

Psychology and Life

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Why should you study psychology? The answer to that question is quite straightforward. Psychological research has immediate and crucial applications to important issues of everyday experience: your physical and mental health, your ability to form and sustain close relationships, and your capacity for learning and personal growth. One of the foremost goals of *Psychology and Life* is to highlight the personal relevance and social significance of psychological expertise. 

Every semester when I begin to teach, I am faced with students who enter an introductory psychology class with some very specific questions in mind. Sometimes those questions emerge from their own experience (“What should I do if I think my mother is mentally ill?” “Will this course teach me how to improve my grades?”); sometimes those questions emerge from the type of psychological information that is communicated through the media (“Should I worry when people use cell phones while they’re driving?” “Is it possible to tell when people are lying?”) The challenge of introductory psychology is to bring the products of scientific research to bear on questions that matter to you.

Research in psychology provides a continuous stream of new information about the basic mechanisms that govern mental and behavioral processes. As new ideas replace or modify old ideas, psychologists are continually intrigued and challenged by the many fascinating pieces of the puzzle of human nature. I hope that, by the end of this journey through psychology, you too will cherish your store of psychological knowledge.

Foremost in the journey will be a scientific quest for understanding. We will inquire about the how, what, when, and why of human behavior and about the causes and consequences of behaviors you observe in yourself, in other people, and in animals. We will consider why you think, feel, and behave as you do. What makes you uniquely different from all other people? Yet why do you often behave so much like others? Are you molded by heredity, or are you shaped more by personal experiences? How can aggression and altruism, love and hate, and mental illness and creativity exist side by side in this complex creature—the human animal? In this opening chapter, we ponder how and why all these types of questions have become relevant to psychology’s goals as a discipline. 

WHAT MAKES PSYCHOLOGY UNIQUE?

To appreciate the uniqueness and unity of psychology, you must consider the way psychologists define the field and the goals they bring to their research and applications. By the end of the text, I hope you will think like a psychologist. This first section will give you a strong idea of what that might mean.

Definitions

Many psychologists seek answers to this fundamental question: What is human nature? Psychology answers this question by looking at processes that occur within individuals as well as forces that arise within the physical and social environment. In this light, we’ll define **psychology** as the scientific study of

the behavior of individuals and their mental processes. Let’s explore the critical parts of this definition: *scientific*, *behavior*, *individual*, and *mental*.

The scientific aspect of psychology requires that psychological conclusions be based on evidence collected according to the principles of the scientific method. The **scientific method** consists of a set of orderly steps used to analyze and solve problems. This method uses objectively collected information as the factual basis for drawing conclusions. Chapter 2 will elaborate on the features of the scientific method more fully as we consider how psychologists conduct their research.

Behavior is the means by which organisms adjust to their environment. Behavior is action. The subject matter of psychology largely consists of the observable behavior of humans and other species of animals. Smiling, crying, running, hitting, talking, and touching are some obvious examples of behavior you can observe. Psychologists examine what the individual does and how the individual goes about doing it within a given behavioral setting and in the broader social or cultural context.

The subject of psychological analysis is most often an *individual*—a newborn infant, a college student adjusting to life in a dormitory, or a woman coping with the stress of her husband’s deterioration from Alzheimer’s disease. However, the subject might also be a chimpanzee learning to use symbols to communicate, a white rat navigating a maze, or a sea slug responding to a danger signal. An individual might be studied in its natural habitat or in the controlled conditions of a research laboratory.

Many researchers in psychology also recognize that they cannot understand human actions without also understanding *mental processes*, the workings of the human mind. Much human activity takes place as private, internal events—thinking, planning, reasoning, creating, and dreaming. Many psychologists believe that mental processes represent the most important aspect of psychological inquiry. As you shall soon see, psychological investigators have devised ingenious techniques to study mental events and processes—to make these private experiences public.

The combination of these concerns defines psychology as a unique field. Within the *social sciences*, psychologists focus largely on the behavior of individuals in various settings, whereas sociologists study social behavior of groups or institutions, and anthropologists focus on the broader context of behavior in different cultures. Even so, psychologists draw broadly from the insights of other scholars. Psychologists share many interests with researchers in *biological sciences*, especially with those who study brain processes and the biochemical bases of behavior. As part of *cognitive science*,

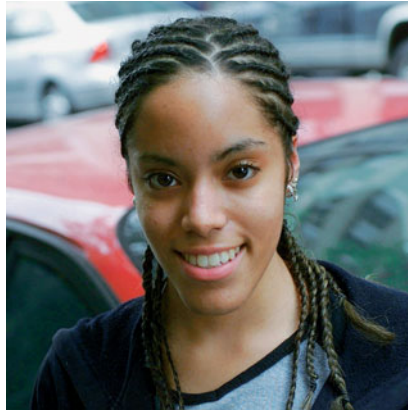
 **Watch the Video** *The Big Picture: Asking the Tough Questions on MyPsychLab*

 **Watch the Video** *How Much Do You Know About Psychology? on MyPsychLab*

psychology The scientific study of the behavior of individuals and their mental processes.

scientific method The set of procedures used for gathering and interpreting objective information in a way that minimizes error and yields dependable generalizations.

behavior The actions by which an organism adjusts to its environment.



Most psychological study focuses on individuals—usually human ones, but sometimes those of other species. Is there anything happening in your life that might make you want to conduct a research study?



psychologists' questions about how the human mind works are related to research and theory in computer science, philosophy, linguistics, and neuroscience. As a *health science*—with links to medicine, education, law, and environmental studies—psychology seeks to improve the quality of each individual's and the collective's well-being.

Although the remarkable breadth and depth of modern psychology are a source of delight to those who become psychologists, these same attributes make the field a challenge to the student exploring it for the first time. There is so much more to the study of psychology than you might expect initially—and, because of that, there will also be much of value that you can take away from this introduction to psychology. The best way to learn about the field is to learn to share psychologists' goals. Let's consider those goals. 👁

The Goals of Psychology

The goals of the psychologist conducting basic research are to describe, explain, predict, and control behavior. These goals form the basis of the psychological enterprise. What is involved in trying to achieve each of them?

Describing What Happens The first task in psychology is to make accurate observations about behavior. Psychologists typically refer to such observations as their *data* (*data* is the plural, *datum* the singular). **Behavioral data** are reports of observations about the behavior of organisms and the conditions

under which the behavior occurs. When researchers undertake data collection, they must choose an appropriate *level of analysis* and devise measures of behavior that ensure *objectivity*.

To investigate an individual's behavior, researchers may use different *levels of analysis*—from the broadest, most global level down to the most minute, specific level. Suppose, for example, you were trying to describe a painting you saw at a museum (see **Figure 1.1** on page 4). At a global level, you might describe it by title, *Bathers*, and by artist, Georges Seurat. At a more specific level, you might recount features of the painting: Some people are sunning themselves on a riverbank while others are enjoying the water, and so on. At a very specific level, you might describe the technique Seurat used—tiny points of paint—to create the scene. The description at each level would answer different questions about the painting.

Different levels of psychological description also address different questions. At the broadest level of psychological analysis, researchers investigate the behavior of the whole person within complex social and cultural contexts. At this level, researchers might study cross-cultural differences in violence, the origins of prejudice, and the consequences of mental illness. At the next level, psychologists focus on

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👁 **Watch the Video** *Thinking Like a Psychologist: Debunking Myths on MyPsychLab*

behavioral data Observational reports about the behavior of organisms and the conditions under which the behavior occurs or changes.



FIGURE 1.1 Levels of Analysis

Suppose you wanted a friend to meet you in front of this painting. How would you describe it? Suppose your friend wanted to make an exact copy of the painting. How would you describe it?

narrower, finer units of behavior, such as speed of reaction to a stop light, eye movements during reading, and children's grammatical errors while acquiring language. Researchers can study even smaller units of behavior. They might work to discover the biological bases of behavior by identifying the places in the brain where different types of memories are stored, the biochemical changes that occur during learning, and the sensory paths responsible for vision or hearing. Each level of analysis yields information essential to the final composite portrait of human nature that psychologists hope ultimately to develop.

