

# The Field of Psychology

*"For it all depends on how we look at things, and not on how they are themselves."*

—Carl Jung, *Modern Man in Search of a Soul*

**Essential Question:** How has the field of psychology been influenced by other disciplines, and how has the field changed over time?

**M**any myths persist about the field of psychology and those who work within it. People often view a psychologist as a professional who listens while a client talks about personal problems or as someone who does testing to gather information about a client's thoughts and feelings. While there is an element of truth to each of these perceptions, the field of psychology is much more dynamic and diverse than these snapshots suggest. One aspect of psychology focuses on providing tools to allow people to lead healthy and productive lives. Another aspect raises and seeks to answer basic questions about the mind: What is the memory process? What pathways do neurochemical transmitters follow, and what is their role?

At its core, **psychology** (from the Greek words *psykhe*, meaning "mind, soul," or "spirit," and *logia*, meaning "the study of") is the scientific study of human thought and human and animal behavior. The field of psychology seeks to improve understanding of self and others and explores both biological and environmental influences on personality and behavior. This chapter will examine the historical roots of psychology and the modern approaches used to evaluate human thought and human and animal behavior. It will also explore the areas of study in which psychologists are engaged and careers in the field of psychology.

## Historical Origins of Psychology

The field of psychology is a relatively new science, but its roots are in the older arenas of philosophy and physiology. Many of the questions psychologists ask today originated with the questions of the ancient philosophers. The differences in the disciplines lie in how they go about answering these questions.

## ***Psychology's Roots***

Plato (424–348 B.C.E.) proposed the idea that each of us has our own perception of the world which is unique to our life experiences. Plato showed that what people think of as reality is shaped by their experiences and that philosophers can arrive at the “truth” by looking beyond the physically observable. You may sit in the same class as thirty other students, and yet each of you takes away different experiences and interpretations from the course. Each of you perceives your own experience as the truth. Plato believed that experiences create a subjective reality. Today, psychology recognizes that perception is influenced by previous experiences that act as a filter for incoming sensory data and that shape our expectations of the world.

Aristotle (384–322 B.C.E.) was a student of Plato's. While Plato believed that the essence of a thing existed beyond observable nature, Aristotle believed the way to understand the essence of something was to study specific examples of it in nature, to gain knowledge from observation and data. Today, experimental psychology is built on the process underlying Aristotle's views: drawing conclusions based on specific observations. Aristotle also drew a distinction between knowing, which he argued was the result of experience, and the process of thinking, and he studied motivation, linguistics, and perception, key topics in psychology today.

French philosopher René Descartes (1596–1650) refined a theory known as dualism, which recognizes a duality or a two-part quality to human existence: the body, which is physical and includes the brain, and the mind, which is nonphysical. He believed further that the two parts interact in a cause-and-effect relationship. His idea contrasts with monism, the belief that nothing exists except physical matter—the mind is a function of the brain.

English philosopher and physician John Locke (1632–1704) posited that all individuals are born a “blank slate,” or *tabula rasa* in Latin, and experience in the world shapes the person, filling up the blank slate. Locke formed the basic ideas that would later make up the theory of **behaviorism**. Locke, like Aristotle as well as future behaviorists, believed in **empiricism**, an approach to understanding subjects, including human behavior, by examining data rather than using intuition or reason alone. Locke's ideas are also important in an ongoing debate between the influences of **nature** (genetics) vs. **nurture** (environment), a key theme in many aspects of psychology.

## ***The Birth of Psychology as a Science***

The German philosopher, physician, and professor **Wilhelm Wundt** (1832–1920) is known as “the father of psychology” because he is the first person to study humans in a laboratory setting. As you read, Wundt began studying people in his laboratory in Leipzig, Germany, in 1879, an occasion now often referred to as “the birth of psychology.” Wundt wanted to move the field of psychology away from philosophy and make it a discipline that was more

measurable and scientific (empirical). Chemicals and other elements were being studied in laboratories, and Wundt believed that humans could be studied in much the same way. To study them, Wundt used a process he called **introspection**, which required people to report their conscious experiences (sensations, perceptions, and first reactions) in relation to a number of different objects. Unfortunately, the process of introspection was unsuccessful in achieving his goal because people's responses were too subjective and, unlike chemicals, they changed from trial to trial.

