

YOU KNOW YOU HAVE MASTERED THE MAIN TOPICS IN THIS CHAPTER IF YOU ARE ABLE TO. . .

- ∞ Define psychology and describe the goals that psychologists hope to achieve.
- ∞ Describe the history of psychology.
- ∞ Discuss the current state of psychology, including the most common perspectives and major professions in the field.
- ∞ Describe the scientific method and discuss its strengths and weaknesses.
- ∞ Explain the basic guidelines and ethical concerns of psychological research.
- ∞ Introduce the criteria for critical thinking and its application in psychology.

RAPID REVIEW

Psychology is defined as the scientific study of behavior and mental processes. The goals of psychology are to describe, explain, predict, and control the behaviors and mental process of both humans and animals. The goals of psychology can be thought of in terms of what, why, when, and how behaviors and mental processes occur.

The field of psychology is relatively new (around 125 years old) but has its origins in the much older fields of physiology and philosophy. Wilhelm Wundt formed the first psychology laboratory in Germany in 1879. Wundt used the method of introspection in an attempt to objectively study human thought processes. Because of his innovative efforts, Wundt is often referred to as the father of psychology. The reality, however, is that multiple people in multiple locations began studying psychology and promoting their particular perspective around the same time. Five historical perspectives are discussed in the text.

Edward Titchener, a student of Wundt's, expanded on Wundt's ideas and brought the method of introspection to the U.S. Titchener called his approach **structuralism** because his ultimate goal was to describe the precise structure of our mental processes. At the same time in the U.S., William James was focused on discovering how our mental processes help us to function in our daily lives and began to promote his viewpoint known as **functionalism**. The terms structuralism and functionalism are no longer used to describe specific viewpoints in the field of psychology. Meanwhile, back in Germany, the **Gestalt psychologists** were studying how sensation and perception create a whole pattern that is greater than the sum of the individual components. Max Wertheimer was a major proponent of Gestalt psychology. In neighboring Austria, Sigmund Freud developed his theory of **psychoanalysis** based on the concept of the unconscious. Freud believed the unconscious played an important role in controlling our day-to-day behaviors and thoughts. Freud's theory is also referred to as the psychodynamic perspective. On the opposite end of the spectrum, and back in the United States, was John Watson. Watson expanded the findings of Russian physiologist Ivan Pavlov, to promote the perspective of **behaviorism**. The behaviorists believed that psychology should focus on concepts that could be studied scientifically and they felt that the only area of psychology that could be approached scientifically was observable behavior.

Today there are seven major perspectives within the field of psychology. The **psychodynamic perspective** focuses on the role of the unconscious. **Behaviorism** attempts to study psychology by focusing on observable actions and events. The **humanistic perspective** emphasizes human potential and free will. **Biopsychology** focuses on the biology underlying our behavior and thoughts, while the **cognitive perspective** focuses on the thoughts or "cognitions" themselves. **Cognitive neuroscience** is a specific area of the cognitive perspective that focuses on the physical changes in the brain that occur when we think, remember, or engage in other mental processes. The **sociocultural perspective** explores the role of social and cultural factors on our behaviors and thoughts, while **evolutionary** psychologists attempt to explain behavior and thoughts in terms of their adaptive or "survival" qualities.

There are many professional opportunities within the field of psychology. **Psychiatrists** receive a medical degree (M.D.), treat serious psychological disorders, and can prescribe medication for their patients. A **psychologist** attends graduate school to obtain a doctorate degree (either a Ph.D., Ed.D. or

Psy.D.) and can select one of many career options from research to counseling to consulting for a business. A **psychoanalyst** is a psychiatrist or psychologist who has received special training in Freud's method of psychoanalysis. A **psychiatric social worker** receives a Master of Social Work degree (M.S.W.) and provides counseling to patients or possibly conducts research.

Psychologists use the **scientific method** to reduce bias and error in their observations. The steps of the scientific method include asking a question, turning your question into a **hypothesis** - a statement about what you believe the actual answer is, testing your hypothesis, drawing a conclusion, and reporting your findings. Your findings can then be further strengthened if other researchers conduct a study and draw the same conclusions as you did, or in other words if other researchers **replicate** your findings. The method you use to test your hypothesis depends on which of the four goals of psychology you are attempting to achieve. If you would like to answer the question of "what" (goal = describe), you would use a descriptive method. **Naturalistic observation** provides a realistic picture of behavior but can become biased through the **observer effect** (subjects act differently when they know they are being watched) and **observer bias** (the researcher only sees what he or she wants to see). Laboratory observation is similar to naturalistic observation but the participants are observed in a laboratory setting instead of "out in nature." Sometimes a researcher will disguise herself as an actual participant in order to reduce the observer effect. This approach is called **participant observation**. A **case study** is a detailed investigation of one individual, or case, and can provide a great deal of information about that one person but is hard to generalize to a larger population. For a **survey**, researchers ask a group of subjects a series of questions. Surveys allow researchers to gather a lot of information quickly. However, with a survey there is no guarantee that the subjects will answer the questions truthfully. Also, researchers must be sure to take a **representative sample** of the **population** they are interested in. A researcher interested in discovering the relationship between two variables would use the **correlational method**. A **correlation coefficient** tells the researcher the direction and strength of the relationship. The coefficient will always be a number between -1.00 and +1.00. A correlation shows that a relationship between two variables exists, but cannot explain the cause of the relationship. In order to answer the question of "why," a researcher must conduct an experiment. Remember the example with the churches and the bars. The new churches did not cause the construction of the new bars. In an **experiment**, the researcher manipulates a variable (the **independent variable**) and measures some response from the participants (the **dependent variable**). In order to measure the dependent variable, the researcher must come up with an **operational definition** for the variable. An operational definition is a set of instructions that explains exactly how to measure the variable. For example, aggressive behavior could be operationally defined as the number of times a subject swings a toy sword in a five-minute observation period. The overall goal of the experiment is to keep everything the same except the independent variable. In order to accomplish this, the researcher usually observes two groups: an **experimental group** and a **control group**. The researcher will most likely use **random assignment** to determine which participants will go in which group. Often, the control group receives a fake treatment in order to control for the **placebo effect** in which the participant's expectations actually influence the results of the experiment. Normally, the subjects are not told which group they are in (**single-blind study**). In order to control for any expectations the experimenter might have (the **experimenter effect**) the study is often designed so that neither the participants nor the experimenter know who is in what group (**double-blind study**). All psychological research must follow the ethical guidelines specified by the American Psychological Association.

Understanding the scientific method can help you in your daily life as you apply the four principles of **critical thinking** to problems you face day to day. The four criteria are that (1) most truths need to be tested, (2) all evidence is not equal, (3) authorities are not always right, and (4) an open mind is still important.