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The Rise of Modern Metaphysics and Epistemology

Every part of the universe is body, and that which is not body is not part of the universe. —Thomas Hobbes

Wood, stone, fire, water, flesh . . . are things perceived by my senses; and things perceived by the senses are immediately perceived; and things immediately perceived are ideas; and ideas cannot exist outside the mind.

—George Berkeley

The transitional period between medieval and modern times was the Renaissance (fourteenth through sixteenth centuries). Through its emphasis on worldly experience and reverence for classical culture, the Renaissance helped emancipate Europe from the intellectual authority of the Church. The modern period in history (and philosophy) that followed lasted through the nineteenth century. Its interesting cultural and social developments include, among other things, the rise of nation-states, the spread of capitalism and industrialization, the exploration and settlement of the New World, the decline of religion, and the eventual domination of science as the most revered source of knowledge. The last development is the most important to a history of metaphysics and epistemology and is briefly described in the box “The Scientific Revolution.”

The Scientific Revolution

Modern science began with the Scientific Revolution. That commenced when Copernicus (1473–1543) broke with long tradition and proposed (mid-sixteenth century) that the earth is not the center of the universe but in fact revolves, with the other planets, around the sun. The essence of the revolution lies in several ideas: (1) it is *important* to understand how the world works; (2) to do that, you have to *examine the world itself* rather than read Aristotle or consult scripture; (3) a fruitful way to examine the world is through *experimentation*—this is an idea expressed most clearly by Francis Bacon (1561–1626); and (4) the world is a *mechanical system* that can be *described mathematically*—this is an idea expressed most clearly by René Descartes (1596–1650). The details of the mechanistic Cartesian picture of the universe were filled in (to a degree) by the observations and findings of (among others) Tycho Brahe (1546–1601), Johannes Kepler (1571–1630), Galileo Galilei (1564–1642), and, most important, Sir Isaac Newton (1642–1727), who combined the various discoveries into a unified

description of the universe based on the concept of gravitation.

Certain newly invented instruments aided the early scientists in their study of the world, including, most famously, the telescope, the microscope, the vacuum pump, and the mechanical clock. And by no means were the findings of the new science limited to astronomy and the dynamics of moving bodies. There were, for example, William Harvey's (1578–1657) discovery of the circulation of the blood, William Gilbert's (1540–1603) investigations of electricity and magnetism, and the various discoveries of Robert Boyle (1627–1691)—the father of chemistry—concerning gases, metals, combustion, acids and bases, and the nature of colors.

Another important idea that came to be characteristic of the Scientific Revolution was that the fundamental constituents of the natural world are basically corpuscular or atomistic—things are made out of tiny particles. The modern scientists (in effect) declared that Democritus had gotten things right.

To most educated Westerners today, it is a matter of plain fact that there exists a universe of physical objects related to one another spatiotemporally. These objects are composed, we are inclined to believe, of minute atoms and subatomic particles that interact with one another in mathematically describable ways.

We are also accustomed to think that in addition to the spatiotemporal *physical* universe there exist human (and perhaps other) observers who are able to perceive their corner of the universe and, within certain limits, to understand it. The *understanding*, we are inclined to suppose, and the *minds* in which this understanding exists, are not themselves physical entities, though we also tend to think that understanding and minds depend in some sense on the functioning of physical entities such as the brain and central nervous system. They, the understanding itself and the minds that have it—unlike physical things such as brains and atoms and nerve impulses and energy fields—exist in time but not in space. They, unlike physical things, are not bound by the laws of physics and are not made up of parts.

Thus, today it seems to be a matter of plain common sense that reality has a dual nature. The world or the universe, we believe, consists of physical objects on one hand and minds on the other. In a normal living person, mind and matter are intertwined in such a way that what happens to the body can affect the mind



Galileo being tried for heresy before a papal tribunal.

and what happens in the mind can affect the body. The clearest examples of mind–body interaction occur when the mind, through an act of will, causes the body to perform some action or when something that happens to the body triggers a new thought in the mind.

So this *commonsense metaphysics*, as we have been describing it, is dualistic. It supposes that two different kinds of phenomena exist: physical and mental (often called “spiritual”). *Dualism* is essentially the “two-realms view” invented by Plato, incorporated with changes into Christianity by Augustine and others and transmitted to us in its contemporary form by early modern philosophers.

Although our commonsense metaphysics is dualistic, it did not have to be that way; we might have adopted an alternative metaphysical perspective. Here are the main possibilities:

- **Dualism.** This view holds that what exists is either physical or mental (“spiritual”); some things, such as a human person, have both a physical component (a physical body) and a mental component (a mind).
- **Materialism,** or physicalism. This view holds that only the physical exists. Accordingly, so-called mental things are in some sense manifestations of an underlying physical reality. (Do not confuse metaphysical materialism with the doctrine that the most important thing is to live comfortably and acquire wealth.)



- **Idealism.** This view holds that only the mental (or “spiritual”) exists. Accordingly, so-called physical things are in some sense manifestations of the mind or of thought. (Do not confuse metaphysical idealism with the views of the dreamer who places ideals above practical considerations.)
- **Alternative views.** Some theorists have held that what exists is ultimately neither mental nor spiritual; still others have believed that what exists is ultimately both mental and physical. How could it be both mental and physical? According to this view, sometimes called **double aspect theory**, the mental and physical are just different *ways of looking at* the same things—things that in themselves are neutral between the two categories.

Thanks to the legacy of Greek and Christian influences on Western civilization, dualism continues to command the assent of common sense. Increasingly, however, the march of science seems philosophically to undermine metaphysical dualism in favor of materialism. At stake here are three important questions:

1. Does an immaterial God exist?
2. Do humans have free will?
3. Is there life after death?

Unfortunately for those who would prefer the answer to one or another of the questions to be “yes,” a scientific understanding of the world tends to imply the materialist view that all that exists is matter. This is one major reason why modern metaphysics may be said to be concerned with powerful stuff: riding on the outcome of the competition among the perspectives just listed (dualism, materialism, idealism, and alternative views) is the reasonableness of believing in God, free will, and the hereafter.

Let us therefore consider each of these perspectives as it arose during the modern period of philosophy.

Chronology of Postmedieval History

Here, for easy reference, are the dates of the major periods in postmedieval history mentioned in the text:

The Renaissance: the fourteenth through sixteenth centuries

The Reformation and Counter-Reformation: the sixteenth century

The Scientific Revolution: the seventeenth century (though that revolution still continues)

The Enlightenment or Age of Reason: the eighteenth century

The Industrial Revolution: the mid-eighteenth to mid-nineteenth centuries

The Romantic Period: the late eighteenth to very early nineteenth centuries

The Age of Technology: the twentieth century to the present

DESCARTES AND DUALISM

Many European thinkers of the sixteenth century began to question established precepts and above all to question the accepted authorities as arbiters of truth. That so-and-so said that something was true was no longer automatically accepted as proof of that something, no matter who said it or what the something was. This tendency to question authority effectively set the stage for the Scientific Revolution and modern philosophy, both of which are products of the seventeenth century. (For a chronology of postmedieval history, see the box above.)

Modern philosophy is usually said to have begun with **René Descartes** [day-KART] (1596–1650), mathematician, scientist, and, of course, philosopher. Descartes' importance to Western intellectual history cannot be overestimated. Other thinkers we have mentioned may have equaled him in significance, but none has surpassed him. He made important contributions to physiology, psychology, optics, and especially mathematics, in which he originated the Cartesian¹ coordinates and Cartesian curves. It is thanks to Descartes that students now study analytic geometry; he introduced it to the world.

Descartes was a Catholic, but he also believed there are important truths that cannot be ascertained through the authority of the Church. These include those truths that pertain to the ultimate nature of existing things.

But what, then, he wondered, is to be the *criterion* of truth and knowledge in such matters? What is to be the criterion by which one might separate *certain knowledge* about matters of fact from inferior products such as *mere belief*?

Such questions were not new to philosophy, of course. During the Renaissance, the classical skeptical works, notably those by Sextus, were “rediscovered,” published, and taken quite seriously—even contributing to the controversies during the Protestant Reformation about the knowability of religious beliefs. In addition, in the sixteenth and seventeenth centuries, various new skeptical writings appeared. Especially noteworthy in this resurgent skeptical tradition were Pierre Gassendi (1592–1655) and Marin Mersenne (1588–1648), who separately used a variety of

¹ *Cartesian* is the adjective form of Descartes.

PROFILE: René Descartes (1596–1650)

Descartes had the great fortune to be able to transform his inheritance into a comfortable annual income on which he lived. And he did not waste his time. Before he died, he had made important advances in science, mathematics, and philosophy. Descartes founded analytic geometry and contributed to the understanding of negative roots. He wrote a text in physiology and did work in psychology. His work in optics was significant. His contributions in philosophy are of enormous importance.

As a youth, Descartes attended the Jesuit College at La Flèche and the University of Poitiers. When he was twenty-one, he joined the Dutch army and, two years later, the Bavarian army. His military experience allowed him to be a spectator of the human drama at first hand and granted him free time to think. In 1628 he retired to Holland, where he lived for twenty years in a tolerant country in which he was free from religious persecution.

Descartes was a careful philosopher and a cautious person. Although he took great issue with the medievalist thinking of his teachers, he did not make them aware of his reactions. Later, when he heard that the Church had condemned Galileo

for his writings, he decided that he would have his works published only one hundred years after his death. He subsequently changed his mind, though he came to wish that he had not. For when he did publish some of his ideas, they were bitterly attacked by Protestant theologians; Catholic denunciations came later. This caused Descartes to say that, had he been smarter, he would not have written anything, so he would have had more peace and quiet to think.

Two unconnected incidents in Descartes' life are always mentioned in philosophy texts. One is that the insights that underlay his philosophy came to him in dreams after he had spent a winter day relaxing in a well-heated room while in the army in Bavaria. The other is that he accepted an invitation, with some reluctance, to tutor Queen Christina of Sweden in 1649. This was a big mistake, for the cold weather and early hour of his duties literally killed him. We can only speculate what the queen learned from the episode.

Descartes' principal philosophical works are *Discourse on Method* (1637), *Meditations on First Philosophy* (1641), and *Principles of Philosophy* (1644).

skeptical arguments (which we do not have the space to discuss) to establish the unknowability of the true nature of things. Both believed, however, that a study of the appearances of things could yield information useful for living in this world.