However tight or broad the focus of the observation, psychologists strive to describe behavior *objectively*. Collecting the facts as they exist, and not as the researcher expects or hopes them to be, is of utmost importance. Because every observer brings to each observation his or her *subjective* point of view—biases, prejudices, and expectations—it is essential to prevent these personal factors from creeping in and distorting the data. As you will see in the next chapter, psychological researchers have developed a variety of techniques to maintain objectivity.

Explaining What Happens Whereas *descriptions* must stick to perceivable information, *explanations* deliberately go beyond what can be observed. In many areas of psychology, the central goal is to find regular patterns in behavioral and mental processes. Psychologists want to discover *how* behavior works. Why do you laugh at situations that differ from your expectations of what is coming next? What conditions could lead someone to attempt suicide or commit rape?

Explanations in psychology usually recognize that most behavior is influenced by a combination of factors. Some factors operate within the individual, such as genetic makeup, motivation, intelligence level, or self-esteem. These inner determinants tell something special about the organism. Other factors, however, operate externally. Suppose, for example, that a child tries to please a teacher to win a prize or that a motorist trapped in a traffic jam becomes frustrated and hostile. These behaviors are largely influenced by events outside the person. When psychologists seek to explain behavior, they almost

always consider both types of explanations. Suppose, for example, psychologists want to explain why some people start smoking. Researchers might examine the possibility that some individuals are particularly prone to risk taking (an internal explanation) or that some individuals experience a lot of peer pressure (an external explanation)—or that both a disposition toward risk taking and situational peer pressure are necessary (a combined explanation).

Often a psychologist's goal is to explain a wide variety of behavior in terms of one underlying cause. Consider a situation in which your professor says that, to earn a good grade, each student must participate regularly in class discussions. Your roommate, who is always well prepared for class, never raises his hand to answer questions or volunteer information. Your professor chides him for being unmotivated and assumes he is not bright. That same roommate also goes to parties but speaks only to people he knows, doesn't openly defend his point of view when it is challenged by someone less informed, and rarely engages in small talk at the dinner table. What is your analysis? What underlying cause might account for this range of behavior? How about *shyness*? Like many other people who suffer from intense feelings of shyness, your roommate is unable to behave in desired ways (Zimbardo & Radl, 1999). We can use the concept of shyness to explain the full pattern of your roommate's behavior.

To forge such causal explanations, researchers must often engage in a creative process of examining a diverse collection of data. Master detective Sherlock Holmes drew shrewd conclusions from scraps of evidence. In a similar fashion, every researcher must use an informed imagination, which creatively *synthesizes* what is known and what is not yet known. A well-trained psychologist can explain observations by using her or his insight into the human experience along with the facts previous researchers have uncovered about the phenomenon in question. Much psychological research is an attempt to give accurate explanations for different behavioral patterns.

Predicting What Will Happen Predictions in psychology are statements about the likelihood that a certain behavior will occur or that a given relationship will be found. Often an accurate explanation of the causes underlying some form of behavior will allow a researcher to make accurate predictions about future behavior. Thus, if we believe your roommate to be shy, we could confidently predict that he would be uncomfortable when asked to give a speech in front of a large class. When different explanations are put forward to account for some behavior or relationship, they are usually judged by how well they can make accurate and comprehensive predictions. If your roommate was to speak happily to the class, we would be forced to rethink our diagnosis.

Just as observations must be made objectively, scientific predictions must be worded precisely enough to enable them to be tested and then rejected if the evidence does not support them. Suppose, for example, a researcher predicts that the presence of a stranger will reliably cause human and monkey babies, beyond a certain age, to respond with signs of anxiety. We might want to bring more precision to this prediction by examining the dimension of "stranger." Would fewer signs of anxiety appear in a human or a monkey baby if the stranger were also a baby rather than an adult, or if the stranger were of the same species rather than of a different one? To improve future predictions, a researcher would create systematic variations in environmental conditions and observe their influence on the baby's response.



A psychological prediction.

Controlling What Happens For many psychologists, control is the central, most powerful goal. Control means making behavior happen or not happen—starting it, maintaining it, stopping it, and influencing its form, strength, or rate of occurrence. A causal explanation of behavior is convincing if it can create conditions under which the behavior can be controlled.

The ability to control behavior is important because it gives psychologists ways of helping people improve the quality of their lives. Throughout *Psychology and Life*, you will see examples of the types of *interventions* psychologists have devised to help people gain control over problematic aspects of their lives. Chapter 15, for example, discusses treatments for mental illness. You will see how people can harness psychological forces to eliminate unhealthy behaviors like smoking and initiate healthy behaviors like regular exercise (see Chapter 12).



What causes people to smoke? Can psychologists create conditions under which people will be less likely to engage in this behavior?

You will learn what types of parenting practices can help parents maintain solid bonds with their children (Chapter 10); you will learn what forces make strangers reluctant to offer assistance in emergency situations and how those forces can be overcome (Chapter 16). These are just a few examples of the broad range of circumstances in which psychologists use their knowledge to control and improve people's lives. In this respect, psychologists are a rather optimistic group; many believe that virtually any undesired behavior pattern can be modified by the proper intervention. *Psychology and Life* shares that optimism.

Stop and Review

- ① What are the four components of the definition of psychology?
- ② What four goals apply to psychologists who conduct research?
- ③ Why is there often a close relationship between the goals of explanation and prediction?

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THE EVOLUTION OF MODERN PSYCHOLOGY

Today, it is relatively easy to define psychology and to state the goals of psychological research. As you begin to study psychology, however, it is important to understand the many forces that led to the emergence of modern psychology. At the core of this historical review is one simple principle: *Ideas matter*. Much of the history of psychology has been characterized by heated debates about what constitutes the appropriate subject matter and methodologies for a science of mind and behavior.

This historical review will be carried out at two levels of analysis. The first section will consider the period of history in which some of the critical groundwork for modern psychology was laid down. This focus will enable you to witness at close range the battle of ideas. The second section will describe in a broader fashion seven perspectives that have emerged in the modern day. For both levels of focus, you should allow yourself to imagine the intellectual passion with which the theories evolved. 🔍

Psychology's Historical Foundations

In 1908, **Hermann Ebbinghaus** (1858–1909), one of the first experimental psychologists, wrote “Psychology has a long past, but only a short history” (Ebbinghaus, 1908/1973). Scholars had long asked important questions about human nature—about how people perceive reality, the nature of consciousness, and the origins of madness—but they did not possess the means to answer them. Consider the fundamental questions posed in the

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Critical Thinking in Your Life

DOES “COMFORT FOOD” REALLY GIVE COMFORT?

An important goal of *Psychology and Life* is to improve your ability to think critically: The text should help you “reach intelligent decisions about what [you] should believe and how [you] should act” (Appleby, 2006, p. 61). To get started toward that goal, let’s consider a real-world scenario. You’re having a tough day, so you decide to indulge in some comfort food. Now take a step back. What evidence would you want to decide whether comfort food really makes you feel better? Let’s see how researchers have approached this question.

If comfort food really gives comfort, people should consume more while experiencing emotional distress. To test that hypothesis, a team of researchers asked college women to watch a “brutal and violent” film excerpt (Evers et al., 2010). The researchers intended the excerpt to produce negative emotions—and it did. However, some of the women were told to suppress their emotional responses while they watched, “so that anybody looking at them would not be able to determine what kind of excerpt they were watching” (p. 797). A second group was not asked to hide their feelings. After watching the film, the students believed they were starting an unrelated study on taste. They were given the opportunity to eat both comfort food (for example, chocolate) and non-comfort food (for example, unsalted crackers). The women who had suppressed their emotions ate twice as much comfort food as the other group; they ate just about the same amount of non-comfort food. This pattern suggests that people actually do prefer comfort food when they are experiencing emotional turmoil.

