Quite early on in this work, Descartes has us imagine the possibility that everything we know is mistaken. For all we know, an evil demon could be deceiving us about everything—or almost everything. This possibility of deception, says Descartes, undermines our confidence that we can know anything at all. But wait—so long as I think, I can be sure that I exist. From this slender thread, called the cogito (short for “cogito ergo sum”: I think, therefore I am), and an argument for God’s existence, Descartes tries to reestablish our justification for our beliefs about most everything we once took for granted.

However, most philosophers following Descartes have doubted that his undertaking was as successful as he himself took it to be. The skeptical doubts that Descartes raises early on in the Meditations continue to exercise philosophers. Skeptical doubts are especially likely to torment the empiricist philosopher. Because empiricism holds that the sole source of our knowledge of things external to us is sense experience, it is a matter of importance to empiricists to explain just how that knowledge is derived from the “impressions” made upon our various sense organs. John Locke rested a great part of his theory upon a crucial distinction first used in antiquity and then revived by Galileo—namely, the distinction between primary and secondary qualities of physical objects. Primary qualities are intrinsic characteristics of the object itself—characteristics such as solidity, extension in space (size), figure (shape), motion or rest, and number. These are qualities that the objects would continue to possess even if there were no perceiving beings in the world. Secondary qualities, on the other hand—such qualities as color, taste, smell, sound, warmth, and cold—exist only when actually sensed and then only “in the mind” of the one who senses them. Primary qualities are inseparable from the material object and are found in every part of it, no matter how small. Every conceivable unit of matter, from a celestial body to an atom, must have some size and shape. (On the other hand, no mere atom could have color.)

Locke also contributed to the terminology of subsequent empiricists the technical term “idea” to stand for “whatever is the object of the understanding when a man thinks” or, more generally, for any direct object of awareness or consciousness.⁵

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⁵David Hume’s usage was somewhat narrower. In the Treatise of Human Nature, his earlier, more formal exposition of the views included here, Hume explains that he will use the word “impression” to mean “all our sensations, passions and emotions, as they make their first appearance in the soul.” By “ideas” he means “the faint images of these in thinking and reasoning.”
And, again, the “ideas” that result from our perception of primary qualities are different from our “ideas” of secondary qualities. When we perceive a primary quality, according to Locke, our idea of this quality exactly resembles the corresponding primary quality in the material object itself. In contrast, when we perceive a secondary quality, our idea of this quality has no resemblance to a corresponding property of the thing itself. That is, our idea of, for instance, color or odor in an object is produced in us by virtue of the object’s “power” to reflect and absorb light waves of certain frequencies or to emit molecules in certain degrees of vibration. Because of these capacities or “powers” of material objects, color and odor can come into existence. Yet without eyes, there could be no color, without noses, no odor; and without minds, no “secondary qualities” at all.

Locke’s theory of perception does seem to have strong support from scientifically sophisticated common sense. It is often contrasted with another possible theory of perception (a theory held by no reputable philosopher), which is sometimes ascribed (quite unfairly) to the scientifically unsophisticated common sense of the “ordinary person.” According to the latter theory, called naive realism, the qualities that Locke called “primary” and those he called “secondary” are both strictly part of physical objects, and both can exist quite independently of perceiving minds. It follows from naive realism that a world without perceiving minds might yet be a colorful, glamorous, and smelly place. Locke’s view, in contrast, is that physical substances and their primary qualities can exist independently of sentient minds and only the secondary qualities are mind-dependent. This theory can be called sophisticated realism: “sophisticated” because it seems to accord with what science tells us about secondary qualities; “realism” because it allows that material objects have a real existence independent of minds. Locke’s view is often called representative realism because of the tenet that ideas (“in the mind”) faithfully mirror or “represent” material objects to us in perception, even though the material objects and the ideas by which we come to know them are quite distinct entities. The textbooks also call Locke’s view the causal theory of perception because of the tenet that material objects are the causes of the ideas, or appearances, or sense data we have of them. The material substance itself is distinct from its own qualities, even from its own primary qualities, and, not being directly perceivable, must simply be posited as an unknowable substratum for its powers and properties. (Locke’s conception of substance was rejected by most later empiricists, who preferred to think of a material thing as a mere “bundle of attributes,” not as a mysterious entity “underlying” or “possessing” its own attributes.)

The realism of Locke, roughly sketched in the preceding paragraphs, must be understood as the primary target of the arguments of George Berkeley, Bishop of Clonmel. Locke would have approved of Berkeley’s systematic demonstration that secondary qualities are mental. Berkeley argues for the conclusion in two ways. First, he maintains that extreme degrees of each secondary quality are inseparable in our consciousness from pain. Hence, if it is absurd to imagine that pain is, for example, in or part of the stove, then it is equally absurd to imagine that the heat is literally in the stove. Berkeley’s second argument is the famous “argument from the relativity of perception.” If I put one ice-chilled hand and one warm hand into a tub of tepid water, the water will feel hot to my cold hand and cold to my hot hand; but the water itself cannot be both hot and cold. Hence, both heat and cold must be “in the mind” only.