Descartes was vitally concerned with skeptical questions as to the possibility of knowledge, but he was no skeptic. His interest in mathematics strongly affected his philosophical reflections, and it was his more or less lifelong intention to formulate a unified science of nature that was as fully certain as arithmetic.

He did, however, employ skepticism as a method of achieving certainty. His idea was simple enough: I will doubt everything that can possibly be doubted, he reasoned, and if anything is left, then it will be absolutely certain. Then I will consider what it is about this certainty (if there is one) that places it beyond doubt, and that will provide me with a *criterion* of truth and knowledge, a yardstick against which I can measure all other purported truths to see if they, too, are beyond doubt.

Skepticism as the Key to Certainty

Let's see how Descartes' *doubting methodology* worked.

To doubt every proposition that he possibly could, Descartes employed two famous conjectures, the **dream conjecture** and the **evil demon conjecture**. For all I know, Descartes said, I might now be dreaming—that is Descartes'

Descartes' Conjectures

For all I know, I might now be dreaming. This is Descartes' dream conjecture, and it is easy enough to disprove, correct? I just pinch myself. But then again . . . am I just dreaming that I pinched myself? Might not any evidence I have that I am now awake just be dream evidence? Can I really be certain that I won't find myself in a few moments waking up, realizing that I have been dreaming? And thus can I really be sure that the things I see around me, this desk and book, these arms and legs, have any existence outside my mind?

Well, you may say, even if I am dreaming, there are still many things I cannot doubt; even if I am dreaming, I cannot doubt, for instance, that two and three are five or that a square has four sides.

But then again—and this is where Descartes' evil demon conjecture comes in—of course, it

seems absolutely certain to me that two and three make five and that a square has four sides. But *some* propositions that have seemed absolutely certain to me have turned out to be false. So how can I be sure that *these* propositions (that two and three make five and that a square has four sides), or any other proposition that seems certain to me, are not likewise false? For all I know, a deceitful and all-powerful intelligence has so programmed me that I find myself regarding as absolute certainties propositions that in fact are not true at all.

Descartes thought that these two conjectures combined in this way to force him “to avow that there is nothing at all that I formerly believed to be true of which it is impossible to doubt.”

dream conjecture. And further, he said, for all I know, some malevolent demon devotes himself to deceiving me at every turn so that I regard as true and certain propositions that are in fact false. That supposition is Descartes' evil demon conjecture.

Yes, these two conjectures are totally bizarre, and Descartes was as aware of that as you are. But that is just the point. What Descartes was looking for was a measure of certainty that escapes even the most incredible and bizarre possibilities of falsehood.

And what he discovered, when he considered everything he thought he knew in the light of one or the other of these two bizarre possibilities, is that he could doubt *absolutely everything, save one indubitable truth*: “I think, therefore I am”—***cogito, ergo sum***. Remember this phrase, which is from Descartes' *Discourse on Method*.

What Descartes meant is that any attempt to doubt one's existence as a thinking being is impossible because to doubt is to think and to exist. Try for a moment to doubt your own existence, and you will see what Descartes meant. The self that doubts its own existence must surely exist to be able to doubt in the first place. (For further description of this line of reasoning, see the box “Descartes' Conjectures.”) Like Augustine, Descartes had found certain truth in his inability to doubt his own existence.

The “Clear and Distinct” Litmus Test

Descartes went much further than Augustine. Having supposedly found certain knowledge in his own existence as a thing that thinks, he reasoned as follows:

I am certain that I am a thing that thinks; but do I not then likewise know what is required to make me certain of a truth? In this knowledge of my existence as a



thinking thing there is nothing that assures me of its truth, excepting the clear and distinct perception of that which I state, which would not indeed suffice to assure me that what I say is true, if it could ever happen that a thing that I conceived so clearly and distinctly could be false. And accordingly it seems to me that already I can establish as a general rule that all things that I perceive very clearly and very distinctly are true.

In other words, Descartes examined his single indubitable truth to see what guaranteed its certainty and saw that any other proposition he apprehended with identical “clarity and distinctness” must likewise be immune to doubt. In short, he had discovered in the certainty of his own existence an essential characteristic of certain truth: anything that was as clear and distinct as his own existence would pass the litmus test and would also have to be certain.

Using this **clear and distinct criterion**, Descartes found to his own satisfaction that he could regard as certain much of what he had initially had cause to doubt. This doubting methodology was like geometry, in which a theorem whose truth initially only *seems* true is demonstrated as absolutely certain by deducing it from basic axioms by means of rules of logic. Descartes’ axiom was, in effect, “I think, therefore I am,” and his rule of logic was “Whatever I perceive clearly and distinctly is certain.”

And so Descartes, having armed himself with an absolutely reliable litmus test of truth, discovers first that he has certain knowledge that God exists. (We shall go over the details of Descartes’ proof of God’s existence in Part Three.) Also, Descartes finds that he knows for certain, and that therefore it is the case, that God would not deceive the thinking mind with perceptions of an external world—a world of objects outside the mind—if such did not exist. Thus, for Descartes, there are, beyond God, two separate and distinct substances, and reality has a dual nature. On one hand is *material substance*, whose essential attribute is **extension** (occupancy of space), and on the other hand is *mind*, whose essential attribute is **thought**. Because a substance, according to

Oliva Sabuco de Nantes and the Body–Soul Connection

Descartes speculated that the mind interacts with the body in the pineal gland. Sixty or so years before Descartes, **Oliva Sabuco de Nantes** [sah-BOO-ko] (1562–?) proposed that, as the properties of the mind (or “soul,” as she called it) are not physical properties, they cannot be physically located in some specific spot. Thus, she reasoned, the connection between body and soul occurs *throughout* the brain. The brain and the rest of the body “serve the soul like house servants serve the house,” she maintained. She argued that a person is a microcosm (a miniature version) of the world, and this discloses that, in the same way as God activates, rules, and governs the world, the soul governs the “affects, movements, and actions of humans.”

It is worth mentioning that Sabuco also believed that the intimate connection between soul and brain means there is a close relationship between psychological and physical health and between morality and medicine. For example, as soon as a negative emotion such as *sorrow* begins to affect our body, she said, we must control it before it becomes unmanageable *despair*. Virtuous passions promote good health, she said; immoral passions cause sickness and disease. As an illustration, she cited exces-

sive sexual activity, which causes (she believed) excessive loss of an essential brain fluid, resulting in brainstem dehydration and the insanity found in advanced cases of syphilis and gonorrhea. There exists, she reasoned, a natural, medical basis for moral sanctions against sexual promiscuity. (It is pretty easy to think of a modern illustration of this thesis.)

Sabuco, born in Alcaraz, Spain, published her important book, *New Philosophy of Human Nature*, when she was only twenty-five years old. This was at the tail end of the Spanish Inquisition—not the most congenial of times for objective scholarship—and Sabuco was taking something of a risk as a woman writer of philosophy. Nevertheless, she was highly knowledgeable about ancient and medieval thinkers, and her book was cleared by the Church with only a few changes. It became quite influential and was published several times during her lifetime and in every century after her death.

Certainly, Sabuco did not solve the problem of mind–body interaction, but she anticipated by several hundred years today’s holistic medicine with its emphasis on the intimate connection between mental and physical well-being.

Descartes, “requires nothing other than itself to exist,” it follows that mind and matter are totally independent of each other. Still, he thought that in a living person the mind and the material body interact, the motion of the body being sometimes affected by the mind and the thoughts of the mind being influenced by physical sensations.

This is, of course, familiar stuff. Our commonsense metaphysics is pretty much the dualistic metaphysics of Descartes. (However, see the box on Oliva Sabuco.) Unfortunately, there are embarrassing difficulties in the Cartesian dualistic metaphysics. These difficulties vexed Descartes and have yet to be plausibly resolved. In Chapter 9 we explain these difficulties in some detail.

To anticipate what is said there, Descartes thought:

1. Material things, including one’s own body, are completely subject to physical laws.

But he also thought:

2. The immaterial mind can move one’s body.

The difficulty is that, if the immaterial mind can do this, then one’s body evidently is *not* completely subject to physical laws after all. It seems contradictory to hold both (1) and (2). Do *you* hold both (1) and (2)?

Descartes also found it difficult to understand just how something immaterial *could* affect the movement of something material. He said that the mind interacts with the body through “vital spirits” in the brain, but he recognized that this explanation was quite obscure and almost wholly metaphorical. It was, in short, a dodge.

Some of Descartes’ followers proposed a solution to the problem of how the immaterial mind interacts with the material body, given that the body is supposed to be subject to physical laws. The solution is called **parallelism**. The mind, they argued, does not *really* cause the body to move. When I will that my hand should move, my act of willing only *appears* to cause my hand to move.

What actually happens is two parallel and coordinated series of events: one a series of mental happenings, and the other a series that involves happenings to material things. Thus, my act of willing my hand to move does not cause my hand to move, but the act of willing and the movement of the hand *coincide*. Hence, it *appears* that the willing causes the moving.

Why do these events just happen to coincide? To account for the coinciding of the mental happenings with the physical happenings, Descartes’ followers invoked God. God, they said, is the divine coordinator between the series of mental happenings and the series of material happenings. (In a variant of parallelism known as **occasionalism**, when I will my hand to move, that is the occasion on which God causes my hand to move.)

This theory of parallelism seems far-fetched, true. But perhaps that only illustrates how serious a difficulty it is to suppose both that material things, including one’s body, are completely subject to physical laws and that the immaterial mind can move one’s body.

To date, a satisfactory explanation of the problem of interaction still has not been found.

Despite these problems, Descartes thought he had succeeded in establishing metaphysical dualism as absolutely certain. He also thought he had shown that the mind, because it is not in space and hence does not move, is not in any sense subject to physical laws and therefore is “free.” The metaphysical dualism that survives today as mere “common sense,” though it originated with Plato and was incorporated into Christianity by Augustine, survives in the form developed by Descartes. Yesterday’s philosophy became today’s common sense.

Notice Descartes’ overall approach to metaphysical issues. Instead of asking, “What is the basic stuff?” or “Of what does reality consist?” Descartes took an indirect approach and asked, in effect, “What do I know is the basic stuff?” and “Of what can I be certain about the nature of reality?” Descartes tried to discover *metaphysical* truth about what *is* through epistemological inquiry about *what can be known*.