Edward Titchener (1867–1927) brought Wundt's ideas to the United States. Titchener worked at Cornell University and promoted the study of conscious experience by attempting to break it down into its most basic components or “structures” using Wundt's introspective techniques, examining them carefully, and then putting the pieces of the “human puzzle” back together to understand the whole. He coined the term *structuralism* to identify this approach. Because it was so closely related to the work of Wundt, structuralism is sometimes thought of as the first “school” of psychology.

**William James** (1842–1910), an American philosopher, physician, and professor at Harvard University, was one of many who were critical of structuralism. James believed it made more sense to examine the *function* of consciousness—what purpose did it serve? Just as Wundt had been influenced by the objective measurement of other scientific fields, James had been influenced by the work of **Charles Darwin** (1809–1882) and his **theory of evolution**—the view that organisms change over time as they adapt to their environment, and that adaptations that serve the function of promoting survival are passed on to offspring. Rather than seeing consciousness as made up of “structures,” James saw it as a continuous flow; he coined the term *stream of consciousness* to describe it. Unlike the structuralists, he did not see individual puzzle pieces and wonder what big picture they make when put together—instead he saw the big picture and asked what its *function* was. James saw the function of consciousness as an evolutionary adaptation to environment that made it possible for humans to thrive and continue to adapt. His approach became known as **functionalism**. James also wrote the first comprehensive textbook of psychology, *Principles of Psychology*.

**Mary Whiton Calkins** (1863–1930) received one-on-one lessons in psychology from James. The reason for her individualized instruction was that all the males who had been enrolled in James's class un-enrolled when Calkins began attending as a way of protesting the presence of a woman in the class. Administrators at Harvard determined she could not be recognized as an official student. She completed all the necessary work for a Ph.D. in her “unofficial” capacity, but Harvard refused to grant her the degree. Calkins nonetheless went on to have a distinguished career in psychology. She conducted early studies on memory and served as the first woman president of the American Psychological Association. She founded one of the first psychology laboratories at Wellesley

College. Today, more than half of all undergraduate and graduate degrees in psychology at all universities are granted to women.

**Margaret Floy Washburn** (1871–1939) was the first woman to receive her Ph.D. in psychology from Cornell University. Earlier at Columbia University, she had studied under Raymond Cattell, a psychologist who had identified 16 discrete personality traits. Washburn was interested in animal behavior and wrote a book titled *The Animal Mind*. She would later have an impact on behaviorists (see page 6), who conducted much of their research with animals. Washburn also served as the president of the American Psychological Association and taught psychology for many years at Vassar.

While women entered the field of professional psychology later than men, they had long been on the frontline of reform for people with mental illness. In the 1840s, **Dorothea Dix** (1802–1887) undertook an investigation of the living conditions of poor people with mental illness, finding some of them kept in cages, stalls, and pens. Her investigations and tireless advocacy led to the first mental asylums in the United States.

**G. Stanley Hall** (1844–1924) was the first president of the American Psychological Association. He also founded the first journal for research in psychology and created the first psychological laboratory in the United States at Johns Hopkins University. He spent most of his career at Clark University in Massachusetts and helped spread the field of psychology in the United States.

Max Wertheimer (1880–1943) took the field in another direction in Germany. His approach became known as **Gestalt psychology** (*gestalt* translates to “shape” or “form”). To understand this approach, look at the picture below. It is actually made of hundreds of photos, but our focus is drawn to the larger figures of the mother and daughter. While structuralists wanted to examine each small picture, metaphorically, Gestalt psychologists, like functionalists, encouraged looking at the shape or form of the whole.



