

## 1a | Introduction to History, Methods, and Paradigms

Welcome to the first module of this course in Cognitive psychology. Cognitive psychology is a fascinating topic that attempts to uncover the secrets of the inner workings of the human mind. A cursory look through the textbook will reveal to you that there are many facets to the study of cognition. In this first module, I am going to introduce you to the topic of Cognitive psychology.

So, what is cognition?

Well, to get a better feel for the domain of Cognitive psychology, let's consider a real life example of a cognitive activity:

So, you're in a crowded 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 and you both apologize for bumping into each other, 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 knew 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 everyday example illustrates several key cognitive processes.

First, and perhaps most obvious, to notice that the woman is familiar you rely on your memory. That is, you might get an automatic sense of familiarity, indicating that you have seen this person before.

There are also more subtle cognitive processes going on as well, ones that might not be overly obvious to you. For example, you are using your perceptual and pattern recognition system to note that the thing you are talking to is indeed a female person. These processes are going on without you consciously being aware of them.

To communicate with her, you are using your language. This language is based on your complex lexicon, that part of your memory system that stores information about word meanings.

Eventually, you'll have to use decision making to determine how to deal with this situation. Will you admit your forgetfulness or will you try to cover it up by avoiding it?

As this example illustrates, pretty much every activity of our daily lives makes use of our cognitive abilities. In addition, even a very simple task, such as carrying on a conversation with someone, often involves several interacting cognitive processes. And again, like I noted above, much of this goes on without us being consciously aware of it.

As cognitive psychologists, our task is to find ways to examine the key mechanisms underlying the complex cognitive processes. For example, a cognitive psychologist might ask, what are the key mechanisms underlying how forgetting occurs? That is, what are the mechanisms underlying how we could not place who that woman was in the last example. In order to draw firm conclusions about such mechanisms, cognitive psychologists need to design experiments with sufficient experimental control. At the same time however, cognitive psychologists need to make sure that the laboratory tests that they develop really do preserve the essential workings of the processes under study. That is, scientists often run the risk of creating an experimental paradigm that is too stripped down and thus the results can't easily be generalized to the real world. This balance is crucial.

Throughout this course we will cover studies that use both tightly controlled experiments and more real world investigations that have the goal of uncovering the mechanisms underlying cognitive processes. In this first module, I will provide the background necessary to understand the remainder of this course. I will begin by providing a bit of a historical perspective of the main influences that served as a foundation for the field of Cognitive psychology. I will then discuss the major precursors to what has been referred to as 'The Cognitive Revolution'. We will then end by discussing some of the major paradigms of Cognitive psychology.

I will also note here, that there is a section in the text on research methods as well that I'm not going to cover in this module, as I'm sure that you have all been exposed to all of that in introductory psychology. However, do make sure you give those pages a read through to make sure that you are up to speed on the different research methods used by experimental psychologists.