We will call this approach to metaphysical truth the **epistemological detour**. After Descartes, and largely because of him, modern philosophy has attached considerable importance to epistemology, and metaphysical inquiry is often conducted via the epistemological detour.

Unfortunately, maybe the least debatable part of Descartes’ overall reasoning is the two skeptical arguments (the dream conjecture and the evil demon conjecture) he advanced at the outset, which seem to make it a live issue whether what

passes for knowledge genuinely is knowledge. After Descartes, the philosophers of the seventeenth century became divided about the power of reason in overcoming skepticism. This division is summarized in the box later in this chapter titled “Rationalism and Empiricism.”

HOBBS AND MATERIALISM

Thomas Hobbes (1588–1679) read Descartes’ *Meditations* before its publication and raised several criticisms, which, together with Descartes’ rejoinders, were published by Descartes. About ten years later, in 1651, Hobbes published his own major work, *Leviathan*.

Hobbes was on close terms with many of the best scientists and mathematicians of the period, including most significantly Galileo, and their discoveries seemed to him to imply clearly that all things are made of material particles and that all change reduces to motion. Accordingly, the basic premise of Hobbes’s metaphysics is that *all that exists is bodies in motion*, motion being a continual relinquishing of one place and acquiring of another. Because, according to Hobbes, there are two main types of bodies, physical bodies and political bodies, there are two divisions of philosophy, natural and civil. Here we are concerned with Hobbes’s natural philosophy. Later we will examine his civil, or political, philosophy, which was enormously important.

Now, this business that all that exists is bodies in motion might sound plausible, until you consider such things as thoughts or acts of volition or emotion. Can it really be held that *thought* is just matter in motion? That *emotions* are? That *hatred* is? “Yes,” said Hobbes.

Perception

Hobbes’s strategy was to show that there is a basic mental activity, **perception**, or, as he called it, “sense,” from which all other mental phenomena are derived and that perception itself reduces to matter in motion.

Perception, he maintained, occurs as follows: Motion in the external world causes motion within us. This motion within (which Hobbes called a “phantasm”) is experienced by us as an external object (or group of objects) having certain properties. The properties do not *really* exist in the objects, Hobbes said; they are just the way the objects *seem* to us:

The things that really are in the world outside us are those motions by which these seemings are caused.

So motion outside us causes motion within us, which is a perception. If the internal motion remains for a while even after the external object is no longer present, it is then *imagination* or *memory*. And *thinking*, he said, is merely a sequence of these perceptions. (There are subtleties in his account of thinking we won’t now bother with.)

Now, humans, unlike animals (Hobbes said), are able to form signs or names (words) to designate perceptions, and it is this ability that allows humans to reason. In Hobbes's view, *reasoning* is nothing but "adding and subtracting of the consequences of general names." Reasoning occurs, for example, when you see that the consequences of the name *circle* are, among other things, that if a straight line is drawn through the center of a circle, the circle has been divided into two equal parts.

As for *decisions* and other voluntary actions, such as walking or speaking or moving our arms, these are all movements of the body that begin internally as "endeavors," caused by perceptions. When the endeavor is toward something that causes it, this is *desire*; when away from it, it is *aversion*. Love is merely desire, and hate merely aversion. We call a thing "good" when it is an object of desire and "bad" when it is an object of aversion. *Deliberation* is simply an alternation of desires and aversions, and *will* is nothing but the last desire or aversion remaining in a deliberation.

We've left out the finer details of Hobbes's account, but this should show you how Hobbes tried to establish that every aspect of human psychology is a derivative of perception and that perception itself reduces to matter in motion.

This theory that all is matter in motion may well strike you as implausible, maybe even ridiculous. Nevertheless, as you will see in Chapter 9, it expresses in a rudimentary form a view that is quite attractive to many contemporary philosophers and brain scientists, namely, that every mental activity is a brain process of one sort or another.

THE ALTERNATIVE VIEWS OF CONWAY, SPINOZA, AND LEIBNIZ

So much, then, for Descartes and dualism and Hobbes and materialism. We still need to discuss the remaining two perspectives listed at the beginning of this chapter, idealism and "alternative views." Since historically idealism was introduced last, we turn now to these alternative views—the three alternative metaphysical systems of Anne Conway, Benedictus de Spinoza, and Gottfried Wilhelm, Baron von Leibniz. It must be said that Spinoza and Leibniz had the greatest influence on subsequent developments, but we shall treat the three in chronological order.

The Metaphysics of Anne Conway

The metaphysical system that **Anne Conway** (1631–1679) developed is a *monadology*: a view that all things are reducible to a single substance that is itself irreducible. (This is roughly what atomic theory was until the discovery of subatomic particles in the twentieth century.) The most famous monadology in the history of philosophy is that of Leibniz. Leibniz was familiar with Conway's metaphysics, and scholars believe Conway's philosophy was a forerunner of Leibniz's.

In Conway's view, there is a kind of continuum between the most material and the most mental or "spiritual" substances. All created substances ("Creatures,"

PROFILE: Anne Finch, The Viscountess Conway (1631–1679)

Like most women of the seventeenth century, Anne Conway, as she is usually called, had no formal education. Her father, who was speaker of the House of Commons, died a week before Anne was born. But her family remained influential, her half-brother becoming lord high chancellor in England. So Anne Finch grew up knowing some of the most important and influential English intellectuals of her time. At home, she somehow managed to learn French, Latin, Hebrew, and Greek. She also studied mathematics and philosophy. She was critical of the work of Descartes (or “Cartes,” as he was sometimes called), Hobbes, and Spinoza. And she discussed philosophy with some fairly well-known philosophers who lived in or visited England during her lifetime. The philosophical community was a small one there, and everybody in it seems to have known everybody else. She worked closely with some influential philosophers known as the Cambridge Platonists.

Anne Conway suffered from migraine headaches, and that is supposed to account for the unreadable scrawl with which she penciled her book, *The Principles of the Most Ancient and Modern Philosophy*. Depending on which scholar you read, she wrote it either between 1671 and 1674 or between 1677 and 1679. She died without having a chance to correct or revise it. Her husband was away in Ireland



at the time; and Francis Mercury von Helmont, her friend and one of the colleagues with whom she often discussed philosophy and religion, preserved her body in wine until her husband could return for the funeral.

Von Helmont had Conway’s work translated into Latin and published in 1690. Two years later, it was translated back into English by somebody whose initials were J. C. Now, von Helmont was a good friend of Leibniz and showed him Conway’s book. Scholars who have studied Conway’s

philosophy consider her to have been a forerunner of Leibniz in many ways. However, in the words of Sarah Hutton, writing in 2003 in the *Stanford Encyclopedia of Philosophy*,¹

although she was unusual as a female philosopher of the seventeenth century, by virtue of the fact that her philosophy achieved publication, the anonymity of her work has ensured that she has suffered the same neglect that has been the lot of most pre-modern female philosophers.

A digital copy of *The Principles of the Most Ancient and Modern Philosophy* is available online at <http://digital.library.upenn.edu/women/conway/principles/principles.html>.

¹ <http://plato.stanford.edu/entries/conway>.

Conway called them) are both mental and physical to some degree or other. Conway also argued that all created substances are dependent on God’s decision to create them. Moreover, she said that all such Creatures have both an individual essence (what makes one thing different from another) and an essence that is common to all. This essence in common is what later came to be known as *de re* modality. The idea of *de re* essentially means that a property (in this case, the property of being both mental and physical) must be a property of anything that is created by God; otherwise, it ceases to be what it is. It could not exist except that it is necessarily both mental and physical. Everything—persons, animals, plants, inanimate objects (furniture)—is a substance. And everything is partly physical and partly mental, and could not be otherwise.

God, of course, is another matter, Conway believed. God is nonmaterial, non-physical; God is also all-perfect. Therefore, the one thing God cannot do is change his mind about being spiritual. To change his mind and be physical one moment, spiritual the next, and maybe back again, would imply that one state or the other was less than perfect. What possible reason could God have to want to change? What's not to like? Now, that does not mean that God cannot be physical; he just does not *want* to be and never would want to be because that would suggest that he was not perfect before the change. And we all know that if God is anything, he is perfect. God created Christ (making God older than Christ), and Christ, God's first physical manifestation of himself (his first Creature), always had some degree of physical essence and some degree of mental or spiritual essence.

Because God is perfect, Conway held, he is changeless and therefore exists outside the dimension of time. Conway's concept of time is less technical than, but philosophically much like, that articulated recently by the great contemporary physicist Stephen Hawking in his book *A Brief History of Time*, according to whom (roughly) time is the succession of events. Conway called events "motions" and "operations" of created objects (Creatures). Understood this way, time is the measure of changes in things. Because creating (making Creatures) is part of God's primary essence (a necessary property—the way God defines himself, as creator), Conway's God is an eternal creator. The universe is therefore not something that was made at some specific time: it always existed because God always existed and he was always creating. Past and future are all God's present.

Conway's book, *The Principles of the Most Ancient and Modern Philosophy*, reminds one of Spinoza's *Ethics* (see the following section) and Leibniz's *Monadology* (see pages 111–113) in that Conway begins with a series of assumptions or "axioms" (though she did not refer to them as such) and then derives from them various philosophical conclusions or "theorems" (though, again, she did not refer to them as such). If you read these three works, you are apt to be struck by how difficult it is to dispute the writer's conclusions if you accept the assumptions.

Spinoza

God also played an important role in the philosophy of **Benedictus de Spinoza** [spin-O-zuh] (1632–1677), even though Spinoza was considered an atheist. About the time Hobbes was sending his work to Amsterdam for publication, Spinoza was completing his major work, *Ethics*, in that city. Holland during this period of history was the most intellectually tolerant of all European countries, sort of a seventeenth-century Berkeley, California. It was probably also the only country in which the government would have tolerated Spinoza's opinions, which, like Hobbes's, were considered atheistic and repulsive.

Spinoza's *Ethics* consists of some 250 "theorems," each of which he attempted to derive by rigorous deductive logic from a set of eight basic definitions and seven self-evident axioms. Given his axioms and definition of substance (that which depends on nothing else for its conception, i.e., that which is self-subsistent), Spinoza is able to prove that there are no multiple substances, as Descartes thought, but

PROFILE: Benedictus de Spinoza (1632–1677)

The gentle Spinoza was among the most ethical men ever to have lived. “As a natural consequence,” twentieth-century philosopher Bertrand Russell observed, “he was considered, during his lifetime and for a century after his death, a man of appalling wickedness.”