**Figure 1.1**

Like humans, this collage can be examined by looking at its smallest parts (as structuralists might do) or by seeing the whole entity (as Gestalt psychologists would do).

## Modern Approaches to Psychology

Structuralism and functionalism are foundational theories for understanding the origins of the discipline of psychology. They eventually gave way to modern approaches to psychology which continue to evolve to help us understand human and animal behavior and the human mind. Each of the approaches briefly described below will be covered in much more detail in later chapters.

### **Psychoanalytic Approach**

Austrian neurologist **Sigmund Freud** (1856–1939) studied medicine but soon discovered that not all ailments were physical. Psychological ailments, he believed, could be treated by what one of his patients identified as “the talking curé.” The **psychoanalytic approach** Freud developed emphasized the role of the **unconscious**, a depository of memories, feelings, and drives, many of them unwanted, that are beyond the reach of conscious awareness. He was also interested in the meaning of dreams. His book *The Interpretation of Dreams* emphasized the **latent** (or hidden) meaning of dreams.

Freud posited that we have three conflicting parts of our personality. The **id** holds our wants and desires and is primarily motivated by sex and aggression. The **superego**, in contrast, acts as our conscience and leads us to “do the right thing.” Freud believed that the id and superego were often at odds with each other. To negotiate the conflicting forces, the **ego** allows people to get what they want and desire within the confines set by society. (Chapter 17 will examine this topic in depth.) Freud also believed that our personality was shaped by the time we were six or seven years old.

Freud was influenced by the theory of thermodynamics, which studies the flow and transfer of energy. Freud believed that the **libido**, instinctual desires such as those for sexual pleasure and self-preservation, was a source of psychological energy. The term **psychodynamics** is sometimes used to describe his approach.

Because the unconscious cannot be studied objectively, psychoanalytic theory was criticized for its lack of scientific objectivity. Many also believe that Freud’s emphasis on sex and aggression was overstated and that he overemphasized the influence of the unconscious on behavior. Yet more than one hundred years after Freud’s proposals, a significant subset of psychotherapists still practice some form of psychoanalysis.

### **Behavioral Approach**

The **behaviorist approach** arose from criticisms of the psychoanalytic approach. Rather than focus on one’s unconscious, behaviorists chose to focus on *observable* behavior. **John Watson** (1878–1958), like Wilhelm Wundt, believed behavior needed to be observable to be objectively and empirically measured. Watson built on the work of Edward Thorndike (1874–1949) who placed cats in **puzzle boxes** and found that once cats figured out how to escape

from the puzzle box for a reward, they would repeat the behavior over and over again. He observed the *law of effect*—responses that produce a satisfying effect will likely be repeated; those that produce an undesirable effect will likely not be repeated. In a similar way, behaviorism rests on the tenet that behaviors that are rewarded will be repeated and those that are punished will eventually be extinguished. Behaviorism is often described as the study of **stimulus and response learning**.

Watson became infamous for asking the experimental question, “Can we condition fears in young children?” In a study of highly questionable ethics, Watson tested a young boy in his lab who became known as Little Albert. Little Albert had a particular affinity for a white rat. Watson presented Albert with the rat and at the same time made a loud noise, which scared Albert. After multiple pairings of the loud noise with the rat, Albert came to fear the white rat alone even when there was no frightening sound. This technique of paired associations is known as **classical conditioning**. Russian psychologist **Ivan Pavlov** (1849–1936) devised experiments in classical conditioning with salivating dogs.