But why does comfort food help with negative emotions? Another pair of researchers suggested that, across our lives, we mostly eat comfort food in the company of loved ones (Troisi & Gabriel, 2011). For that reason, we have associations built up in memory so that comfort food calls to mind the emotional warmth of those relationships. To test that hypothesis, the researchers assembled two groups of students: Some had previously reported that chicken soup was a comfort food; the second group did not have that association. At the start of the experiment, some students ate chicken soup and others did not. The students then completed a task in which they were given word fragments (for example, *li—*) that could be completed as relationship words (for example, *like*). The researchers demonstrated that the students who consumed chicken soup—when it counted as a comfort food—produced the most relationship words. For that group, the experience of eating chicken soup made relationship associations easily accessible in memory.


These projects suggest that the memories associated with the consumption of comfort food help people deal with negative emotions. Now, use your critical thinking skills. What else would you like to know before you indulge in your own comfort food binge? 

- In the first study, why might the researchers have kept their sample to just one sex?
- With respect to the researchers’ theory, why would chicken soup not be comfort food for everyone?

4th and 5th centuries B.C. by the classical Greek philosophers **Plato** (427–347 B.C.) and **Aristotle** (384–322 B.C.): How does the mind work? What is the nature of free will? What is the relationship of individual citizens to their community or state? Although forms of psychology existed in ancient Indian Yogic traditions, Western psychology traces its origin to the writings of these philosophers. Plato and Aristotle defined opposing views that continue to have an impact on contemporary thinking. Consider how people come to know about the world. In the *empiricist* view, people begin life with their mind as a blank tablet; the mind acquires information through experiences in the world. **John Locke** (1632–1704) articulated this position at length in the 17th century; its roots can be traced to Aristotle. In the *nativist* view, people begin life with mental structures that provide constraints on how they experience the world. **Immanuel Kant** (1724–1804) fully developed this position in the 18th century; its roots can be traced to Plato. (In later chapters, we revisit this theoretical debate in the form of “nature versus nurture.”) The French philosopher **René Descartes** (1596–1650) provided another important step toward contemporary psychology. Descartes proposed what, in his time, was a

very new and very radical idea: The human body is an “animal machine” that can be understood scientifically—by discovering natural laws through empirical observation. Toward the end of the 19th century, psychology began to emerge as a discipline when researchers applied the laboratory techniques from other sciences—such as physiology and physics—to the study of such fundamental questions from philosophy.

A critical figure in the evolution of modern psychology was **Wilhelm Wundt**, who, in 1879 in Leipzig, Germany, founded the first formal laboratory devoted to experimental psychology. Although Wundt had been trained as a physiologist, over his research career his interest shifted from questions of body to questions of mind: He wished to understand basic processes of sensation and perception as well as the speed of simple mental processes. By the time he established his psychology laboratory, Wundt had already accomplished a range of research and published the first of several editions of *Principles of Physiological*

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In 1879, Wilhelm Wundt founded the first formal laboratory devoted to experimental psychology. Suppose you decided to found your own psychology laboratory. What one area in your life would you study if you could?

Psychology (King et al., 2009). Once Wundt's laboratory was established at Leipzig, he began to train the first graduate students specifically devoted to the emerging field of psychology. Those students often became founders of their own psychology laboratories around the world.

As psychology became established as a separate discipline, psychology laboratories began to appear in universities throughout North America, the first at Johns Hopkins University in 1883. These early laboratories often bore Wundt's impact. For example, after studying with Wundt, **Edward Titchener** became one of the first psychologists in the United States, founding a laboratory at Cornell University in 1892. However, at around the same time, a young Harvard philosophy professor who had studied medicine and had strong interests in literature and religion developed a uniquely American perspective. **William James**, brother of the great novelist Henry James, wrote a two-volume work, *The Principles of Psychology* (1890/1950), which many experts consider to be the most important psychology text ever written. Shortly after, in 1892, G. Stanley Hall founded the American Psychological Association. By 1900 there were more than 40 psychology laboratories in North America (Benjamin, 2007).

Almost as soon as psychology emerged, a debate arose about the proper subject matter and methods for the new discipline. This debate isolated some of the issues that still loom large in psychology. Let's consider the tension between structuralism and functionalism.

Structuralism: The Elements of the Mind Psychology's potential to make a unique contribution to knowledge became apparent when psychology became a laboratory science organized around experiments. In Wundt's laboratory, experimental participants made simple responses (saying yes or no, pressing a button) to stimuli they perceived under conditions varied by laboratory instruments. Because the data were collected through systematic, objective procedures, independent observers could replicate the results of these experiments. Emphasis on the

scientific method (see Chapter 2), concern for precise measurement, and statistical analysis of data characterized Wundt's psychological tradition.

When Titchener brought Wundt's psychology to the United States, he advocated that such scientific methods be used to study consciousness. Titchener's goal was to uncover the underlying structure of the human mind by defining the component elements of an individual's mental life. In fact, he conceived his research program in analogy to the work of chemists (1910, p. 49): "The psychologist arranges the mental elements precisely as the chemist classifies his elementary substances." Titchener's approach came to be known as **structuralism**, the study of the basic structural components of mind and behavior.

To discover the basic elements, Titchener relied on the technique of **introspection**, the systematic examination by individuals of their own thoughts and feelings about specific sensory experiences. Consider the domain of taste: Based on his introspections, Titchener suggested that all taste experiences emerge from combinations of the basic sensations of salty, sweet, sour, and bitter. In Chapter 4, you'll learn that Titchener's analysis was missing only one basic element. However, introspection functioned less well in other domains of human experience: Titchener and his followers identified more than 44,000 distinct elements of sensory experiences (Benjamin, 2007)! Structuralism attracted many critics because it was impossible to confirm that the products of each individual's introspections were general aspects of human psychology.

One important alternative to structuralism, pioneered by the German psychologist **Max Wertheimer**, focused on the way in which the mind understands many experiences as *gestalts*—organized wholes—rather than as the sums of simple parts: Your experience of a painting, for example, is more than the sum of the individual daubs of paint. As you will see in Chapter 4, **Gestalt psychology** continues to have an impact on the study of perception.

A second major opposition to structuralism came under the banner of *functionalism*.

Functionalism: Minds With a Purpose William James agreed with Titchener that consciousness was central to the study of psychology. However, James focused his attention not on the elements of mental processes, but on their purpose. James wished to understand the ways in which consciousness functions to help people adapt effectively to their environments. James's approach became known as **functionalism**.

For functionalists, the key question to be answered by research was "What is the function or purpose of any behavioral act?" For example, a structuralist might look at a *reflex* and try to identify its basic components. By contrast, a theorist like

structuralism The study of the structure of mind and behavior; the view that all human mental experience can be understood as a combination of simple elements or events.

introspection Individuals' systematic examination of their own thoughts and feelings.

Gestalt psychology A school of psychology that maintains that psychological phenomena can be understood only when viewed as organized, structured wholes, not when broken down into primitive perceptual elements.

functionalism The perspective on mind and behavior that focuses on the examination of their functions in an organism's interactions with the environment.



Classroom practices in the United States were changed through the efforts of the functionalist John Dewey. As a student, what classroom experiences have you experienced that encouraged your “intellectual curiosity”?

John Dewey focused on the functions of reflexes, which he described as “a continuously ordered sequence of acts, all adapted in themselves and in the order of their sequence, to reach a certain objective end, the reproduction of the species, the preservation of life, locomotion to a certain place” (1896, p. 366). Dewey’s concern for the practical uses of mental processes led to important advances in education. His theorizing provided the impetus for *progressive education* in his own laboratory school and more generally in the United States: “Rote learning was abandoned in favor of learning by doing, in expectation that intellectual curiosity would be encouraged and understanding would be enhanced” (Kendler, 1987, p. 124).