Spinoza’s family was one of many Jewish families that fled Portugal for Holland to escape the terrors of the Inquisition. His serious nature and love of learning were appreciated by all until he pointed out that the Old Testament and biblical tradition were full of inconsistencies. This produced a venomous wrath in the Jewish community. At first Spinoza was offered an annual pension for concealing his doubts. When this failed, the logical next step was taken: an attempt was made to murder him. He was finally, of course, excommunicated from the synagogue.

For a time, Spinoza lived in the house of his Latin teacher, though he later rented a room in a tiny house in Rhynsburg, now a suburb of Leyden, where he

earned a sparse living by grinding glass lenses. He lived a modest and frugal existence and preferred to work on his philosophy than to do anything else.

Spinoza became known despite his quiet and retiring existence, and at one point he was offered a professorship at Heidelberg. He declined the appointment, realizing that there would be restrictions on his academic freedom and fearing that his philosophy might draw sharp reactions in German society. In that suspicion he was probably correct, if the fact that many German professors referred to him as “that wretched monster” is any indication.

Still, after his death, some of the greatest thinkers eventually came to appreciate his depth. Hegel went so far as to say that all subsequent philosophy would be a kind of Spinozism.

Spinoza died when he was forty-four, from tuberculosis. His condition was aggravated by the glass dust that he was forced to breathe in his profession. Today, the society for out-of-work American philosophers is called The Lensgrinders.

only one infinite substance. Spinoza equated this substance with God, but we must not be misled by his proof of God. Spinoza’s “god” is simply *basic substance*: it is not the personal Judaeo-Christian God; rather, it is simply the sum total of everything that is. It is reality, nature. Although Spinoza was considered an atheist, he was not. On the contrary, he was a pantheist: god is all.

Because there is only one substance, according to Spinoza, thought and extension are not the attributes of two separate and distinct substances, mind and matter, as Descartes had thought. What they are, in Spinoza’s system, are different attributes of the one basic substance—they are alternative ways of conceiving of it.

So a living person, from Spinoza’s point of view, is not a composite of two different things. The living person is a single unit or “modification” of substance that can be conceived either as extension or as thought. Your “body” is a unit of substance conceived as extension; your “mind” is the selfsame unit of substance conceived as thought.

Because, according to Spinoza, the infinite substance is infinite in all respects, it necessarily has infinite attributes. Therefore, thought and extension are not the only attributes of substance. They are just the only attributes we know—they are the only ways available to us of characterizing or conceiving substance. They are, so to speak, the only “languages” in terms of which we can speak and think about reality or substance.

Accordingly, for Spinoza there is no problem in explaining how the mind interacts with the body, for they are one and the same thing. Wondering how the

mind and the body interact is like wondering how your last glass of *wine* and your last glass of *vino* could mix with each other. The mind and the body are the same thing, conceptualized from different viewpoints.

In Spinoza's system, there is no personal immortality after death. Further, free will is an illusion; whatever happens is caused by the nature of substance. Material bodies are governed by the laws of physics, and what happens to them is completely determined by what happened before. Because the mental and the material are one and the same, what happens in minds is as inevitable as what happens in bodies. Everything was, is, and will be exactly as it must be.

There is certainly more to Spinoza's philosophy than this, but this is enough for our purposes here. Where Descartes had postulated two separate substances, both Hobbes and Spinoza postulated only one. For Hobbes, however, what exists is only material; a nonmaterial mental realm does not exist. For Spinoza, what exists is both material and mental, depending on how it is conceptualized. Thus, although neither Hobbes nor Spinoza is faced with Descartes' problem of explaining how two realms, the mental and the material, interact, Hobbes is faced with a different problem, that of *explaining away* the mental realm. We are inclined to ask Hobbes just how and why this illusory mental realm seems so clearly to be real when in fact it is not. For Spinoza, the mental realm is real, and there is nothing that he needs to explain away.

Before leaving Spinoza, we should mention that his philosophy is interesting not merely for its content but for its form as well. Spinoza attempted to geometrize philosophy to an extent unequaled by any other major philosopher.

Euclid began his *Elements* with a set of basic definitions and unproved postulates, and from them he logically derived a set of geometric theorems. Likewise, Spinoza began with definitions and seemingly self-evident axioms and proceeded to derive theorems or "propositions" from them.

For example, Spinoza's Proposition III states, "Things which have nothing in common cannot be one the cause of the other." And under that proposition Spinoza gives a proof that refers back to two of his axioms. Thus, giving Spinoza his definitions, and assuming his axioms are beyond doubt and that he made no mistakes in logic, every one of Spinoza's propositions—his *entire* philosophy—is beyond doubt! Spinoza, unlike Descartes, did not take the epistemological detour by explicitly asking, "What can be known?" But by geometrizing his philosophy, Spinoza attempted to provide a metaphysical system that could be known with certainty to be true.

Leibniz

Many recent scholars qualified to make such a judgment think that **Gottfried Wilhelm, Baron von Leibniz** [LIBE-nits] (1646–1716), was the most brilliant intellect of his age. This judgment is made specifically with the fact in mind that Leibniz was the contemporary of a very bright light, Sir Isaac Newton (1642–1727). Leibniz and Newton, independently of each other, developed the calculus—and at the time, there was bitter controversy over who did so first. Leibniz's calculus was

Newtonians, Metaphysicians, and Émilie du Châtelet

One of the important intellectual controversies of the eighteenth century was whether there could be such a thing as action at a distance. On one hand were the Cartesians (followers of Descartes), who said that, if an object is to move, another object must *come up against it and push it*. On the other hand were the Newtonians (followers of Sir Isaac Newton), who believed in action at a distance—for example, two objects will attract one another through the force of gravity, even though they are separated by space. Cartesians generally viewed the concept of action at a distance, and the forces postulated to explain such action, as mystical and bizarre.

This controversy was just a minor skirmish in a broader conceptual battle, that between Newtonian empirical physics, which was based on observation and experimentation, and speculative metaphysics, which was grounded to a large extent purely on reason and was represented by the Cartesians and, most important, the brilliant Leibniz. According to the metaphysicians, even if Newtonian science described *how* the universe operates, it did not show *why* the universe must operate in that way. The metaphysicians felt that Newtonian physics lacked the rational grounding or certainty found in the systems of a Descartes or a Leibniz.

The metaphysical group had other problems with Newtonianism, too, such as how God fit into the Newtonian picture of the universe. If the universe is a vast physical machine, couldn't God

change his mind and destroy it—maybe make a different machine? How could there be human free will if the Newtonians were right and humans are just small parts in God's big machine? Do humans have free will, can they do what they choose, or are they nothing more than bodies, moving in reaction to immaterial forces?

A major participant in the disputes between science and metaphysics was **Émilie du Châtelet** [SHA-ta-lay] (1707–1749). Du Châtelet, a colleague (and lover) of Voltaire, was both a scientist and a philosopher, and her writings were respected by both camps. Her two-volume annotated translation of Newton's *Mathematical Principles of Natural Philosophy* (1759) remains to this day the French translation of Newton.

In her three-volume work, *Institutions de Physique* (1740), du Châtelet sought to answer some of the metaphysicians' complaints about Newtonianism. She did this essentially by adapting Leibniz's metaphysical principles (for example, the principle of sufficient reason and the principle of the identity of indiscernibles) to Newtonian science in such a way as to provide, she hoped, a vigorous metaphysical foundation for it and to allay fears that Newtonianism required abandoning important theological tenets. Although du Châtelet perhaps did not resolve all the problems, it is safe to say that she did as much as anyone to bring into focus exactly what the bones of contention were.

published in 1684, a few years before Newton's, but Newton had been slow in publishing his work. (Another controversy between the followers of both thinkers is discussed in the box "Newtonians, Metaphysicians, and Émilie du Châtelet.")

Because Leibniz's philosophy is highly technical and difficult to characterize or summarize in a brief passage, we won't go into it in detail. Basically, it is a complicated metaphysical system according to which the ultimate constituents of reality are indivisible atoms. But Leibniz's atoms are not indivisible units of matter, for, because matter is extended, a piece of matter, however tiny, is always further divisible. Instead, Leibniz's atoms are what he called **monads**, which are indivisible units of force or energy or activity. Here, Leibniz anticipated by a couple of centuries the views of contemporary physics, according to which material particles are a form of energy. Leibniz, however, believed the monads to be entirely *non-physical* and often referred to them as "souls," though he distinguished them from souls in the ordinary sense.

Leibniz’s philosophy is not just haphazard or idle speculation. His entire metaphysical system seems to follow from a few basic and plausible assumptions, or basic principles. One of these principles, for example, the **principle of the identity of indiscernibles**, says that, if two beings have exactly the same set of properties, then they are identical with one another. Another principle, known as the **principle of sufficient reason**, says that there is a sufficient reason why things are exactly as they are and are not otherwise. Leibniz also used this principle as a proof of God, as we shall see in Chapter 13.

Leibniz’s most famous work is the *Monadology*, available online at <http://www.rbjones.com/rbjpub/philos/classics/leibniz/monad.htm>.

THE IDEALISM OF LOCKE AND BERKELEY

Descartes, Hobbes, Conway, and Spinoza all belonged to the lively seventeenth century, the century that produced not only great philosophy but also some of the most important scientific discoveries of all time. The seventeenth century, you may recall from your history books, was also the century of the Thirty Years’ War (1618–1648), which was the most brutal European war before this century and the English Civil War. It also witnessed the Sun King (Louis XIV of France), the opening of Harvard, the founding of Pennsylvania, and the popularization of smoking.

In England the most important philosopher of the time was **John Locke** (1632–1704). In his great work, *An Essay Concerning Human Understanding*, Locke wished to inquire into the origin, certainty, and extent of human knowledge. Many of his views will almost certainly be shared by most readers of this book. Locke’s epistemology is indeed so widely accepted that much of it is now thought to be so much common sense. You should be prepared, however—terrible philosophical difficulties attend Locke’s basic position, as commonsensical as it will probably seem.