But Berkeley then turns the tables on Locke by arguing in quite similar ways for the necessarily mental status of primary qualities too. If the supporter of Locke accepts
these latter arguments, there is nothing left of his conception of an external object beyond that of an unknowable substratum. Berkeley easily disposes of the concept of a substratum as theoretically superfluous and unintelligible. He is left then with a world in which only perceiving minds ("subjects") and their ideas (the appearances of primary and secondary qualities) exist. Hence, the universe is through and through mental. This theory of reality bears the name **subjective idealism**. (Perhaps **idealism** would be less misleading, because the theory has nothing whatever to do with ideals.)

Berkeley was as concerned as Descartes or Locke to find a solid alternative to skepticism. As an empiricist, he was resolved to show that all of our ideas, in so far as they are genuine (not merely confused), are derived from experience. What, then, of our idea of corporeal objects such as trees, tables, bodies? Berkeley was driven by his logic and his empiricist starting points to conclude that physical objects, in so far as we have any clear idea of them at all, are simply collections of sense impressions. Those **corporeal substances**, of which Descartes was at last able to form a "clear and distinct idea," turn out on analysis to be figments of muddled thought.

Has empiricism then truly reconstructed our knowledge of the world, if this is its conclusion? Doesn't Berkeley's conception of a world "through and through mental" give a violent jolt to common sense? Not so, replies Berkeley. His idealism implies that tables and trees and bodies are just exactly what they seem—colored, shaped, hard, and so on. There is indeed nothing to these things except the qualities they seem to have. Moreover, it is not true that tables "vanish" or "pop out of existence" the moment we turn our backs on them (that would be repugnant to common sense); for God is always perceiving them, and therefore they continue to exist as ideas in his mind. To many later empiricists, this use of God seemed a desperate expedient to save Berkeley's theory from embarrassment. John Stuart Mill (1806–1873) was typical of later empiricists (often called **phenomenalists**) who found ways to make the rejection of "corporeal substance" more palatable to common sense without invoking a **deus ex machina**. According to Mill, if we say that the table continues to exist when unperceived, all we can mean by this is that if someone were to look in a certain place, then he would have sense impressions of a certain (tablelike) kind; for material objects are not simply bundles of actual sense impressions but are rather to be understood as "permanent possibilities of sensation," and this conception exhausts whatever clear idea we have of them. Some writers have suggested that phenomenalism (the view of David Hume as well as of Mill) can be thought of as "Berkeley's view without Berkeley's God."

The great opponent of the view that all reality is mental was Hume's countryman and almost exact contemporary, Thomas Reid (1710–1796). It was Reid's primary purpose to vindicate common sense against the skepticism to which empiricism seemed finally to be driven. The "Scottish Common Sense School," of which Reid was the chief spokesman, had very widespread influence, particularly in the United States in the nineteenth century. Reid concedes to Berkeley and Hume that we cannot infer the existence of enduring corporeal (nonmental) objects from our mere sense impressions. Nevertheless, he contends, our belief in such objects is no mere "opinion got by reasoning:" it is, rather, a natural principle of the human constitution, as reliable and as inevitable as any of the natural principles that govern our reasoning. (If, as Reid suggests, we think of nature, as designed by God, then we can find strong similarities in his position to the argument of Descartes that "God can be no deceiver.")

This section concludes with G. E. Moore's now-classic "proof" of an external world. Moore inherited from Reid a very sturdy appreciation of common sense
and would have no truck with skeptical hypotheses of the sort that have plagued philosophers for so long. Moore stuck out his two hands, proclaimed the certainty of their existence, and that was that. Whether that really is the end of the story is a matter that has been discussed ever since.

In the eighteenth century David Hume applied the empiricist philosophy not only to the concept of a material substance but to other basic concepts as well, with results that even he called skeptical. Unlike Berkeley, who regarded skepticism as a charge to be rebutted, Hume thought of it as a position to be reluctantly adopted. In the selections included in this final section, "The Methods of Science," Hume examines the concept of causation and finds no more sense in the idea of a "necessary connection" between cause and effect (when we drop a stone, it must fall—so we think) than Berkeley did in the idea of "corporeal substance." We may continue to talk, as Hume himself does, of one thing's causing another, but all we can mean is that events of the first kind are in fact constantly conjoined with events of the second kind; the so-called necessity that the second follow the first is simply the reflection of our habitual expectation. Hume would not have us deny the plain reports of our senses or the fruits of our mathematical deductions; he merely points out that there is no logically infallible method of achieving truth about matters of fact, and indeed no method at all for reasoning about matters that lie beyond all experience. But this kind of skepticism need not force us into a permanent suspension of judgment about all things, even in the practical affairs of life; we will (as Hume elsewhere puts it) continue to leave buildings by the first-floor door rather than the upstairs window, and "Nature will always maintain her rights and prevail in the end over any abstract reasoning whatever."