Although James believed in careful observation, he put little value on the rigorous laboratory methods of Wundt. In James’s psychology, there was a place for emotions, self, will, values, and even religious and mystical experience. His “warm-blooded” psychology recognized a uniqueness in each individual that could not be reduced to formulas or numbers from test results. For James, explanation rather than experimental control was the goal of psychology.

The Legacy of These Approaches Despite their differences, the insights of the practitioners of both structuralism and functionalism created an intellectual context in which contemporary psychology could flourish. Psychologists currently examine *both* the structure and the function of behavior. Consider the process of speech production. Suppose you want to invite a friend over to watch the Superbowl. To do so, the words you speak must serve the right function—*Superbowl, with me, today*—but also have the right structure: It wouldn’t do to say, “Would watch Superbowl me the with today you to like?” To understand how speech production works, researchers study the way that speakers fit meanings (functions) to the grammatical structures of their languages (Bock, 1990). (Chapter 8 will describe some of the processes of language production.) *Psychology and Life* will

emphasize both structure and function as we review both classic and contemporary research. Psychologists continue to employ a great variety of methodologies to study the general forces that apply to all humans as well as unique aspects of each individual.

Women as Pioneering Researchers

It probably won’t surprise you to learn that, early in its history, research and practice in psychology were dominated by men. Even when they were still few in numbers, however, women made substantial contributions to the field (Benjamin, 2007). Let’s consider four women who were pioneers in different areas of psychological research.

Mary Whiton Calkins (1863–1930) studied with William James at Harvard University. However, because she was a woman she was allowed to participate only as a “guest” graduate student. Although she completed all the requirements for a PhD with an exceptional record, the Harvard administration refused to grant a PhD to a woman. Despite this insult, Calkins established one of the first psychology laboratories in the United States and invented important techniques for studying memory. In 1905, she became the first woman president of the American Psychological Association.

In 1894, **Margaret Floy Washburn** (1871–1939) graduated from Cornell University to become the first woman to receive a PhD in psychology. She went on to write an influential early textbook, *The Animal Mind*, which was published in 1908. The book provided a review of research on perception, learning, and memory across animal species. In 1921, Washburn became the second woman to lead the American Psychological Association.



In 1894, Margaret Washburn became the first woman to receive a PhD in psychology. She went on to write an influential textbook, *The Animal Mind* (1908). What challenges might she have faced as a pioneer woman researcher?

Helen Thompson Wooley (1874–1947) accomplished some of the earliest research that examined differences between the sexes (Maracek et al., 2003; Milar, 2000). For her PhD research at the University of Chicago in 1900, Wooley compared the performance of 25 men and 25 women on a battery of tests, including tests of intelligence and emotions. The research led her to the conclusion that differences between the sexes arose not from natural ability but rather from differences in men and women's social experiences across their life spans. Wooley also offered a famous critique of “the flagrant personal bias, logic martyred in the cause of supporting a prejudice, unfounded assertions, and even sentimental rot and drivel” (Wooley, 1910, p. 340) that characterized research, largely by men, on differences between the sexes.

Leta Stetter Hollingworth (1886–1939) was inspired by Wooley to bring research data to bear on claims about gender differences (Maracek et al., 2003). In particular, Hollingworth attacked the claim that women were genetically inferior to men with respect to their levels of creativity and intelligence. Hollingworth also conducted some of the earliest research on children who tested at the extremes of intelligence—both those who had mental retardation and those who were gifted. She invented a curriculum to help nurture the talents of gifted children that she was able to implement in school settings in New York City.

Since the days in which these women were pioneers, the field of psychology has changed in the direction of far greater diversity. In fact, in recent years more women than men have earned PhDs in the field (National Science Foundation, 2010). I will highlight the work of diverse researchers throughout *Psychology and Life*. As psychology continues to contribute to the scientific and human enterprise, more people—women and men, and members of all segments of society—are being drawn to its richness.

Perspectives on Psychology

Suppose your friend accepts the invitation to join you for the Superbowl. What *perspective* does each of you bring to your viewing of the game? Suppose one of you played football in high school, whereas the other did not. Or suppose one of you has rooted from birth for one of the competing teams, whereas the other has no prior commitments. You can see how these different perspectives would affect the way in which you evaluate the game as it unfolds.

In a similar fashion, psychologists' perspectives determine the way in which they examine behavior and mental processes. The perspectives influence what psychologists look for, where they look, and what research methods they use. This section defines seven perspectives—psychodynamic, behaviorist, humanistic, cognitive, biological, evolutionary, and sociocultural. As you read the section, note how each perspective defines the causes and consequences of behavior. 👁

👁 **Watch the Video** *The Basics: Diverse Perspectives on MyPsychLab*

psychodynamic perspective A psychological model in which behavior is explained in terms of past experiences and motivational forces; actions are viewed as stemming from inherited instincts, biological drives, and attempts to resolve conflicts between personal needs and social requirements.

A word of caution: Although each perspective represents a different approach to the central issues of psychology, you should come to appreciate why most psychologists borrow and blend concepts from more than one of these perspectives. Each perspective enhances the understanding of the entirety of human experience.

The Psychodynamic Perspective According to the **psychodynamic perspective**, behavior is driven, or motivated, by powerful inner forces. In this view, human actions stem from inherited instincts, biological drives, and attempts to resolve conflicts between personal needs and society's demands. Deprivation states, physiological arousal, and conflicts provide the power for behavior. According to this model, the organism stops reacting when its needs are satisfied and its drives reduced. The main purpose of action is to reduce tension.

Psychodynamic principles of motivation were most fully developed by the Viennese physician **Sigmund Freud** (1856–1939) in the late 19th and early 20th centuries. Freud's ideas grew out of his work with mentally disturbed patients, but he believed that the principles he observed applied to both normal and abnormal behavior. Freud's psychodynamic theory views a person as pulled and pushed by a complex network of inner and outer forces. Freud's model was the first to recognize that human nature is not always rational and that actions may be driven by motives that are not in conscious awareness.

Many psychologists since Freud have taken the psychodynamic model in new directions. Freud himself emphasized early childhood as the stage in which personality is formed. Neo-Freudian theorists have broadened psychodynamic theory to include social influences and interactions that occur over the individual's entire lifetime. Psychodynamic ideas have had a



Sigmund Freud, photographed with his daughter, Anna, on a trip to the Italian Alps in 1913. Freud suggested that behavior is often driven by motives outside of conscious awareness. What implications does that perspective have for the ways in which you make life choices?

great influence on many areas of psychology. You will encounter different aspects of Freud's contributions as you read about child development, dreaming, forgetting, unconscious motivation, personality, and psychoanalytic therapy.

The Behaviorist Perspective Those who take the **behaviorist perspective** seek to understand how particular environmental stimuli control particular kinds of behavior. First, behaviorists analyze the *antecedent* environmental conditions—those that precede the behavior and set the stage for an organism to make a response or withhold a response. Next, they look at the *behavioral response*, which is the main object of study—the action to be understood, predicted, and controlled. Finally, they examine the observable *consequences* that follow from the response. A behaviorist, for example, might be interested in the way in which speeding tickets of varying penalties (the consequences of speeding) change the likelihood that motorists will drive with caution or abandon (behavioral responses).

The behaviorist perspective was pioneered by **John Watson** (1878–1958), who argued that psychological research should seek the laws that govern observable behavior across species. **B. F. Skinner** (1904–1990) extended the influence of behaviorism by expanding its analyses to the consequences of behaviors. Both researchers insisted on precise definitions of the phenomena studied and on rigorous standards of evidence. Both Watson and Skinner believed that the basic processes



John Watson was an important pioneer of the behaviorist perspective. Why did he find it necessary to research behaviors of both humans and nonhuman animals?

they investigated with nonhuman animals represented general principles that would hold true for humans as well.