John Locke and Representative Realism

Locke’s fundamental thesis is that all our ideas come from experience. The human mind at birth, he wrote (echoing Aristotle), is essentially a *tabula rasa*, or blank slate. On this blank slate, experience makes its imprint. External objects impinge on our senses, which convey into the mind ideas, or, as we might prefer to say today, perceptions, of these objects and their various qualities. In short, sensation furnishes the mind with all its contents. *Nihil in intellectu quod prius non fuerit in sensu*—nothing exists in the mind that was not first in the senses. This, of course, is familiar and plausible.

These ideas or perceptions of some of the qualities of external objects are accurate copies of qualities that actually reside in the objects, Locke said. This is what he means. Think of a basketball. It has a certain size, shape, and weight, and when we look at and handle the ball, our sensory apparatus provides us with accurate pictures or images or ideas or perceptions of these “primary” qualities, as Locke called them.

Locke's theory: According to Locke, when we say we are looking at an external object, what we are really doing is attending to the perceptions or “ideas” of the object in our mind. Some of these perceptions, such as those of a basketball's size and shape, accurately represent qualities in the object itself. Other perceptions, such as those of the basketball's color and odor, do not represent anything in the object.



The basketball also has the power to produce in us ideas of “secondary” qualities, such as the brown color, the leathery smell, the coolness we feel when we hold it, and so forth. Are these qualities really in the basketball? Well, not exactly, you will say. And that is exactly what Locke said. These secondary qualities exist in the basketball only as the power of the basketball to produce in us ideas of color and taste and so forth—but the color and taste are purely subjective and exist in us merely as ideas. In other words, in Locke's view—and we will bet that this is your view as well—if all sentient creatures were removed from the proximity of the basketball, there would not *be* any brownness, leathery odor, or coolness, but only an object of a certain size and shape and weight, composed of minute particles that collectively would smell leathery and feel cool and look brown if any creatures with sense organs then came into existence and held and looked at and sniffed the ball.

This theory that Locke accepted is often called **representative realism**. In a sentence, it is the theory that we perceive objects *indirectly* by means of our “representations” or ideas or perceptions of them, some of which are accurate copies or representations or reflections of the real properties of “external” objects, of objects “outside the mind.” This theory is widely held and is probably regarded by most people as self-evident. Open almost any introductory psychology text, and you will behold implicit in its discussion of perception Locke's theory of representative realism.

Now, we said a moment ago that terrible philosophical difficulties attend to this very nice, down-to-earth, commonsense theory known as representative realism, and it is time for us to explain ourselves. As justifiable as Locke's theory may seem, it is subject to a powerful objection, stated most eloquently by the Irish bishop and philosopher George Berkeley.

George Berkeley and Idealism

If Locke is correct, then we experience sensible things, things like basketballs and garden rakes, *indirectly*—that is, through the intermediary of our ideas or perceptions. But if that is true, **George Berkeley** [BAR-lee] (1685–1753) said, then we cannot know that *any* of our ideas or perceptions accurately represent the qualities

PROFILE: George Berkeley (1685–1753)

Berkeley was born in Ireland and studied at Trinity College, Dublin. He was made a Fellow of the College in 1707. His *Treatise Concerning the Principles of Human Knowledge* (1709) was a great success and gave Berkeley a lasting reputation, though few accepted his theory that nothing exists outside the mind.

Berkeley eventually obtained a post that included a lucrative stipend. But he gave up the post in what proved to be a futile attempt to establish a college in the Bermudas to convert the Indians in North America. He was made Bishop of Cloyne in 1734.



Berkeley was known for his generosity of heart and mind, and also for his enthusiasm for tar water (water made from pine tar). He especially liked the fact that tar water did not have the same effects as alcohol. His writings about the health benefits of drinking tar water actually caused it to become a fad in English society for a time.

Berkeley's main works, in addition to the one already mentioned, are *Essay Towards a New Theory of Vision* (1709) and *Three Dialogues between Hylas and Philonous* (1713).

of these sensible things. Why can't we know this? Because, Berkeley argued, if Locke is correct, we do not directly experience the basketball (or any other object) itself. Instead, what we directly experience is our *perceptions* and *ideas* of the basketball. And if we do not have direct experience of the basketball itself, then we cannot compare our perceptions or ideas of the basketball with the basketball itself to see if they "accurately represent" the basketball's qualities.

Indeed, given Locke's position, Berkeley said, we cannot really know that a thing like a basketball or a garden rake even *exists*. For according to Locke's theory, it is not the *object* we experience but rather our *perceptions* or *ideas* of it.

This, then, is Berkeley's criticism of Locke's theory. As satisfying as it might seem to common sense, Locke's position is the short road to skepticism. If we accept Locke's theory, then we cannot know that "sensible things," things like basketballs and rakes and even our own hands and feet, actually exist.

Berkeley began his criticism of Locke's theory by noting that the objects of human knowledge consist of "ideas" (1) conveyed to the mind through the senses (sense perceptions), (2) perceived by the mind when the mind reflects on its own operations, or (3) compounded or divided by the mind with the help of memory and imagination. "Light and colors, heat and cold, extension (length) and figures (shapes)—in a word the things we see and feel—what are they but so many sensations, notions, ideas, or impressions on the sense?"

There exist, therefore, Berkeley said, ideas and the minds that have them. However, Berkeley observed, people have the strange opinion that houses, mountains, rivers, and all sensible objects have an existence outside the mind. But that is a contradictory opinion, Berkeley suggested. "For what are the forementioned objects but the things we perceive by sense? And what do we perceive besides our own ideas or sensations? And is it not plainly contradictory that any one of these, or any combination of them, should exist unperceived?"

At this point, John Locke's theory kicks in and says that our ideas of *primary* qualities (extension, figure, motion, and so on) *represent* to us or *resemble* properties that exist outside the mind in an inert, senseless substance called matter. "But it is evident," Berkeley wrote, "that extension, figure, and motion are only ideas existing in the mind and consequently cannot exist in an unperceiving substance."

Common sense, of course, tells us that the so-called secondary qualities such as tastes, odors, and colors, exist only in the mind because, after all, what tastes sweet or smells good or seems red to one person will taste bitter or smell bad or seem green to another person. But, Berkeley argued, "let anyone consider those arguments which are thought to prove that colors and tastes exist only in the mind, and he shall find they may with equal force prove the same thing of extension, figure, and motion." In other words, extension, figure, and motion are relative to the observer, too. A cookie, for example, might taste sweet to one taster and bitter to another; but its shape will be elliptical to an observer viewing it from the side and round to an observer viewing it straight on, and its size will be smaller to an observer farther away.

Of course, our inclination is to distinguish the *perceived* size and shape of a cookie from the size and shape that are the cookie's "true" size and shape. But Berkeley pointed out that size and shape (and the other qualities) *are* perceived qualities. Talking about an *unperceived* size or shape is nonsense. It is like talking about unfelt pain. And thus sensible objects, because they are nothing more than their qualities, are themselves only ideas and exist only in the mind.

But, you may still insist (in frustration?), surely there are material things "out there" that have their own size, shape, texture, and the like! Well, Berkeley has already responded to this line of thought: it is contradictory to suppose that size, shape, texture, and so on could exist in unthinking things. Size, shape, texture, and so on are *ideas*, and it is silly to suppose that ideas could exist in unthinking things.

Material Things as Clusters of Ideas

This theory of Berkeley's is *idealism*, the last of the four metaphysical philosophies. There are other versions of idealism, but in Berkeley's version, sensible things, such as tables, chairs, trees, books, and frogs, are not material things that exist outside the mind. They are, in fact, groups of ideas and as such are perceived directly and exist only within the mind. Because they are ideas, we can no more doubt their existence than we can doubt our own aches and pains (which also, indeed, are ideas).

Berkeley's idealism does not mean, however, that the physical world is a mere dream or that it is imaginary or intangible or ephemeral. Dr. Samuel Johnson (1709–1784), the famous English literary critic and scholar, believed that he had refuted Berkeley by kicking a stone, evidently thinking that the solidity of the stone was solid disproof of Berkeley. In fact, Johnson succeeded only in hurting his foot and demonstrating that he did not understand Berkeley. A stone is just as hard an object in Berkeley's philosophy as it is to common sense, for the fact that a stone exists only in the mind does not make its hardness disappear.

Rationalism and Empiricism

A doctrine that St. Thomas Aquinas (see Chapter 5) accepted and attributed to Aristotle, and that John Locke also accepted, is *nihil in intellectu quod prius non fuerit in sensu*; that is, there is nothing in the intellect that was not first in the senses. This doctrine is called **empiricism**. Another doctrine, known as **rationalism**, holds that the intellect contains important truths that were not placed there by sensory experience. “Something never comes from nothing,” for example, might count as one of these truths, because experience can tell you only that something has never come from nothing so far, not that it can never, ever happen (or so a rationalist might argue). Sometimes rationalists believe in a *theory of innate ideas*, according to which these truths are “innate” to the mind—that is, they are part of the original dispositions of the intellect.

The empiricist is, in effect, a type of modified skeptic—he or she denies that there is any knowledge that does not stem from sensory experience. Most rationalists, by contrast, do not deny that *some* knowledge about the world can be obtained through experience. But other rationalists, such as Parmenides (see Chapter 2), deny that experience can deliver up any sort of true knowledge. This type of rationalist is also a type of modified skeptic.

Classical rationalism and empiricism in modern philosophy were mainly a product of the seventeenth and eighteenth centuries. Rationalism is associated most significantly during that time period with Descartes (1596–1650), Spinoza (1632–1677),

and Leibniz (1646–1716). These three are often called the *Continental rationalists* and are contrasted with Locke (1632–1704), Berkeley (1685–1753), and Hume (1711–1776), the *British empiricists*. (We discuss Hume in the next chapter.) Philosophers from other periods, however, are sometimes classified as rationalists or empiricists depending on whether they emphasized the importance of reason or experience in knowledge of the world. Those earlier philosophers treated in this book who are usually listed as rationalists are, among others, Pythagoras, Parmenides, and Plato. Those who are often listed as empiricists are Aristotle, Epicurus, and Aquinas. Immanuel Kant (1724–1804), also discussed in the next chapter, is said to have synthesized rationalism and empiricism because he believed that all knowledge *begins* with experience (a thesis empiricists agree with) but also believed that knowledge is not limited to what has been found in experience (a thesis rationalists agree with).

