

SETTING THE STAGE.....

Look across the room right now and notice the objects you see. If you are looking out a window, maybe you see some trees or bushes, perhaps a bicycle or car, a person walking, or a group of children playing.

What you've just done, cognitively speaking, is an amazing achievement: You've taken sensory input and interpreted it meaningfully in a process known as **perception**. In other words, you have perceived patterns, objects, people, and possibly events in your world. You might not consider this achievement at all remarkable—after all, you do it every day. However, computer scientists trying to create artificially intelligent systems have discovered just how complicated the process of perception is. Neuroscientists have estimated that the areas of our brain responsible for visual processing occupy up to half of the total cortex space (Tarr, 2000).

The central problem of perception is explaining how we attach meaning to the sensory information we receive. In the example just given, you received and somehow interpreted a great deal of sensory information: You “saw” certain objects as trees, people, and so forth. You recognized certain objects—that is, saw them as