Behaviorism has yielded a critical practical legacy. Its emphasis on the need for rigorous experimentation and carefully defined variables has influenced most areas of psychology. Although behaviorists have conducted much basic research with nonhuman animals, the principles of behaviorism have been widely applied to human problems. Behaviorist principles have yielded a more humane approach to educating children (through the use of positive reinforcement rather than punishment), new therapies for modifying behavior disorders, and guidelines for creating model utopian communities.

The Humanistic Perspective Humanistic psychology emerged in the 1950s as an alternative to the psychodynamic and the behaviorist models. According to the **humanistic perspective**, people are neither driven by the powerful, instinctive forces postulated by the Freudians nor manipulated by their environments, as proposed by the behaviorists. Instead, people are active creatures who are innately good and capable of choice. Humanistic psychologists study behavior, but not by reducing it to components, elements, and variables in laboratory experiments. Instead, they look for patterns in people's life histories.

The humanistic perspective suggests that the main task for humans is to strive for positive development. For example, **Carl Rogers** (1902–1987) emphasized that individuals have a natural tendency toward psychological growth and health—a process that is aided by the positive regard of those who surround them. **Abraham Maslow** (1908–1970) coined the term *self-actualization* to refer to each individual's drive toward the fullest development of his or her potential. In addition, Rogers, Maslow, and their colleagues defined a perspective that strives to deal with the whole person, practicing a *holistic* approach to human psychology. They believed that true understanding requires integrating knowledge of the individual's mind, body, and behavior with an awareness of social and cultural forces.

The humanistic approach expands the realm of psychology to include valuable lessons from the study of literature, history, and the arts. In this manner, psychology becomes a more complete discipline. Humanists suggest that their view is the yeast that helps psychology rise above its focus on negative forces and on the animal-like aspects of humanity. As we shall see in Chapter 15, the humanistic perspective had a major impact on the development of new approaches to psychotherapy.

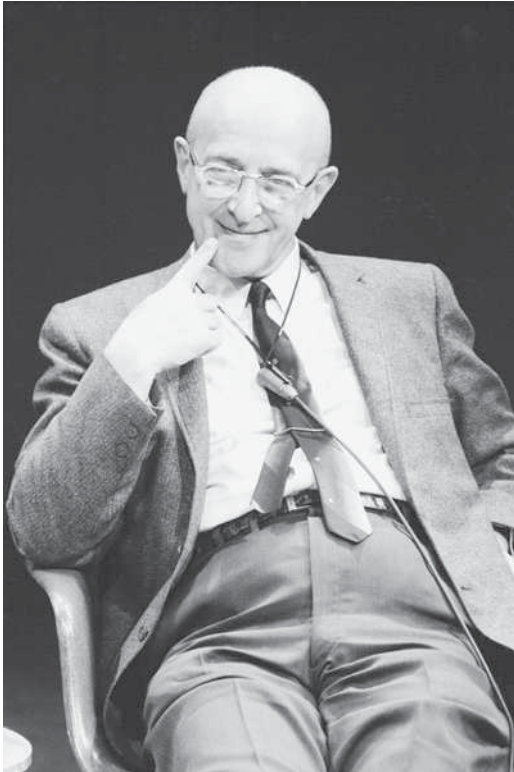
The Cognitive Perspective The cognitive revolution in psychology emerged as another challenge to the limits of behaviorism. The centerpiece of the **cognitive perspective** is human

behaviorist perspective The psychological perspective primarily concerned with observable behavior that can be objectively recorded and with the relationships of observable behavior to environmental stimuli.

behaviorism A scientific approach that limits the study of psychology to measurable or observable behavior.

humanistic perspective A psychological model that emphasizes an individual's phenomenal world and inherent capacity for making rational choices and developing to maximum potential.

cognitive perspective The perspective on psychology that stresses human thought and the processes of knowing, such as attending, thinking, remembering, expecting, solving problems, fantasizing, and consciousness.



Carl Rogers provided foundational ideas for the humanistic perspective. Why did Rogers place an emphasis on positive regard?

thought and all the processes of knowing—attending, thinking, remembering, and understanding. From the cognitive perspective, people act because they think, and people think because they are human beings, exquisitely equipped to do so.

According to the cognitive model, behavior is only partly determined by preceding environmental events and past behavioral consequences, as behaviorists believe. Some of the most significant behavior emerges from totally novel ways of thinking, not from predictable ways used in the past. Consider how children learn their native language. In his book *Verbal Behavior* (1957), B. F. Skinner suggested that children acquire language through ordinary processes of learning. **Noam Chomsky** (b. 1928) helped originate the cognitive perspective by arguing forcefully against Skinner's claim. Chomsky asserted that even children are able to produce utterances that fall outside the bounds of their previous experience. In his own research with children, the Swiss researcher **Jean Piaget** (1896–1980) used a series of mental tasks to demonstrate qualitative changes over the course of cognitive development. To explain children's growing sophistication, Piaget made reference to children's inner cognitive states.

Cognitive psychologists study higher mental processes such as perception, memory, language use, thinking, problem solving, and decision making at a variety of levels. Cognitive psychologists view thoughts as both results and causes of overt actions. Feeling regret when you've hurt someone is an example of thought as a result. But apologizing for your actions after feeling regret is an example of thought as a cause of behavior.

Within the cognitive perspective, an individual responds to reality not as it is in the objective world of matter but as it is in the *subjective reality* of the individual's inner world of thoughts and imagination. Because of its focus on mental processes, many researchers see the cognitive perspective as the dominant approach in psychology today.

The Biological Perspective The **biological perspective** guides psychologists who search for the causes of behavior in the functioning of genes, the brain, the nervous system, and the endocrine system. An organism's functioning is explained in terms of underlying physical structures and biochemical processes. Experience and behaviors are largely understood as the result of chemical and electrical activities taking place within and between nerve cells.

Researchers who take the biological perspective generally assume that psychological and social phenomena can be ultimately understood in terms of biochemical processes: Even the most complex phenomena can be understood by analysis, or reduction, into ever smaller, more specific units. They might, for example, try to explain how you are reading the words of this sentence with respect to the exact physical processes in cells in your brain. According to this perspective, behavior is determined by physical structures and hereditary processes. Experience can modify behavior by altering these underlying biological structures and processes. Researchers might ask, "What changes in your brain occurred while you learned to read?" The task of psychobiological researchers is to understand behavior at the most precise level of analysis.

Many researchers who take the biological perspective contribute to the multidisciplinary field of **behavioral neuroscience**. Neuroscience is the study of brain function; behavioral neuroscience attempts to understand the brain processes underlying behaviors such as sensation, learning, and emotion. The advances in the brain-imaging techniques highlighted in Chapter 3 have led to dramatic breakthroughs in the field of **cognitive neuroscience**. Cognitive neuroscience trains a multidisciplinary research focus on the brain bases of higher cognitive functions such as memory and language. As you shall see, brain-imaging techniques allow the biological perspective to be extended into a broad range of human experience. 👁

The Evolutionary Perspective The **evolutionary perspective** seeks to connect contemporary psychology to a central idea of the life sciences, Charles Darwin's theory of evolution by natural selection. The idea of natural selection is quite simple:

.....
 👁 **Watch the Video** *Developmental Cognitive Neuroscience: Adele Diamond on MyPsychLab*

biological perspective The approach to identifying causes of behavior that focuses on the functioning of genes, the brain, the nervous system, and the endocrine system.

behavioral neuroscience A multidisciplinary field that attempts to understand the brain processes that underlie behavior.

cognitive neuroscience A multidisciplinary field that attempts to understand the brain processes that underlie higher cognitive functions in humans.

evolutionary perspective The approach to psychology that stresses the importance of behavioral and mental adaptiveness, based on the assumption that mental capabilities evolved over millions of years to serve particular adaptive purposes.