Modern epistemology, as you will see, has been predominantly empiricist. This is because the Continental rationalists, and later rationalists too, were primarily metaphysicians. That is, they were generally less concerned with discussing the possibility of knowledge and related issues than with actually coming to propose some philosophically important theory about reality. The great exception is Descartes, a rationalist who concerned himself explicitly with the possibility of knowledge.

As for the stones found in dreams, Berkeley distinguished unreal dream stones from real stones just the way you and we do. Stones found in dreams behave in an irregular and chaotic manner—they can float around or change into birds or whatever—compared with those found in waking life. And Berkeley distinguished stones that we conjure up in our imaginations from real stones by their lack of vividness and also by the fact that they, unlike real stones, can be brought into existence by an act of our will.

Berkeley and Atheism

So Berkeley’s position is that sensible things cannot exist independent of perception—to be is to be perceived (*esse est percipi*). What, then, happens to



Telegraph Avenue in Berkeley, California. The city was named after George Berkeley because of his line of poetry, "Westward the course of empire takes its way."

this desk when everyone leaves the room? What happens to the forest when all the people go away? What happens to sensible things when no one perceives them?

Berkeley's answer is that the perceiving mind of God makes possible the continued existence of sensible things when neither you nor any other people are perceiving them. Because sensible things do not depend on the perception of humans and exist independently of them, Berkeley wrote, "There must be some other mind wherein they exist." This other mind, according to Berkeley, is God.

Berkeley believed that the greatest virtue of his idealist system was that it alone did not invite skepticism about God. Dualism, he thought, by postulating the existence of objects outside the mind, made these objects unknowable and was just an open invitation to skepticism about their existence; skepticism about the existence of sensible objects, he thought, would inevitably extend itself to skepticism about their creator, God. Materialism, he believed, made sensible objects independent of God; and thus it, too, led to skepticism about God. His own system, he thought, by contrast made the existence of sensible objects undeniable (they are as undeniable as your own ideas). This meant, for Berkeley, that the existence of the divine mind, in which sensible objects are sustained, was equally undeniable.

So, for Berkeley, the fact that sensible things continue to exist when we do not perceive them is a short and simple proof of God's existence. Another similar proof, in Berkeley's view, can be derived from the fact that we do not ourselves cause our ideas of tables, chairs, mountains, and other sensible things.



We would say the railroad tracks *appear* to grow smaller and closer together. Berkeley thought the tracks *really* did grow smaller and closer together.

“There is therefore,” he reasoned, “some other will or spirit that produced them”—God.

Berkeley was aware that his theory that what we call material things are ideas both in God’s mind and in our own raises peculiar questions about the relationship between our minds and the mind of God. For example, if a mountain is an idea in God’s mind and we perceive the mountain, does that mean we perceive or have God’s ideas?

With Berkeley, Hobbes, Descartes, and Spinoza, the four basic metaphysical perspectives of modern philosophy were set out: reality is entirely physical (Hobbes), *or* it is entirely nonphysical or “mental” (Berkeley), *or* it is an even split (Descartes), *or* “matter” and “mind” are just alternative ways of looking at one and the same stuff (Spinoza). See the box “Mind–Body Theories.”

An alternative, epistemological classification of these philosophers was given in the box “Rationalism and Empiricism” earlier in this chapter.

Mind–Body Theories

Matter	Mind		
+	+	Both matter and mind	Descartes’ dualism
+	–	Only matter, no mind	Hobbes’s materialism
–	+	No matter, only mind	Berkeley’s idealism
–	–	No matter, no mind	Spinoza’s alternativism



SELECTION 6.1

Meditations on First Philosophy**René Descartes*

[Descartes' Meditations on First Philosophy is among the most widely read books of all time—right up there, almost, with Plato's Republic. In this selection, Descartes is trying to doubt everything that can be doubted and finds that almost everything that he previously thought he knew for certain is actually open to question.]

Reason persuades me that I ought no less carefully to withhold my assent from matters which are not entirely certain and indubitable than from those which appear to me manifestly to be false. . . .

All that up to the present time I have accepted as most true and certain I have learned either from the senses or through the senses; [and], although the senses sometimes deceive us concerning things which are hardly perceptible, or very far away, there are yet many others to be met with as to which we cannot reasonably have any doubt. . . .

For example, there is the fact that I am here, seated by the fire, attired in a dressing gown, having this paper in my hands and other similar matters. And how could I deny that these hands and this body are “mine[?] . . .”

At the same time I must remember that . . . I am in the habit of sleeping and in my dreams representing to myself the same things. . . . How often has it happened to me that in the night I dreamt that I found myself in this particular place, that I was dressed and seated near the fire, while in reality I was lying undressed in bed! At this moment it does indeed seem to me that it is with eyes awake that I am looking at this paper. . . . But in thinking over this I remind myself that on many occasions I have in sleep been deceived by similar illusions, and in dwelling carefully on this reflection I see . . . that there are no certain indications by which we may clearly distinguish wakefulness from sleep. . . .

At the same time we must at least confess that . . . whether I am awake or asleep, two and three together always form five, and the square can never have more than four sides, and it does not seem possible that truths so clear and apparent can be suspected of any falsity.

Nevertheless . . . how do I know that I am not deceived every time that I add two and three, or count the sides of a square, or judge of things yet simpler, if anything simpler can be imagined? . . . Possibly God has not desired that I should be thus deceived, for He is said to be supremely good. . . . But let us . . . grant that all that is here said of a God is a fable. . . . I shall then suppose, not that God who is supremely good and the fountain of truth, but some evil genius not less powerful than deceitful, has employed his whole energies in deceiving me; I shall consider that the heavens, the earth, colors, figures, sound, and all other external things are nought but the illusions and dreams of which this genius has availed himself in order to lay traps for my credulity; I shall consider myself as having no hands, no eyes, no flesh, no blood, nor any senses, yet falsely believing myself to possess all these things. . . .

[Yet even if] there is some deceiver or other, very powerful and very cunning, who ever employs his ingenuity in deceiving me[,] then without a doubt I exist also if he deceives me, and let him deceive me as much as he will, he can never cause me to be nothing so long as I think that I am something. So that after having reflected well and carefully examined all things, we must come to the definite conclusion that this proposition: I am, I exist, is necessarily true each time that I pronounce it, or that I mentally conceive it.

But what am I, now that I suppose that there is a certain genius which is extremely powerful, and, if I may say so, malicious, who employs all his powers in deceiving me? Can I affirm that I possess the least of all those things which I have just said pertain to the nature of body? I pause to consider, I revolve all these things in my mind, and I find none of which I can say that it pertains to me. It would be tedious to

* René Descartes, “Meditations on First Philosophy” from *The Philosophical Works of Descartes*, translated by Elizabeth S. Haldane and G. R. T. Ross, Vol. 1 (Cambridge: The University Press, 1911).

stop to enumerate them. Let us pass to the attributes of soul and see if there is any one which is in me? What of nutrition or walking [the first mentioned]? But if it is so that I have no body it is also true that I can neither walk nor take nourishment. Another attribute is sensation. But one cannot feel without body, and besides I have thought I perceived many things during sleep that I recognised in my waking moments as not having been experienced at all. What of thinking? I find here that thought is an attribute that belongs to me; it alone cannot be separated from me. I am, I exist, that is certain. But how often? Just when I think; for it might possibly be the case if I ceased entirely to think, that I should likewise cease altogether to exist. I do not now admit anything which is not necessarily true: to speak accurately I am not more than a thing which thinks, that is to say a mind or a soul, or an understanding, or a reason, which are terms whose significance was formerly unknown to me. I am, however, a real thing and really exist; but what thing? I have answered: a thing which thinks. . . . What is a thing which thinks? It is a thing which doubts, understands, [conceives], affirms, denies, wills, refuses, which also imagines and feels. . . .

. . . [I]n the little that I have just said, I think I have summed up all that I really know, or at least all that hitherto I was aware that I knew. In order to try to extend my knowledge further, I shall now look around more carefully and see whether I cannot still discover in myself some other things which I have not hitherto perceived. I am certain that I am a thing which thinks; but do I not then likewise know what is requisite to render me certain of a truth? Certainly in this first knowledge there is nothing that assures me of its truth, excepting the clear and distinct perception of that which I state, which would not indeed suffice to assure me that what I say is true, if it could ever happen that a thing which I conceived so clearly and distinctly could be false; and accordingly it seems to me that already I can establish as a general rule that all things which I perceive very clearly and very distinctly are true.

[At this point in the Meditations, Descartes proves to his own satisfaction that he perceives clearly and distinctly that God exists and that God would never permit Descartes to be deceived as long as Descartes forms no judgment except on matters clearly and distinctly represented to Descartes by his understanding. He then continues:]

Because I know that all things which I apprehend clearly and distinctly can be created by God as I apprehend them, it suffices that I am able to apprehend one thing apart from another clearly and distinctly in order to be certain that the one is different from the other, since they may be made to exist in separation at least by the omnipotence of God . . . and therefore, just because I know certainly that I exist, and that meanwhile I do not remark that any other thing necessarily pertains to my nature of essence, excepting that I am a thinking thing, I rightly conclude that my essence consists solely in the fact that I am a thinking thing . . . [and as] I possess a distinct idea of body, inasmuch as it is only an extended and unthinking thing, it is certain that this I is entirely and absolutely distinct from my body, and can exist without it. . . .

There is certainly further in me a certain passive faculty of perception, that is, of receiving and recognising the ideas of sensible things, but this would be useless to me, if there were not either in me or in some other thing another active faculty capable of forming and producing these ideas. . . . [A]nd since God is no deceiver, [and since] He has given me . . . a very great inclination to believe that [these ideas] are conveyed to me by corporeal objects, I do not see how He could be defended from the accusation of deceit if these ideas were produced by causes other than corporeal objects. Hence we must allow that corporeal things exist. . . . [A]nd we must at least admit that all things which I conceive in them clearly and distinctly, that is to say, all things which, speaking generally, are comprehended in the object of pure mathematics, are truly to be recognised as external objects. . . .

[O]n the sole Ground that God is not a deceiver . . . there is no doubt that in all things which nature teaches me there is some truth contained. . . . But there is nothing which this nature teaches me more expressly than that I have a body which is adversely affected when I feel pain, which has need of food or drink when I experience the feelings of hunger and thirst, and so on; nor can I doubt there being some truth in all this.