Like Watson, **B.F. Skinner** (1904–1990) believed in **radical behaviorism**, the idea that behavior should be studied objectively using the scientific method and only what can be seen or observed is measurable. He created an **operant conditioning chamber** (also known as a *Skinner box*) in which an animal—often a rat or a pigeon—would be trained to complete a voluntary behavior, such as turning around or pecking the corner of the cage. Once the behavior was completed, the animal would receive a reward, which often increased the likelihood of the behavior occurring again. This process became known as **operant conditioning**. Like Thorndike, Skinner believed that behavior that was rewarded would be repeated, while behavior that was punished would not be repeated. Because Skinner emphasized the importance of learning through rewards and punishments, he believed that people have no free will and essentially operate like robots based solely on past learning.

The behaviorist approach is still popular today, but people have moved away from the radical approach taken by Skinner and Watson. While Skinner acknowledged that people had thoughts, he believed thoughts had little scientific value because they could not be studied objectively.

### ***Cognitive Approach***

The cognitive approach addresses the flaw Skinner identified in studying thoughts by examining thinking and perception. The cognitive revolution in psychology took place in the mid- to late 1950s. Psychologists such as Harry Harlow and others began to wonder why behaviorists were studying rats and pigeons to learn about human behavior rather than animals who were closer to humans, such as primates. They also believed that by failing to examine thought processes, the field of psychology was not studying the entire individual. The **cognitive approach** studies how thinking and perception influence behavior.

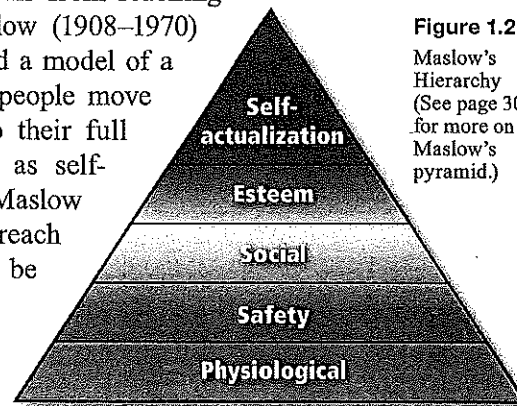
This field includes such topics as memory, problem-solving, decision-making, and perception. While cognitive psychologists do not necessarily discount observable behavior, they are more concerned with the internal functions driving behavior. Psychologists such as **Jean Piaget** studied how children's cognitive development unfolds. The cognitive approach remains a strong approach today, and new methods allow more objective study of how people think, interpret information, and make decisions in given situations.

### **Humanistic Approach**

The **humanistic approach** also came to prominence in the 1950s. This approach addressed perceived flaws in both the psychoanalytic and behavioral approaches. Freud's belief that people were driven solely by sex and aggression was replaced in the humanistic approach with a more positive outlook on people related to their motivation to fulfill their potential. In addition, humanists focused on a person's future rather than the past. This approach also took issue with the behaviorists' idea that humans have no free will and are driven only by past rewards and punishments. The humanists believed that people do have free will and ultimately are responsible for the decisions they make regardless of what they may have learned in the past. Humanism focuses on the potential of people and their drive to be their best.

**Carl Rogers** (1902–1987) is one of the founders of the humanistic approach. Before Rogers went into the field of psychology, he was training to be a minister, a calling which perhaps helps to explain his optimistic view of the world. Rogers did acknowledge that environments may not always be ideal and can prevent individuals from reaching their potential. **Abraham Maslow** (1908–1970) built on these ideas and created a model of a **hierarchy of needs** in which people move from basic biological needs to their full potential, which he identified as self-actualization. Like Rogers, Maslow believed that people strive to reach their highest potential but can be limited by a poor environment.

The humanistic approach today remains strong in the field of therapy but is criticized for what many describe as an overly optimistic view of human behavior. Also, many say it works well as a general approach to life but is not inclusive enough to be considered an explanation of all human thought and behavior.



**Figure 1.2**  
Maslow's  
Hierarchy  
(See page 306  
for more on  
Maslow's  
pyramid.)

### **Sociocultural Approach**

The **sociocultural approach** emphasizes the impact of people's culture, religion, ethnicity, gender, income level, and overall environment on the individuals they become. To better understand the sociocultural approach, think about how your family, religion, high school environment, and peer group shape your beliefs and goals. Also consider how you might be different if you practiced a different religion, grew up in a different neighborhood, or had a different ethnic background.

