

You're walking along a dark, unfamiliar city street. It's raining and foggy, and you are cold and a bit apprehensive. As you walk past a small alley, you catch some movement out of the corner of your eye. You turn to look down the alley and start to make out a shape coming toward you. As the shape draws nearer, you are able to make out more and more features, and you suddenly realize that it's . . .

What cognitive processes are going on in this admittedly melodramatic example? In general, this example illustrates the initial acquisition and processing of information. In particular, the cognitive processes depicted include **attention**, mentally focusing on some stimulus (the mysterious shape); **perception**, interpreting sensory information to yield meaningful information; and **pattern recognition**, classifying a stimulus into a known category. In recognizing the shape as something familiar, you no doubt called on **memory**, the storage facilities and retrieval processes of cognition. All this processing occurred rapidly, probably within a few seconds or less. Most of the cognitive processing in this example appears so effortless and automatic that we usually take it for granted.

Here's another example:

You're in a crowded public place such as a shopping mall during the holiday season. Throngs of people push past you, and you're hot and tired. You head for a nearby bench, aiming to combine some rest with some people watching. As you make your way, a young woman about your age jostles up against you. You both offer polite apologies ("Oh, excuse me!" "Sorry!"), glancing at each other as you do. She immediately exclaims, "Oh, it's you! How are you? I never thought I'd run into anyone I know here—can you believe it?" You immediately paste a friendly but vague smile on your face to cover your frantic mental search. Who is this woman? She looks familiar, but why? Is she a former classmate? Did you and she attend camp together? Is she saying anything that you can use as a clue to place her?

This example illustrates your use of memory processes, including **recognition** (you see the woman as familiar) and **recall** (you try to determine where you know her from). Other cognitive processes are involved here too, although they play a lesser role. For instance, you perceive the entity talking to you as a person, specifically a woman, more specifically a vaguely familiar woman. You pay attention to her. You may be using various strategies or techniques of **reasoning** and **problem solving** to try to figure out who she is.



■ **Photo 1.1:** An ordinary activity, such as reading a map, involves a great deal of cognitive processing.

Your success or failure at this task may also depend on your mental organization of the knowledge you have accumulated in your lifetime—your **knowledge representation**. To communicate with her, you use **language** as well as nonverbal cues or signals. Eventually, you'll need to use **decision making** to determine how to deal with the situation: Will you admit your forgetfulness, or will you try to cover it up?

As these two examples demonstrate, our everyday lives involve a great deal of cognition. Furthermore, this everyday cognition is complex, often involving several cognitive processes. We tend to remain unaware of this complexity, however, because much of our cognitive processing occurs so often, so rapidly, and with so little effort that we might not even know it is taking place.

In both of the preceding examples, several cognitive processes were occurring either simultaneously or very closely in time. In fact, it is nearly impossible to