In the previous chapter, Descartes’s meditation illustrates that author’s attempt to know the contents of the mind, with a special emphasis on innate ideas. Indeed, he stressed reason over perception and innate ideas over experience. Such views classify him as a rationalist, which has led the historian of psychology Thomas Leahey (1987) to call Descartes a paradoxical figure. Leahey notes the contrast between Descartes’s rationalism and his mechanism, the latter view ultimately supporting an empirical psychology.*

In contrast to the notion of innate ideas and knowledge by reason stood the British empiricists, a group of philosophers who spanned a period of approximately two hundred years, beginning with John Locke (1632–1704). Locke rejected the notion of innate ideas and argued forcefully that all ideas were derived from experience. Resurrecting Aristotle’s notion of tabula rasa, Locke described how experience would write on the blank slate, thus filling the mind with its ideas. Although all ideas were derived from experience, they were not all derived from direct sensory experience; some were the products of the mind from the processes of reflection, or what Locke called the internal operations of the mind. Thus, one could know a rose from direct sensory experience—its aroma, color, texture. But it was also possible to “experience” the rose when it was not present by reflecting on these earlier experiences. These ideas of reflection were not derived from any sensory contact of the moment.

* Although mechanism and rationalism might seem to be unlikely philosophical partners, they have co-existed in great thinkers other than Descartes. For example, Isaac Newton (1642–1727) developed a mechanistic view of the world using rationalist methods in his Philosophiae Naturalis Principia Mathematica (1687).
Unlike Descartes, Locke was more interested in how the mind works, that is, how it acquires knowledge, than in what it actually knows. He studied that question for twenty years, writing and rewriting his most important work for psychology, *An Essay Concerning Human Understanding*, which was finally published in 1690. Many historians use the publication of that book to mark the formal beginning of British empiricism.

The first selection in this chapter is an excerpt from Locke's *Essay*. In it he discusses the nature and extent of knowledge, including his descriptions of simple and complex ideas and primary and secondary qualities. Simple ideas are derived from either sensory experience or reflection, but complex ideas are the product only of reflection. Primary and secondary qualities are distinguished as follows. Primary qualities are sensory qualities that exist in an object, such as the thorny shape of a rose stem or the whiteness of a feather. Secondary qualities exist in the experiencing individual and are not a part of the object itself, for example, the pain experienced from the rose thorn or the tickle from the feather. That is, the pain is not part of the rose thorn, nor is the tickle part of the feather. Instead, these qualities of sensory experience are part of the individual. Locke's distinction between primary and secondary qualities was especially important for a science of psychology because it recognized experience that was independent of the physical objects of the world. In essence, these secondary qualities were products of the mind, and as such were the very basis of psychological study.

Empiricism continued through the work of George Berkeley (1685–1753), especially in terms of observations on sensory systems such as vision. Berkeley disagreed with Locke's distinction between primary and secondary qualities, arguing that only the latter could really be known to exist. For Berkeley, all knowledge was dependent on the experiencing individual, and qualities of objects existed only as perceived.

Berkeley was followed by David Hartley (1705–1757) and David Hume (1711–1776), whose principal interests were in learning, or what they called association. They were particularly interested in how ideas became associated with one another to form the complex ideas about which Locke had written. Both men emphasized contiguity as a fundamental law of association; that is, ideas that were adjacent to one another in space or time were likely to be associated with one another. They sought to determine the limits of contiguity in forming associations.

Continuing in the empiricist-associationist tradition were the Mills, father James Mill (1773–1836) and his son John Stuart Mill (1806–1873). James Mill recognized that some associations were formed more easily than others and that some were more lasting. His extremely mechanical view of the mind described a set of factors that determined the strength and durability of associations.

John Stuart Mill extended his father's work on association, but his most important work for psychology was *A System of Logic*, published in 1843. It is the source for the second selection in this chapter. In his book, Mill argues for the feasibility of a science of psychology (in his words, a "science of human nature"). That was a hotly debated question in Mill's time, as many agreed
with Auguste Comte that there could be no science of the mind because the mind could not study its own processes (Hothersall, 1984). Although Mill acknowledged that psychology was, in his time, an inexact science, he believed it was as precise as some sciences, such as astronomy, and worthy of study. He also proposed a related field of study that he labeled ethology, or the science of the formation of character. This field was to discover the individual and social factors that developed individual character, or what we might describe today as personality. (Mill’s use of the word ethology should not be confused with its contemporary usage as a naturalistic approach to the study of animal behavior.)

From Locke to John Stuart Mill, the approaches to studying the mind enjoyed an evolution that deepened the emphases of empiricism and mechanism. The British empiricists stressed the role of sensations, the nature of ideas, how these ideas were acquired, and how more complex ideas were formed through associations. These areas of inquiry would form the basis of the study of consciousness in the experimental psychology about to take shape in Germany, the subject of Chapters 6 and 7.

There are two secondary source selections in this chapter, one dealing with Locke, the other with J. S. Mill. The article on Locke by Martha E. Moore-Russell examines the social and political forces that surrounded Locke and the writing of his Essay. She uses what she calls a person-in-society approach to describe how she thinks Locke’s philosophy was determined by his interpretation of the socio-political world around him. In writing this article, she has made use of a number of sources, including several of Locke’s works that were never published.

The other article, by the University of New Hampshire historian of psychology David E. Leary, describes the fate and influence of J. S. Mill’s proposed science of ethology. Leary notes that Mill’s ethology proposal, published as part six of his System of Logic, seems to have been ignored in historical accounts. This article traces its influence up to 1940 and describes its culmination in the field of social anthropology.

REFERENCES