### **Biological/Neurobiological/Physiological Approach**

This approach focuses primarily on examining how genetics, the nervous system, hormones, and brain structures influence a person's thinking and behavior. Damage to certain areas in the left hemisphere of the brain can result in a lack of language functioning; an excess of a neurotransmitter called dopamine may lead to schizophrenic hallucinations. These types of findings are the focus of the **biological approach** to psychology. While examining biological factors that may cause a lack of functioning, this approach also focuses on how biological treatments may improve certain conditions. Treatments primarily involve medication to regulate levels of hormones or neurotransmitters in the brain and body. As brain scanning techniques continue to improve, biological psychologists are learning more than ever about how the brain operates.

### **Evolutionary Approach**

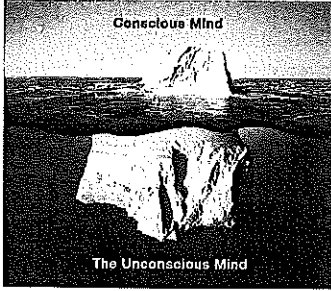
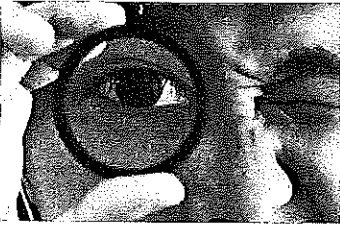

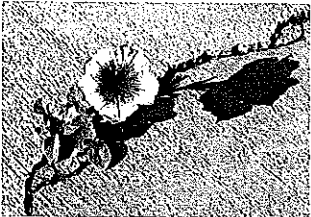
This approach dates back to **Charles Darwin** and his thoughts on **natural selection** and the **survival of the fittest**, the process by which the genes that are most beneficial for survival are protected and strengthened, and the organisms that develop those genes survive and pass them on. However, **evolutionary psychologists** think beyond Darwin's famous study of the *physical* adaptations of finches to look for aspects of human thought and behavior that may give individuals or their genes a better chance for survival in the future. For example, evolutionary psychologists may examine why many people have an aversion to bitter tastes (they may have been an indication of poisonous foods that were dangerous to eat), or they may explain that we are attracted to those with certain physical traits because those traits tend to be associated with higher chances for successful reproduction.

### **Biopsychosocial Model**


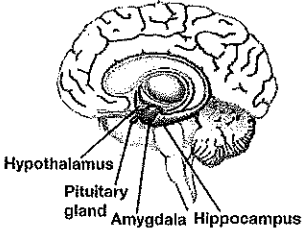
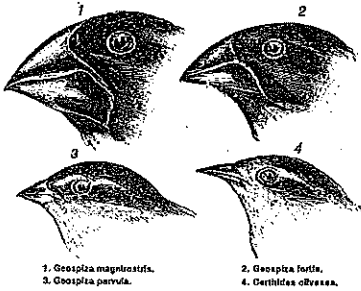
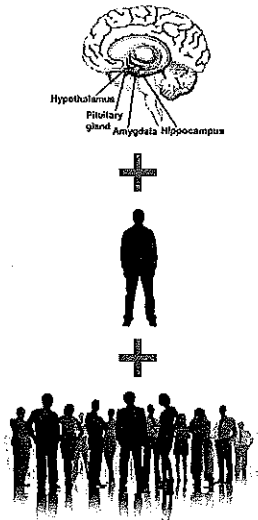
In the late 20th century, psychiatrist George L. Engel formulated a model of treating patients that looked for explanations of illness as well as potential treatments by examining the interactions of the patient's biology, personality, and social influences—the **biopsychosocial model**. While recognizing the biological and physiological elements of disease, Engel and others who followed believed that a patient's perception of an illness or condition as



well as the social environment of the patient have an influence on treatment outcome. The interaction of these elements can also help explain the onset of disease: Someone who grows up in a family of smokers (social) might be more likely to become a smoker because of a desire to belong (psychological), and smoking is a known disease-causing behavior (biological). Some psychiatrists and medical doctors believe that Engel's ideas have helped medical doctors see patients as whole beings rather than just biological systems.