Those organisms that are better suited to their environments tend to produce offspring (and pass on their genes) more successfully than those organisms with poorer adaptations. Over many generations, the species changes in the direction of the privileged adaptation. The evolutionary perspective in psychology suggests that *mental abilities* evolved over millions of years to serve particular adaptive purposes, just as physical abilities did.

To practice evolutionary psychology, researchers focus on the environmental conditions in which the human brain evolved. Humans spent 99 percent of their evolutionary history as hunter-gatherers living in small groups during the Pleistocene era (the roughly 2-million-year period ending 10,000 years ago). Evolutionary psychology uses the rich theoretical framework of evolutionary biology to identify the central adaptive problems that faced this species: avoiding predators and parasites, gathering and exchanging food, finding and retaining mates, and raising healthy children. After identifying the adaptive problems that these early humans faced, evolutionary psychologists generate inferences about the sorts of mental mechanisms, or psychological adaptations, that might have evolved to solve those problems.

Evolutionary psychology differs from other perspectives most fundamentally in its focus on the extremely long process of evolution as a central explanatory principle. Evolutionary psychologists, for example, attempt to understand the different sex roles assumed by men and women as products of evolution, rather than as products of contemporary societal pressures. Because evolutionary psychologists cannot carry out experiments that vary the course of evolution, they must be particularly inventive to provide evidence in favor of their theories.

The Sociocultural Perspective Psychologists who take a **sociocultural perspective** study *cross-cultural* differences in the causes and consequences of behavior. The sociocultural perspective is an important response to the criticism that psychological research has too often been based on a Western conception of human nature and had as its subject population mostly white middle-class Americans (Arnett, 2008; Gergen et al., 1996). A proper consideration of cultural forces may involve comparisons of groups within the same national boundaries. For example, researchers may look within the United States to compare the prevalence of eating disorders for women of different races (see Chapter 11). Cultural forces may also be assessed across nationalities, as in comparisons of media reports in the United States and Japan (see Chapter 16). Cross-cultural psychologists want to determine whether the theories researchers have developed apply to all humans, or only to more narrow, specific populations.

A cross-cultural perspective can be brought to bear on almost every topic of psychological research: Are people's perceptions of the world affected by culture? Do the languages people speak affect the way they experience the world? How does culture affect the way children develop toward adulthood? How do cultural attitudes shape the experience of old age? How

does culture affect our sense of self? Does culture influence an individual's likelihood to engage in particular behaviors? Does culture affect the way individuals express emotions? Does culture affect the rates at which people suffer from psychological disorders?

By asking these types of questions, the sociocultural perspective often yields conclusions that directly challenge those generated from the other perspectives. Researchers have claimed, for example, that many aspects of Freud's psychodynamic theories cannot apply to cultures that are very different from Freud's Vienna. This concern was raised as early as 1927 by the anthropologist Bronislaw Malinowski (1927), who soundly critiqued Freud's father-centered theory by describing the family practices of the Trobriand Islanders of New Guinea, for whom family authority resided with mothers rather than with fathers. The sociocultural perspective, therefore, suggests that some universal claims of the psychodynamic perspective are incorrect. The sociocultural perspective poses a continual, important challenge to generalizations about human experience that ignore the diversity and richness of culture.



Bronislaw Malinowski documented the important roles women play in the culture of the Trobriand Islands. Why is cross-cultural research critical to the search for universal psychological principles?

.....
sociocultural perspective The psychological perspective that focuses on cross-cultural differences in the causes and consequences of behavior.

Table 1.1 • Comparison of Seven Perspectives on Psychology

Perspective	Focus of Study	Primary Research Topics
Psychodynamic	Unconscious drives Conflicts	Behavior as overt expression of unconscious motives
Behaviorist	Specific overt responses	Behavior and its stimulus causes and consequences
Humanistic	Human experience and potentials	Life patterns Values Goals
Cognitive	Mental processes Language	Inferred mental processes through behavioral indicators
Biological	Brain and nervous system processes	Biochemical basis of behavior and mental processes
Evolutionary	Evolved psychological adaptations	Mental mechanisms in terms of evolved adaptive functions
Sociocultural	Cross-cultural patterns of attitudes and behaviors	Universal and culture-specific aspects of human experience

Comparing Perspectives: Focus on Aggression Each of the seven perspectives rests on a different set of assumptions and leads to a different way of looking for answers to questions about behavior. **Table 1.1** summarizes the perspectives. As an example, let's briefly compare how psychologists using these models might deal with the question of why people act aggressively. All of the approaches have been used in the effort to understand the nature of aggression and violence. For each perspective, here are examples of the types of claims researchers might make and experiments they might undertake:

- *Psychodynamic.* Analyze aggression as a reaction to frustrations caused by barriers to pleasure, such as unjust authority. View aggression as an adult's displacement of hostility originally felt as a child against his or her parents.
- *Behaviorist.* Identify reinforcements of past aggressive responses, such as extra attention given to a child who hits classmates or siblings. Assert that children learn from physically abusive parents to be abusive with their own children.
- *Humanistic.* Look for personal values and social conditions that foster self-limiting, aggressive perspectives instead of growth-enhancing, shared experiences.
- *Cognitive.* Explore the hostile thoughts and fantasies people experience while witnessing violent acts, noting both aggressive imagery and intentions to harm others. Study the impact of violence in films and videos, including pornographic violence, on attitudes toward gun control, rape, and war.
- *Biological.* Study the role of specific brain systems in aggression by stimulating different regions and then recording any destructive actions that are elicited. Also analyze the brains of mass murderers for abnormalities; examine female aggression as related to phases of the menstrual cycle.
- *Evolutionary.* Consider what conditions would have made aggression an adaptive behavior for early humans. Identify psychological mechanisms capable of selectively generating aggressive behavior under those conditions.

- *Sociocultural.* Consider how members of different cultures display and interpret aggression. Identify how cultural forces affect the likelihood of different types of aggressive behavior.

From this example of aggression, you can see how the different perspectives conspire to provide a full understanding of particular domains of psychological research. In contemporary psychology, most research is informed by multiple perspectives. Throughout *Psychology and Life*, you will see how new theories often emerge from combinations of different perspectives. In addition, technological advances have made it easier for researchers to combine perspectives. For example, the innovative brain-imaging techniques you'll learn about in Chapter 3 allow researchers to bring a biological perspective to topics as varied as language processing (Chapter 8) and personality differences (Chapter 13). Moreover, developments such as the Internet have made it easier for researchers to collaborate across the globe. They can bring a sociocultural perspective to topics as diverse as moral reasoning (Chapter 10) and people's body images (Chapter 11). Psychology's diversity of perspectives helps researchers think creatively about core topics of human experience.

Stop and Review

- ① What are the central concerns of the structuralist and functionalist approaches?
- ② What conclusions did Helen Thompson Wooley draw about differences between the sexes?
- ③ How do the psychodynamic and behaviorist perspectives conceptualize the forces that shape people's actions?
- ④ What is the purpose of cognitive neuroscience?
- ⑤ How do the evolutionary perspective and sociocultural perspective complement each other?

✓—[Study and Review on MyPsychLab

WHAT PSYCHOLOGISTS DO

You now know enough about psychology to formulate questions that span the full range of psychological inquiry. If you prepared such a list of questions, you would be likely to touch on the areas of expertise of the great variety of individuals who call themselves psychologists. **Table 1.2** provides my own version of such questions and indicates what sort of psychologist might address each one.

