

stimuli are trees, cars, people, and so forth. From the upside-down, backward, two-dimensional image, you quickly (almost instantaneously) “see” a set of objects you recognize. You also “recognize” that, say, the giant oak tree is closer to you than are the lilac shrubs, which appear to recede in depth away from you. This information is not part of the proximal stimulus; somehow, you must interpret the proximal stimulus to know this information.

Although researchers studying perception disagree about much, they agree that percepts are not the same things as proximal stimuli. Consider a simple demonstration of **size constancy**. Extend your arm away from your body and look at the back of your hand. Now, keeping the back of your hand facing you, slowly bring it toward you a few inches and then away from you. Does your hand seem to be changing size as it moves? Probably not, although the size of the hand in the retinal image is most certainly changing. The point here is that perception involves something other than the formation of retinal images.

Related to perception is a process called **pattern recognition**. This is the recognition of a particular object, event, and so on as belonging to a class of objects, events, and so on. Your recognition of the object you are looking at as belonging to the class of things called “shrubs” is an instance of pattern recognition. Because the formation of most percepts

involves some classification and recognition, most, if not all, instances of perception involve pattern recognition.

We will begin by considering proposals from the Gestalt school of psychology that perception involves the segmentation, or “parsing,” of visual stimuli into objects and backgrounds (and just how complicated this seemingly easy process is). We will then turn to examine some (mostly) bottom-up models of perception. Then we will examine phenomena that have led many cognitive psychologists to argue that some top-down processes must occur in interaction with bottom-up processing. We will examine some neurological findings pertaining to object perception and will also consider a connectionist model of word perception.

We will also review a very different view: work inspired by J. J. Gibson (1979) on “direct perception.” Gibson’s view departs from most other theories of perception in that he claims perceivers actually do little “processing” of information, either bottom-up or top-down. Instead, Gibson believed the information available in the world is sufficiently rich that all the perceiver needs to do is detect or “pick up on” that information. We will conclude by looking at some neuropsychological work on patients who have an inability to perceive (but have intact visual abilities) to illustrate just what the process of perception is all about.