MODERN APPROACHES TO PSYCHOLOGY		
Perspective	Image to Remember	Explanation
Psychoanalytic	 <p>The image shows an iceberg floating in the ocean. The tip of the iceberg is labeled "Conscious Mind" and is above the water line. The much larger, submerged part of the iceberg is labeled "The Unconscious Mind" and is below the water line.</p>	The iceberg represents Freud's levels of consciousness and shows the scope of the unconscious mind compared to that of the conscious mind.
Behavioral	 <p>The image shows a close-up of a person's face. They are holding a magnifying glass over their right eye, which is significantly enlarged through the lens.</p>	Behavior that is observable and measurable is scientifically useful.
Cognitive	 <p>The image shows a stylized human head with a face. The top of the head is open, and several question marks are floating out of it, symbolizing thought and perception.</p>	Thinking and perception influence behavior.
Humanistic	 <p>The image shows a single flower growing out of a crack in a concrete surface. The flower is in full bloom, and its shadow is cast on the concrete.</p>	The flower is trying to reach its full potential and blossom. Even in a bad environment, it will try its best. People strive to be their best.

MODERN APPROACHES TO PSYCHOLOGY

Perspective	Image to Remember	Explanation
Sociocultural		The individual is influenced by the people and culture that surround them.
Biological		Brain structures and chemistry affect behavior.
Evolutionary		Evolutionary adaptations help explain human thought and behavior.
Biopsychosocial		Interactions among a person's biology, personality, and culture help shape thoughts and behaviors.

## ***The Strengths and Limitations of Theories***

Theories in psychology, such as those you just read about, are like lenses or magnifying glasses. Lenses help us see things within the lens better, but things outside of the lens become less clear. Theories can make us blind to—or at least less aware of—other phenomena. For example, Freud’s theory focused the lens on inner drives, taking little account of the kinds of influences the behaviorists examined. Humanism makes valuable contributions to understanding human potential but pays little attention to biological factors, beyond the requirement to meet basic needs. Thus, enduring theories help people see certain things well, but they explain other phenomena less well. Taken together, all applicable theories remain useful, at least to some subset of people—hence their endurance.

## **Subfields and Careers in Psychology**

Psychologists are found in a vast array of careers, and for this reason and many others psychology is one of the most popular college majors. Most psychologists fall into one of two categories: applied psychologists and basic psychologists. **Applied psychologists** work face-to-face with clients, students, or patients. They use the knowledge of basic researchers to directly help individuals. **Basic psychologists** focus on completing research, often working in labs, to increase knowledge about human thinking and human and animal behavior. They may work to find a new antipsychotic medication, for example, but may never meet the people who use the drug. Some psychologists do work in both basic and applied psychology: A professor at a university may work in a lab studying how students learn (basic) and may also teach classes of students about the field (applied).

### ***Applied Fields***

**Psychiatrists** are medical doctors and can prescribe medication to patients who may benefit from them. In fact, psychiatric treatment today focuses on medication management—finding the right medications to successfully treat disorders and monitoring their effectiveness and side effects. Recently, some states have allowed psychologists who have the proper education to prescribe medications as well. Psychologists may be in a practice with psychiatrists, and their educational training as well as the approach (or approaches) to which they adhere will influence the type of treatment they provide.

**Clinical psychologists** are likely the professionals that most frequently come to mind when thinking about practitioners in psychology. Clinical psychologists work with individuals who may be suffering from psychological disorders. For example, they may help a person with an obsessive-compulsive disorder to cope with or potentially overcome the illness.