As you examine the table, you will note the great many subfields within the profession of psychology. Some of the labels the field uses tell you about the major content of a psychologist's expertise. For example, *cognitive psychologists* focus on basic cognitive processes such as memory and language; *social psychologists* focus on the social forces that shape people's attitudes and behavior. Some of the labels identify the domains in which psychologists apply their expertise. For example, *industrial-organizational psychologists* focus their

Table 1.2 • The Diversity of Psychological Inquiry

The Question	Who Addresses It?	Focus of Research and Practice
How can people cope better with day-to-day problems?	Clinical psychologists Counseling psychologists Community psychologists Psychiatrists	Study the origins of psychological disorders and day-to-day problems to evaluate treatment options; provide diagnosis and treatment of psychological disorders and other issues of personal adjustment
How can I cope with the aftereffects of a stroke?	Rehabilitation psychologists	Provide assessment and counseling for people with illnesses or disabilities; offer coping strategies and education to affected individuals, caretakers, employers, and community members
How do memories get stored in the brain?	Biological psychologists Psychopharmacologists	Study the biochemical bases of behavior, feelings, and mental processes
How can you teach a dog to follow commands?	Experimental psychologists Behavior analysts	Use laboratory experiments, often with nonhuman participants, to study basic processes of learning, sensation, perception, emotion, and motivation
Why can't I always recall information I'm sure I know?	Cognitive psychologists Cognitive scientists	Study mental processes such as memory, perception, reasoning, problem solving, decision making, and language use
What makes people different from one another?	Personality psychologists Behavioral geneticists	Develop tests and theories to understand differences in personalities and behaviors; study the influence of genetics and environments on those differences
How does peer pressure work?	Social psychologists	Study how people function in social groups as well as the processes by which people select, interpret, and remember social information
What do babies know about the world?	Developmental psychologists	Study the changes that occur in the physical, cognitive, and social functioning of individuals across the life span; study the influence of genetics and environments on those changes
Why does my job make me feel so depressed?	Industrial-organizational psychologists Human factors psychologists	Study the factors that influence performance and morale in the general workplace or on particular tasks; apply those insights in the workplace
How should teachers deal with disruptive students?	Educational psychologists School psychologists	Study how to improve aspects of the learning process; help design school curricular, teaching-training, and child-care programs
Why do I get sick before every exam?	Health psychologists	Study how different lifestyles affect physical health; design and evaluate prevention programs to help people change unhealthy behaviors and cope with stress
Was the defendant insane when she committed the crime?	Forensic psychologists	Apply psychological knowledge to human problems in the field of law enforcement
Why do I always choke during important basketball games?	Sports psychologists	Assess the performance of athletes and use motivational, cognitive, and behavioral principles to help them achieve peak performance levels
How can I make sense of all the numbers people throw at me?	Quantitative psychologists Psychometricians	Develop and evaluate new statistical methods; construct and validate measurement tools
How accurately can psychologists predict how people will behave?	Mathematical psychologists	Develop mathematical expressions that allow for precise predictions about behavior and tests of contrasting psychological theories

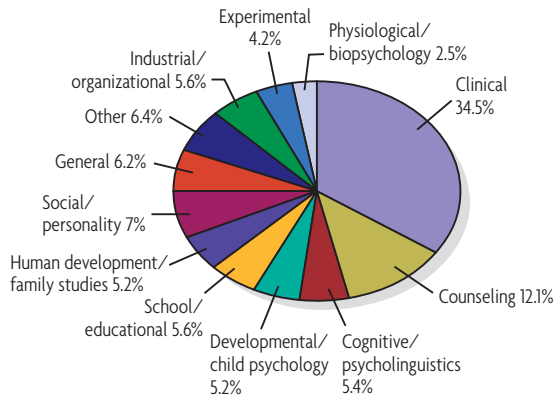


FIGURE 1.2 Distribution of Degrees to Subfields of Psychology

In 2009, roughly 3,500 people received PhDs in the many subfields of psychology (National Science Foundation, 2010). Although the largest percentage of those degrees went to individuals pursuing careers in clinical psychology, students also received advanced training in several other areas of basic and applied research.

efforts on improving people’s adjustment in the workplace; *school psychologists* focus on students’ adjustment in educational settings.

Each type of psychologist achieves a balance between *research*—seeking new insights—and *application*—putting those insights to use in the world. There’s a necessary relationship between those two types of activities. For example, we often think of *clinical psychologists* largely as individuals who apply psychological knowledge to better people’s lives. However, as you will see in Chapters 14 and 15, clinical psychologists also have important research functions. Contemporary research continues to improve our understanding of the distinctions among psychological disorders and the treatments that best ease patients’ distress. **Figure 1.2** provides information about



Developmental psychologists may use puppets or other toys in their study of how children behave, think, or feel. Why might it be easier for a child to express his or her thoughts to a puppet than to an adult?

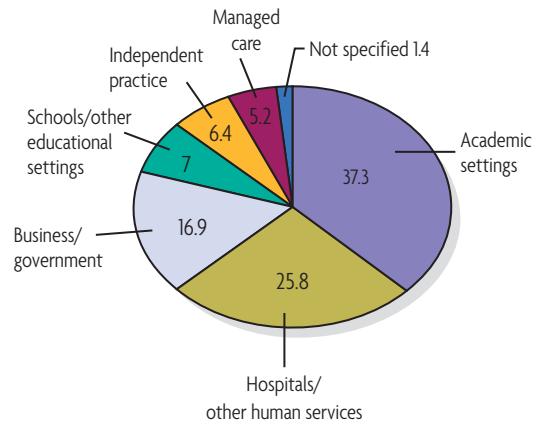


FIGURE 1.3 Work Settings for Psychologists

Shown are percentages of psychologists working in particular settings, according to a survey of American Psychological Association (APA) members holding doctoral degrees in psychology.

the numbers of people who pursue PhDs across psychology’s many subfields.

Take a look back at Table 1.2. This list of questions illustrates why psychology has so many divisions. Did these questions capture your own concerns? If you have the time, make a list of your own questions. Cross off each question as *Psychology and Life* answers it. If, at the end of the course, you still have unanswered questions, please contact me! (My e-mail address can be found in the preface.) ✱

Have you begun to wonder exactly how many practicing psychologists there are in the world? Surveys suggest the number is well over 500,000. **Figure 1.3** gives you an idea of the distribution of settings in which psychologists function. Although the percentage of psychologists in the population is greatest in Western industrialized nations, interest in psychology continues to increase in many countries. The International Union of Psychological Science draws together member organizations from 71 countries (Ritchie, 2010). The American Psychological Association (APA), an organization that includes psychologists from all over the world, has over 150,000 members. A second international organization, the Association for Psychological Science (APS), with about 23,000 members, focuses more on scientific aspects of psychology and less on the clinical, or treatment, side.

Stop and Review

- ① What is the relationship between research and application?
- ② In what two settings are most psychologists employed?

✓ Study and Review on **MyPsychLab**

✱ Explore the **Concept Psychologists at Work** on **MyPsychLab**

Psychology in Your Life

IN WHAT WAYS DO PSYCHOLOGISTS PARTICIPATE IN THE LEGAL SYSTEM?

An important lesson of *Psychology and Life* is that empirical research provides psychologists with a broad range of expertise. As the text unfolds, you'll have a good many opportunities to see how research results apply to important issues in everyday life. You'll also see how psychological expertise functions in the public forum. As an initial example, let's consider how *forensic psychologists* become involved in important legal decisions.

The legal system relies on forensic psychologists to provide assessments for both civil and criminal proceedings (Packer, 2008). On the civil side, for example, forensic psychologists provide evidence that influences decisions about child custody in divorce hearings. They might also testify about the potential psychological harm workers have sustained in a particular place of employment. On the criminal side, forensic psychologists evaluate people's capacity to understand the acts they have committed and their competence to stand trial. Forensic psychologists also assess whether individuals are a danger to themselves or others. Let's examine that last role more closely.

Suppose that a person is sent to prison for committing a violent crime. After having served some time, he or she arrives at a parole hearing. An important consideration at that hearing will be what lies in the prisoner's future. What is the likelihood that violent acts will occur again?