Nature also teaches me by these sensations of pain, hunger, thirst, etc., that I am not only lodged in my body as a pilot in a vessel, but that I am very closely united to it, and so to speak so intermingled with it that I seem to compose with it one whole. For if that were not the case, when my body is hurt,

I, who am merely a thinking thing, would not feel pain, for I should perceive this wound by the understanding only, just as the sailor perceives by sight when something is damaged in his vessel. . . .

[T]here is a great difference between mind and body, inasmuch as body is by nature always divisible, and the mind is entirely indivisible. For, as a matter of fact, when I consider the mind, that is to say, myself inasmuch as I am only a thinking thing, I cannot distinguish in myself any parts, but apprehend myself to be clearly one and entire; and although the whole mind seems to be united to the whole body, yet if a foot, or an arm, or some other part, is separated from my body, I am aware that nothing has been taken away from my mind. And the faculties of willing, feeling, conceiving, etc.,

cannot be properly speaking said to be its parts, for it is one and the same mind which employs itself in willing and in feeling and understanding. But it is quite otherwise with corporeal or extended objects, for there is not one of these imaginable by me which my mind cannot easily divide into parts, and which consequently I do not recognise as being divisible. [T]his would be sufficient to teach me that the mind or soul of man is entirely different from the body, if I had not already learned it from other sources.

I further notice that the mind does not receive the impressions from all parts of the body immediately, but only from the brain, or perhaps even from one of its smallest parts, to wit, from that in which the common sense is said to reside.



SELECTION 6.2

Ethics*

Benedictus de Spinoza

[This excerpt will give you a good idea of Spinoza's geometric method in which metaphysical certainties ("Proportions") are deduced from a short list of "Definitions" and self-evident "axioms."]

Definitions and Axioms

Definitions I. By that which is *self-caused*, I mean that of which the essence involves existence, or that of which the nature is only conceivable as existent.

II. A thing is called *finite after its kind*, when it can be limited by another thing of the same nature; for instance, a body is called finite because we always conceive another greater body. So, also, a thought is limited by another thought, but a body is not limited by thought, nor a thought by body.

III. By *substance*, I mean that which is in itself, and is conceived through itself: in other words, that of which a conception can be formed independently of any other conception.

IV. By *attribute*, I mean that which the intellect perceives as constituting the essence of substance.

V. By *mode*, I mean the modifications of substance, or that which exists in, and is conceived through, something other than itself.

VI. By *God*, I mean a being absolutely infinite—that is, a substance consisting in infinite attributes, of which each expresses eternal and infinite essentiality.

Explanation.—I say absolutely infinite, not infinite after its kind: for, of a thing infinite only after its kind, infinite attributes may be denied; but that which is absolutely infinite, contains in its essence whatever expresses reality, and involves no negation.

VII. That thing is called *free*, which exists solely by the necessity of its own nature, and of which the action is determined by itself alone. On the other hand, that thing is necessary, or rather constrained, which is determined by something external to itself to a fixed and definite method of existence or action.

VIII. By *eternity*, I mean existence itself, in so far as it is conceived necessarily to follow solely from the definition of that which is eternal.

* From *The Chief Works of Benedictus de Spinoza*, Vol. 2, revised edition, translated by R. H. M. Elwes (London: George Bell & Sons, 1901), 45–48.

Explanation.—Existence of this kind is conceived as an eternal truth, like the essence of a thing, and, therefore, cannot be explained by means of continuance or time, though continuance may be conceived without a beginning or end.

Axioms I. Everything which exists, exists either in itself or in something else.

II. That which cannot be conceived through anything else must be conceived through itself.

III. From a given definite cause an effect necessarily follows; and, on the other hand, if no definite cause be granted, it is impossible that an effect can follow.

IV. The knowledge of an effect depends on and involves the knowledge of a cause.

V. Things which have nothing in common cannot be understood, the one by means of the other; the conception of one does not involve the conception of the other.

VI. A true idea must correspond with its ideate or object.

VII. If a thing can be conceived as non-existing, its essence does not involve existence.

Seven Propositions on Substance

Propositions PROP. I. *Substance is by nature prior to its modifications.*

Proof.—This is clear from Defs. iii. and v.

PROP. II. *Two substances, whose attributes are different, have nothing in common.*

Proof.—Also evident from Def. iii. For each must exist in itself, and be conceived through itself; in other words, the conception of one does not imply the conception of the other.

PROP. III. *Things which have nothing in common cannot be one the cause of the other.*

Proof.—If they have nothing in common, it follows that one cannot be apprehended by means of the other (Ax. v.), and, therefore, one cannot be the cause of the other (Ax. iv.). *Q.E.D.*

PROP. IV. *Two or more distinct things are distinguished one from the other, either by the difference of the attributes of the substances or by the difference of their modifications.*

Proof.—Everything which exists, exists either in itself or in something else (Ax. i.),—that is (by Defs. iii. and v.), nothing is granted in addition to the understanding, except substance and its modifications. Nothing is, therefore, given besides the

understanding, by which several things may be distinguished one from the other, except the substances, or, in other words (see Ax. iv.), their attributes and modifications. *Q.E.D.*

PROP. V. *There cannot exist in the universe two or more substances having the same nature or attribute.*

Proof.—If several distinct substances be granted, they must be distinguished one from the other, either by the difference of their attributes, or by the difference of their modifications (Prop. iv.): If only by the difference of their attributes, it will be granted that there cannot be more than one with an identical attribute. If by the difference of their modifications—as substance is naturally prior to its modifications (Prop. i.),—it follows that setting the modifications aside, and considering substance in itself, that is truly (Defs. iii. and vi.), there cannot be conceived one substance different from another,—that is (by Prop. iv.), there cannot be granted several substances, but one substance only. *Q.E.D.*

PROP. VI. *One substance cannot be produced by another substance.*

Proof.—It is impossible that there should be in the universe two substances with an identical attribute, i.e., which have anything common to them both (Prop. ii.), and, therefore (Prop. iii.), one cannot be the cause of another, neither can one be produced by the other. *Q.E.D.*

Corollary.—Hence it follows that a substance cannot be produced by anything external to itself. For in the universe nothing is granted, save substances and their modifications (as appears from Ax. i. and Defs. iii. and v.). Now (by the last Prop.) substance cannot be produced by another substance, therefore it cannot be produced by anything external to itself. *Q.E.D.* This is shown still more readily by the absurdity of the contradictory. For, if substance be produced by an external cause, the knowledge of it would depend on the knowledge of its cause (Ax. iv.), and (by Def. iii.) it would itself not be substance.

PROP. VII. *Existence belongs to the nature of substance.*

Proof.—Substance cannot be produced by anything external (Corollary Prop. vi.), it must, therefore, be its own cause—that is, its essence necessarily involves existence, or existence belongs to its nature.



SELECTION 6.3

Treatise Concerning the Principles of Human Knowledge

George Berkeley

[Berkeley's philosophy—that what we call material objects are really just ideas in the mind—strikes newcomers to philosophy as bizarre and preposterous. In this selection, Berkeley defends his view through a series of arguments and rebuttals to those who would disagree with him. Enjoy Berkeley's direct, powerful, elegant English.]

It is evident to anyone who takes a survey of the objects of human knowledge, that they are either ideas (1) actually imprinted on the senses, or else such as are (2) perceived by attending to the passions and operations of the mind, or lastly (3) ideas formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the aforesaid ways. By sight I have the ideas of lights and colors, with their several degrees and variations. By touch I perceive hard and soft, heat and cold, motion and resistance, and of all these more and less either as to quantity or degree. Smelling furnishes me with odors, the palate with tastes, and hearing conveys sounds to the mind in all their variety of tone and composition. And as several of these are observed to accompany each other, they come to be marked by one name, and so to be reputed as one thing. Thus, for example, a certain color, taste, smell, figure, and consistence, having been observed to go together, are accounted one distinct thing, signified by the name “apple.” Other collections of ideas constitute a stone, a tree, a book, and the like sensible things. . . .

2. But besides all that endless variety of ideas or objects of knowledge, there is likewise something which knows or perceives them, and exercises divers operations, as willing, imagining, remembering, about them. This perceiving, active being is what I call mind, spirit, soul, or myself. By which words I do not denote any one of my ideas, but a thing entirely distinct from them wherein they exist, or, which is the same thing, whereby they are perceived; for the existence of an idea consists in being perceived.

3. That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind, is what everybody will allow. And it seems no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (that is, whatever objects they compose), cannot exist otherwise than in a mind perceiving them. . . .

4. It is indeed an opinion strangely prevailing amongst men, that houses, mountains, rivers, and in a word all sensible objects, have an existence, natural or real, distinct from their being perceived by the understanding. But with how great an assurance and acquiescence soever this principle may be entertained in the world, yet whoever shall find in his heart to call it in question may, if I mistake not, perceive it to involve a manifest contradiction. For what are the forementioned objects but the things we perceive by sense? and what do we perceive besides our own ideas or sensations? and is it not plainly repugnant that any one of these, or any combination of them, should exist unperceived?

5. Light and colors, heat and cold, extension and figures—in a word the things we see and feel—what are they but so many sensations, notions, ideas, or impressions on the sense? And is it possible to separate, even in thought, any of these from perception? . . .

8. But, say you, though the ideas themselves do not exist without the mind, yet there may be things like them, whereof they are copies or resemblances, which things exist without the mind in an unthinking substance. I answer, an idea can be like nothing but an idea; a color or figure can be like nothing but another color or figure. . . . Again, I ask whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then they are ideas and we have gained our point; but if

you say they are not, I appeal to anyone whether it be sense to assert a color is like something which is invisible; hard or soft, like something which is intangible; and so of the rest.

9. Some there are who make a distinction betwixt primary and secondary qualities. By the former they mean extension, figure, motion, test, solidity or impenetrability, and number; by the latter they denote all other sensible qualities, as colors, sounds, tastes, and so forth. The ideas we have of these they acknowledge not to be the resemblances of anything existing without the mind, or unperceived, but they will have our ideas of the primary qualities to be patterns or images of things which exist without the mind, in an unthinking substance which they call matter. By matter, therefore, we are to understand an inert, senseless substance, in which extension, figure, and motion do actually subsist. But it is evident from what we have already shown, that extension, figure, and motion are only ideas existing in the mind, and that an idea can be like nothing but another idea, and that consequently neither they nor their archetypes can exist in an unperceiving substance. Hence, it is plain that the very notion of what is called matter, or corporeal substance, involves a contradiction in it.

