athlete and golfer **16** 487-488

**ZANGWILL, ISRAEL** (1864-1926), Jewish author and philosopher **16** 488-489

**ZANUCK, DARRYL F.** (1902-1979), American film producer and executive **19** 435-437

**ZAPATA, EMILIANO** (circa 1879-1919), Mexican agrarian leader and guerrilla fighter **16** 489-490

**ZARLINO, GIOSEFFO** (1517-1590), Italian music theorist and composer **16** 490-491

**ZATOPEK, EMIL** (born 1922), Czechoslovakian runner **20** 420-422

**ZAYID BIN SULTAN AL-NAHYAN** (born 1923), president of the United Arab Emirates (1971-) **16** 491-492

**ZEAMI, KANZE** (1364-1444), Japanese actor, playwright, and critic **16** 492-493

**ZEDILLO PONCE DE LEON, ERNESTO** (born 1951), president of Mexico **16** 493-495

**ZEFFIRELLI, FRANCO** (born 1923), Italian stage, opera, and film director, set designer, and politician **18** 419-421

**ZELAYA, JOSÉ SANTOS** (1853-1919), Nicaraguan statesman, three-time president **16** 495-496

**ZEMURRAY, SAMUEL** (1877-1961), Russian-born U.S. fruit importer **16** 496-497

**ZENGER, JOHN PETER** (1697-1746), American printer **16** 497-498

**ZENO OF CITIUM** (335-263 B.C.), Greek philosopher **16** 499-500

**ZENO OF ELEA** (born circa 490 B.C.), Greek philosopher and logician **16** 500

**ZENOBIAS** (died 273), queen of Palmyra **16** 500-503

**ZETKIN, CLARA** (1857-1933), German political activist **16** 504-505

**ZHAO KUANG-YIN** (a.k.a. Song Tai Zu or Sung T'ai Tsu; 927-976), Chinese emperor **16** 505-508

**ZHAO ZIYANG** (Zhao Xiusheng; born 1919), Chinese statesman **16** 508-509

**ZHIRINOVSKY, VLADIMIR VOLFOVICH** (born 1946), Russian politician **16** 509-510

**ZHIVKOV, TODOR** (1911-1998), leader of the Bulgarian Communist Party and head of the Bulgarian government (1962-) **16** 510-512

**ZHUKOV, GEORGI KONSTANTINOVICH** (1896-1974), Russian general **16** 512-513

**ZIA, HELEN** (born 1952), Asian American activist and journalist **18** 421-423

**ZIA UL-HAQ, MOHAMMAD** (1924-1988), president of Pakistan (1978-1988) **16** 513-515

**ZIAUR RAHMAN** (1936-1981), Bangladesh president (1975-1981) **16** 515-516

**ZIEGFELD, FLORENZ** (1869-1932), American musical producer **16** 516-517

**ZIMMERMANN, BERND ALOIS** (1918-1970), German composer **16** 517-518

**ZIMMERMANN BROTHERS**, German artists **16** 518

**ZINDEL, PAUL** (born 1936), American children's author and playwright **18** 423-425

**ZINE EL ABIDINE BEN ALI** (born 1936), president of Tunisia **16** 518-520

**ZINN, HOWARD** (born 1922), American political scientist and historian **16** 520-521

**ZINOVIEV, GRIGORI EVSEEVICH** (1883-1936), Soviet politician **16** 521-522

**ZINZENDORF, COUNT NIKOLAUS LUDWIG VON** (1700-1760), German-born Moravian clergyman **16** 522-523

**ZNANIECKI, FLORIAN** (1882-1958), Polish-American sociologist and educator **16** 523-524

**ZOË** (circa 978-1050), Byzantine empress 1028-34 **16** 524-525

**ZOG I** (Ahmed Bey Zog; 1895—1961), Albanian king **16** 525-526

**ZOLA, ÉMILE** (1840-1902), French novelist **16** 526-528

**ZORACH, WILLIAM** (1887-1966), American sculptor and painter **16** 528

**ZOROASTER** (flourished 1st millennium B.C.), prophet and founder of Iranian national religion **16** 528-530

**ZORRILLA DE SAN MARTIN, JUAN** (1855-1931), Uruguayan poet and newspaperman **16** 530-531

**ZOSER** (flourished circa 2686 B.C.), Egyptian king **16** 531

**ZUKOR, ADOLPH** (1873-1976), American film producer and executive **19** 437-439

**ZUMÁRRAGA, JUAN DE** (circa 1468-1548), Spanish churchman, first archbishop of Mexico **16** 531-532

**ZUMWALT, ELMO RUSSELL, JR.** ("Bud"; 1920-2000), commander of U.S. naval forces in Vietnam **16** 532-534

**ZUNZ, LEOPOLD** (1794-1886), German-born Jewish scholar **16** 534

**ZURBARÁN, FRANCISCO DE** (1598-1644), Spanish painter **16** 534-535

**ZWILICH, ELLEN TAAFFE** (born 1939), American composer **16** 536-537

**ZWINGLI, HULDREICH** (1484-1531), Swiss Protestant reformer **16** 537-538

**ZWORYKIN, VLADIMIR KOSMA** (1889-1982), Russian-American physicist and radio engineer **16** 539-540