

things you had seen before. The question for cognitive psychologists is how we manage to accomplish these feats so rapidly and (usually) without error.

The vast topic of perception can be subdivided into visual perception, auditory perception, olfactory perception, haptic (touch) perception, and gustatory (taste) perception. For the purposes of this chapter, we will concentrate on visual and auditory perception—in part to keep our discussion manageable and in part because those two are the kinds of perception psychologists study most. From time to time, however, we will also look at examples of other kinds of perception to illustrate different points.

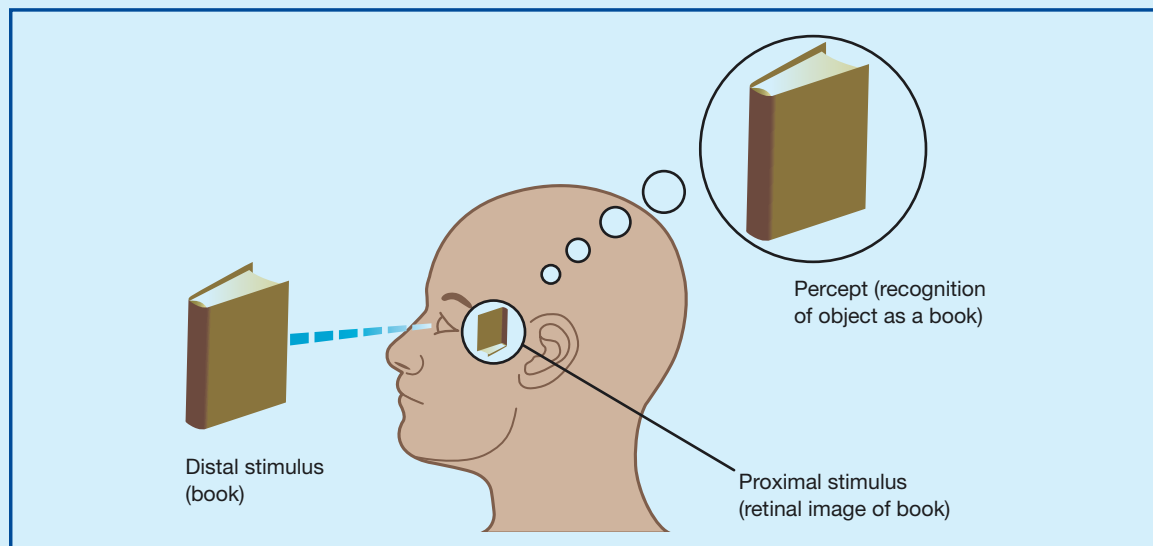
Notice that when you look at an object, you acquire specific bits of information about it, including its location, shape, texture, size, and (for a familiar object) name. Some psychologists—namely, those working in the tradition of J. J. Gibson (1979)—would argue that you also immediately acquire information about the object’s function. Cognitive psychologists seek to describe how people acquire such information and what they then do to process it.

Several related questions suggest themselves. How much of the information we acquire through perception draws on past learning? How much of our perception do we infer, and how much do we receive directly? What specific cognitive processes enable us to perceive objects (and events, states, etc.)? Where can the line

be drawn between perception and sensation, which is the initial reception of information in a specific sensory modality—vision, hearing, or olfaction? Where can the line be drawn between perception and other kinds of cognition such as reasoning and categorization? Clearly, even defining perception so as to answer these questions is a challenge.

For now, we will adopt what might be called the “classic” approach to defining perception. Figure 3.1 illustrates this approach for visual perception. Out in the real world are objects and events—things to be perceived—such as this book or, as in my earlier example, trees and shrubs. Each such object is a **distal stimulus**. For a living organism to process information about these stimuli, it must first receive the information through one or more sensory systems—in this example, the visual system. The reception of information and its registration by a sense organ make up the proximal stimulus. In our earlier example, light waves reflect from the trees and cars to your eyes, in particular to a surface at the back of each eye known as the **retina**. There, an image of the trees and cars, called the **retinal image**, is formed. This image is two-dimensional, and its size depends on your distance from the window and the objects beyond (the closer you are, the larger the image). In addition, the image is upside down and is reversed with respect to left and right.

The meaningful interpretation of the **proximal stimulus** is the **percept**—your interpretation that the



■ Figure 3.1: Distal stimuli, proximal stimuli, and percepts.