10. They who assert that figure, motion, and the rest of the primary or original qualities do exist without the mind in unthinking substances, do at the same time acknowledge that color, sounds, heat, cold, and such-like secondary qualities, do not; which they tell us are sensations existing in the mind alone. . . . Now, if it be certain that those original qualities are inseparably united with the other sensible qualities, and not, even in thought, capable of being abstracted from them, it plainly follows that they exist only in the mind. But I desire anyone to reflect and try whether he can, by any abstraction of thought, conceive the extension and motion of a body without all other sensible qualities. For my own part, I see evidently that it is not in my power to frame an idea of a body extended and moving, but I must withal give it some color or other sensible quality which is acknowledged to exist only in the mind. In short, extension, figure, and motion, abstracted from all other qualities, are inconceivable. Where therefore the other sensible qualities are, there must these be also, to wit, in the mind and nowhere else.

11. Again, great and small, swift and slow, are allowed to exist nowhere without the mind, being entirely relative, and changing as the frame or position of the organs of sense varies. The extension therefore which exists without the mind is neither great nor small, the motion neither swift nor slow, that is, they are nothing at all. . . .

12. That number is entirely the creature of the mind, even though the other qualities be allowed to exist without, will be evident to whoever considers that the same thing bears a different denomination of number as the mind views it with different respects. Thus, the same extension is one, or three, or thirty-six, according as the mind considers it with reference to a yard, a foot, or an inch. Number is so visibly relative, and dependent on men's understanding, that it is strange to think how anyone should give it an absolute existence without the mind. . . .

14. It is said that heat and cold are affections only of the mind, and not at all patterns of real beings, existing in the corporeal substances which excite them, for that the same body which appears cold to one hand seems warm to another. Now, why may we not as well argue that figure and extension are not patterns or resemblances of qualities existing in matter, because to the same eye at different stations, or eyes of a different texture at the same station, they appear various, and cannot therefore be the images of anything settled and determinate without the mind? Again, it is proved that sweetness is not really in the sapid (i.e. flavorful) thing, because the thing remaining unaltered the sweetness is changed into bitter, as in case of a fever or otherwise vitiated palate. Is it not as reasonable to say that motion is not without the mind, since if the succession of ideas in the mind become swifter, the motion, it is acknowledged, shall appear slower without any alteration in any external object?

15. In short, let anyone consider those arguments which are thought manifestly to prove that colors and tastes exist only in the mind, and he shall find they may with equal force be brought to prove the same thing of extension, figure, and motion. . . . The arguments foregoing plainly show it to be impossible that any color or extension at all, or other sensible quality whatsoever, should exist in an unthinking subject without the mind, or in truth, that

there should be any such thing as an outward object. . . .

18. But though it were possible that solid, figured, movable substances may exist without the mind, corresponding to the ideas we have of bodies, yet how is it possible for us to know this? Either we must know it by sense or by reason. As for our senses, by them we have the knowledge only of our sensations, ideas, or those things that are immediately perceived by sense, call them what you will; but they do not inform us that things exist without the mind. . . . It remains therefore that if we have any knowledge at all of external things, it must be by reason, inferring their existence from what is immediately perceived by sense. But what reason can induce us to believe the existence of bodies without the mind, from what we perceive. . . . It is granted on all hands (and what happens in dreams, frenzies, and the like, puts it beyond dispute) that it is possible we might be affected with all the ideas we have now, though there were no bodies existing without, resembling them. Hence, it is evident the supposition of external bodies is not necessary for the producing of our ideas; since it is granted that they are produced sometimes, and might possibly be produced always in the same order we see them in at present, without their concurrence. . . .

20. In short, if there were external bodies, it is impossible we should ever come to know it; and if

there were not, we might have the very same reasons to think there were that we have now. Suppose (what no one can deny possible) an intelligence without the help of external bodies, to be affected with the same train of sensations or ideas that you are, imprinted in the same order and with like vividness in his mind. I ask whether that intelligence hath not all the reason to believe the existence of corporeal substances, represented by his ideas, and exciting them in his mind, that you can possibly have for believing the same thing?

22. I am content to put the whole upon this issue: if you can but conceive it possible for one extended movable substance, or, in general, for any one idea, or anything like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause. . . .

23. But, say you, surely there is nothing easier than for me to imagine trees, for instance, in a park, or books existing in a closet, and nobody by to perceive them. I answer, you may so, there is no difficulty in it; but what is all this, I beseech you, more than framing in your mind certain ideas which you call books and trees, and the same time omitting to frame the idea of anyone that may perceive them? But do not you yourself perceive or think of them all the while? . . . When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas.

CHECKLIST

To help you review, here is a checklist of the key philosophers and terms and concepts of this chapter. The brief descriptive sentences summarize the philosophers' leading ideas. Keep in mind that some of these summary statements are oversimplifications of complex positions.

Philosophers

- **George Berkeley** was a British empiricist and idealist who denied the existence of material substance and held that sensible objects exist only in the mind. 114
- **Anne Conway** argued against parts of the philosophies of Descartes, Hobbes, and Spinoza. An essentialist who argued that everything other than God has both physical and mental essences—God is totally mental—she had a big influence on Leibniz's monadology. 107
- **Oliva Sabuco de Nantes** proposed that the connection between body and soul occurs throughout the brain. 104
- **René Descartes** was the “father” of modern philosophy, a Continental rationalist, and a dualist. He said there are two separate and distinct substances: material substance and mind. 100
- **Benedictus de Spinoza** was a Continental rationalist. He maintained that thought and extension are attributes of a single substance. 109

- **Émilie du Châtelet** adapted Leibniz’s metaphysical principles to Newtonian science. 112
- **Thomas Hobbes** was the first great modern materialist. He held that all that exists is bodies in motion. 106
- **Gottfried Wilhelm, Baron von Leibniz** was a Continental rationalist who held that the ultimate constituents of reality are monads, which are nonmaterial, indivisible units of force. 111
- **John Locke** was a British empiricist who held that we perceive objects indirectly by means of our perceptions of them, some of which he believed were accurate copies of the real properties of objects. 113

Key Terms and Concepts

clear and distinct criterion	103	monads	112
<i>cogito, ergo sum</i>	102	<i>nihil in intellectu quod prius non fuerit in sensu</i>	113
double aspect theory	99	occasionalism	105
dream conjecture	101	parallelism	105
dualism	98	perception	106
empiricism	117	principle of sufficient reason	113
epistemological detour	105	principle of the identity of indiscernibles	113
<i>esse est percipi</i>	117	rationalism	117
evil demon conjecture	101	representative realism	114
extension (as the essential attribute of material substance)	103	<i>tabula rasa</i>	113
idealism	99	thought (as the essential attribute of mind)	103
materialism	98		

3. Should Descartes have questioned whether there could be thinking without an “I” that does the thinking?
4. “We can think. This proves we are not just mere matter.” Does it?
5. “Material things, including one’s own body, are completely subject to physical laws.” “The immaterial mind can move one’s body.” Are these two claims incompatible? Explain.
6. What is parallelism?
7. Explain Hobbes’s idea that all mental activity reduces to matter in motion.
8. What does Spinoza claim is the relationship of the mind to the body?
9. Explain Anne Conway’s concept of time and its relationship to her view of God and creatures.
10. Why does Berkeley say that sensible objects exist only in the mind?
11. Are the qualities of sensible objects (e.g., size, color, taste) all equally relative to the observer?
12. Does Berkeley’s philosophy make everything into a dream?
13. If all our knowledge comes from experience, why might it be difficult to maintain that we have knowledge of external objects?
14. Do we have knowledge of external objects? Explain.
15. Is there really a difference between primary and secondary qualities?
16. Is your brain your mind? Explain.
17. Psychokinesis is the mental power by which psychics claim to make changes in the external physical world—to bend spoons, to cause balls to roll, and so on. Is there any difference between using your mind to bend a spoon and using your mind to bend your arm? Explain.

QUESTIONS FOR DISCUSSION AND REVIEW

1. Define or explain dualism, materialism, and idealism.
2. Explain and critically evaluate either Descartes’ dream conjecture or his evil demon conjecture.

SUGGESTED FURTHER READINGS

Margaret Atherton, *Women Philosophers of the Early Modern Period* (Indianapolis: Hackett, 1994). Anthology of excerpts from Princess Elisabeth of Bohemia, Margaret Cavendish, Mary Astell, Damaris Cudworth Masham, Anne Conway, Catharine Trotter Cockburn, and Lady Mary Shepherd.

- George Berkeley, *Principles of Human Knowledge, Three Dialogues*, Howard Robinson, ed. (New York: Oxford University Press, 1999). Contains a useful introduction.
- Christopher Biffle, *A Guided Tour of René Descartes' Meditations on First Philosophy* (New York: McGraw-Hill, 2000). Accessible translation of Descartes' *Meditations* I–VI with a guide to thinking about them critically.
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- E. O. Burt, *The English Philosophers from Bacon to Mill* (New York: Modern Library, 1939). A general book on modern philosophy.
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- René Descartes, *Philosophical Works*, in two volumes, E. S. Haldane and G. R. T. Ross, trans. (Cambridge: The University Press, 1968). This is what you need to read Descartes.
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- S. Lamprecht, ed., *Locke Selections* (New York: Scribner's, 1928). If you want to read more than "Selections," you must turn to his *Essay Concerning Human Understanding*, in two volumes, A. C. Fraser, ed. (New York: Dover, 1959). This (the Fraser edition) is a heavily annotated work.
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- Tom Sorell, *Descartes: A Very Short Introduction* (New York: Oxford University Press, 2000). A short but accessible introduction to Descartes' life and thinking.
- Tom Sorell, ed., *The Cambridge Companion to Hobbes* (Cambridge: Cambridge University Press, 1996). A review of Hobbes's life and the full range of his philosophical concerns.
- Richard Tuck, *Hobbes: A Very Short Introduction* (New York: Oxford University Press, 1989). A quick look at Hobbes's life and key ideas.
- J. O. Urmson and A. J. Ayer, *The British Empiricists* (New York: Oxford University Press, 1992). A set of introductory readings on the lives and thoughts of Locke, Berkeley, and Hume.
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- F. J. E. Woodbridge, ed., *Hobbes Selections* (New York: Scribner's, 1930). Here, too, we think that the selected original material will be sufficient for the introductory student.