**Counseling psychologists** primarily work with individuals who are going through a difficult time in their lives but are unlikely to have a mental illness. Counseling psychologists generally try to help their clients work through such issues as divorce or transitioning into a new school. They work with their clients to develop strategies for coping with difficult situations so they can be positive and productive.

**Human factors psychologists** generally have a background in engineering. They study how the design of certain products can improve use. For example, human factors psychologists may design a comfortable chair that supports one's back properly or a coffee machine that is easy to use even by someone who has never seen it before. We have all had experiences with products that do not work as we might like; human factors psychologists seek to remedy these situations.

**Industrial-organizational psychologists** are often found in an office setting. They may work in human resources to find the best person for a particular job; they may work to increase worker morale; or they may be involved with training, such as sexual harassment training or other on-the-job seminars. They may also work as outside consultants to find a match between an employer and well qualified-employees.

**School psychologists**, not to be confused with educational psychologists who are often basic researchers, generally work in a face-to-face setting. They may evaluate students for special programs, such as special education or gifted programs. They are involved with proctoring IQ tests and creating plans, along with counselors, parents, students, and other school support staff, to meet each student's educational needs.

### ***Basic Fields***

**Biological psychologists** investigate how the structures in one's brain or nervous system influence behavior. Biological psychologists may also study how deficits in certain types of neurotransmitters may shape the behavior of their clients.

**Cognitive psychologists** investigate how people's thinking and perception of situations influence their behavior. They examine decision-making, problem-solving, memory, risk assessment, and metacognition (thinking about thinking).

**Developmental psychologists** study how people change and develop over their lifespan. The topics they examine may include cognitive development, linguistic (speech) development, moral development, motor development, and others. Developmental psychologists historically have studied children; however, as the population ages, gerontology (the study of old age) is attracting some practitioners as their focus.

**Educational psychologists** research how people learn and remember information. Their work may help teachers develop an effective curriculum for promoting student understanding.

**Experimental psychologists** generally work in laboratories and form the largest category of basic psychologists. What they study may run the spectrum from treating rats with a new type of drug to testing the interpersonal skills of college students.

**Psychometric psychologists** have a strong math background that they put to use by interpreting personality or intelligence tests or analyzing the data produced by basic psychologists to determine their findings. Psychometric psychologists often work as consultants to assist those collecting data to insure that they are analyzing the data correctly.

**Personality psychologists** often work closely with psychometric psychologists, providing personality inventories which are then analyzed and assessed. Personality psychologists may also work in a clinical setting to determine why certain personality characteristics seem to make getting along difficult for certain individuals or hold them back from reaching their potential.

**Social psychologists** are those who adhere to the sociocultural approach to psychology. They are primarily focused on examining the influence of family, culture, religion, and peer group on behavior. Social psychologists can work in teaching or research at universities, in the private sector in such positions as consultant and marketing director, or in the government or nonprofit spheres as researchers, conflict managers, or policy experts.

Regardless of the career one pursues in psychology, the key force underlying all careers is furthering an understanding of human behavior and helping to promote empathy and compassion for others. Even if you end up in the future on a path unrelated to psychology, your knowledge of psychology should help you better understand people's motives, behaviors, and thoughts.

#### **THINK AS A PSYCHOLOGIST: APPLY GENERAL PRINCIPLES**

The theoretical perspectives you have read about in this chapter are general frameworks that are applied to specific instances for purposes of therapy or understanding. For example, behaviorism rests on the conviction that behaviors are shaped by punishments and rewards. A psychologist applying behaviorism to a therapeutic situation would look for ways in which undesirable behavior in a client is being reinforced through rewards and seek opportunities to extinguish it. The ability to apply a general concept to a specific individual or situation is critical to a psychologist's success.

**Practice:** The American Psychological Association (APA) publishes the document "Ethical Principles of Psychologists and Code of Conduct"