In recent years, psychologists have attempted to provide increasingly research-based answers to that question (Fabian, 2006). This research often begins with a theoretical analysis

of the life factors that make violence more or less likely. Researchers make an important distinction between *static* and *dynamic* factors (Douglas & Skeem, 2005). Static factors are those that are relatively stable over time (such as gender and age at first conviction); dynamic variables are those that may change over time (such as emotional control and substance abuse). The inclusion of dynamic factors suggests how risk changes over time. Past history alone does not provide a valid indication of how a person will behave in the future. It's also important to measure the trajectory of a person's life.

Researchers must provide evidence that risk assessment devices are successful at predicting future violence (Singh et al., 2011; Yang et al., 2010). To do so, researchers often follow groups of individuals over time. For example, Wong and Gordon (2006) evaluated 918 adult male offenders who were incarcerated in the Canadian provinces of Alberta, Saskatchewan, and Manitoba. Each participant was evaluated with the Violence Risk Scale (VRS), which measures six static and 20 dynamic variables. To evaluate the validity of the VRS, the researchers followed their participants over several years, to see how often they were convicted of new crimes after they had been released into the community. In both the short term (after 1 year) and the longer term (after 4.4 years), men who had obtained higher ratings on the VRS were more likely to be convicted of additional violent crimes.

Research results of this sort are quite important because they help forensic psychologists provide more accurate guidance for legal judgments.

HOW TO USE THIS TEXT

You are about to embark on an intellectual journey through the many areas of modern psychology. As you begin, I want to share with you some important information that will help guide your adventures. "The journey" is a metaphor used throughout *Psychology and Life*; your teacher serves as the tour director, the text as your tour book, and your author as your personal tour guide. The goal of this journey is for you to discover what is known about the most incredible phenomena in the entire universe: the brain, the human mind, and the behavior of all living creatures. Psychology is about understanding the seemingly mysterious processes that give rise to your thoughts, feelings, and actions.

This guide offers general strategies and specific suggestions about how to use this book to get the quality grade you deserve for your performance and to get the most from your introduction to psychology.

Study Strategies

1. *Set aside sufficient time* for your reading assignments and review of class notes. This text contains much new technical information, many principles to learn, and a new glossary of terms to memorize. To master this material, you will need at least three hours of reading time per chapter.
2. *Keep a record of your study time* for this course. Plot the number of hours (in half-hour intervals) you study at each reading session. Chart your time investment on a cumulative graph. Add each new study time to the previous total on the left-hand axis of the graph and each study session on the baseline axis. The chart will provide visual feedback of your progress and show you when you have not been hitting the books as you should.
3. *Be an active participant.* Optimal learning occurs when you are actively involved with the learning materials. That means reading attentively, listening to lectures mindfully,

paraphrasing in your own words what you are reading or hearing, and taking good notes. In the text, underline key sections, write notes to yourself in the margins, and summarize points that you think might be included on class tests.

4. *Space out your studying.* Research in psychology tells us that it is more effective to do your studying regularly rather than cramming just before tests. If you let yourself fall behind, it will be difficult to catch up with all the information included in introductory psychology at last-minute panic time.
5. *Get study-centered.* Find a place with minimal distractions for studying. Reserve that place for studying, reading, and writing course assignments—and do nothing else there. The place will come to be associated with study activities, and you will find it easier to work whenever you are seated at your study center.

Take the teacher's perspective, anticipating the kinds of questions she or he is likely to ask and then making sure you can answer them. Find out what kinds of tests you will be given in this course—essay, fill-in, multiple-choice, or true/false. That form will affect the extent to which you focus on the big ideas and/or on details. Essays and fill-ins ask for recall-type memory; multiple-choice and true/false tests ask for recognition-type memory.

Study Techniques

This section gives you specific advice about a technique you can use to learn the material for this course and your other courses. The technique emerged from principles of human memory you will encounter in Chapter 7. It is called *PQ4R* from the initials of the six phases it suggests for effective study: Preview, Question, Read, Reflect, Recite, and Review (Thomas & Robinson, 1972).

1. *Preview.* Skim through the chapter to get a general sense of the topics the chapter will discuss. Make yourself aware of the organization and major topics. Read the section headings and scan the photos and figures. In fact, your first stop for each chapter should be the section "Recapping Main Points." There you will find the main ideas of the chapter organized under each of the first-level headings, which will give you a clear sense of what the chapter covers.

2. *Question.* For each section, make up questions. You should use the section headings and key terms to help you. For example, you might transform the heading "The Goals of Psychology" into the question "What are the goals of psychology?" You might use the key term *biological perspective* to generate the question, "What is the major focus of the biological perspective?" These questions will help direct your attention as you read.
3. *Read.* Read the material carefully so that you are able to answer the questions you invented.
4. *Reflect.* As you read the text, reflect on it to relate the material to your prior knowledge about the topics. Think of extra examples to enrich the text. Try to link the ideas together across the subsections.
5. *Recite.* After you have read and reflected on a section, try to demonstrate your recall of the material as concretely as possible. For example, answer the questions you invented earlier by producing the material out loud. For later review, write down the ideas you find difficult to remember.
6. *Review.* After you have read the entire chapter, review the key points. If you are unable to recall important points, or you cannot answer the questions you invented, consult the book and repeat the earlier phases (read, reflect, and recite).

Take a moment now to use PQ4R for one of the earlier sections of this chapter to see how each phase works. It will take you some time to master the flow of PQ4R. Make that investment at the beginning of the semester.

You are now prepared to take full advantage of *Psychology and Life*. Let's make your journey through this text worthwhile, full of memorable moments and unexpected pleasures!

Stop and Review

- ① What does it mean to be an active participant in a course?
- ② What is the relationship between the *Question* and *Read* phases of PQ4R?
- ③ What is the purpose of the *Recite* phase of PQ4R?

✓ [Study and Review on MyPsychLab]

Recapping Main Points

What Makes Psychology Unique?

- Psychology is the scientific study of the behavior and the mental processes of individuals.
- The goals of psychology are to describe, explain, predict, and help control behavior.

The Evolution of Modern Psychology

- Structuralism emerged from the work of Wundt and Titchener. It emphasized the structure of the mind and behavior built from elemental sensations.

- Functionalism, developed by James and Dewey, emphasized the purpose behind behavior.
- Taken together, these theories created the agenda for modern psychology.
- Women made substantial research contributions in psychology's early history.
- Each of the seven perspectives on psychology differs in its view of human nature, the determinants of behavior, the focus of study, and the primary research approach.

- The psychodynamic perspective looks at behavior as driven by instinctive forces, inner conflicts, and conscious and unconscious motivations.
- The behaviorist perspective views behavior as determined by external stimulus conditions.
- The humanistic perspective emphasizes an individual's inherent capacity to make rational choices.
- The cognitive perspective stresses mental processes that affect behavioral responses.
- The biological perspective studies relationships between behavior and brain mechanisms.
- The evolutionary perspective looks at behavior as having evolved as an adaptation for survival in the environment.
- The sociocultural perspective examines behavior and its interpretation in cultural context.

KEY TERMS

behavior (p. 2)
 behavioral data (p. 3)
 behavioral neuroscience (p. 11)
 behaviorism (p. 10)
 behaviorist perspective (p. 10)
 biological perspective (p. 11)

cognitive neuroscience (p. 11)
 cognitive perspective (p. 10)
 evolutionary perspective (p. 11)
 functionalism (p. 7)
 Gestalt psychology (p. 7)
 humanistic perspective (p. 10)

introspection (p. 7)
 psychodynamic perspective (p. 9)
 psychology (p. 2)
 scientific method (p. 2)
 sociocultural perspective (p. 12)
 structuralism (p. 7)

What Psychologists Do

- Psychologists work in a variety of settings and draw on expertise from a range of specialty areas.
- Almost any question that can be generated about real-life experiences is addressed by some member of the psychological profession.

How to Use This Text

- Devise concrete strategies for determining how much study time you need and how to distribute the time most efficiently.
- Take an active approach to your lectures and the text. The PQ4R method provides six phases—Preview, Question, Read, Reflect, Recite, and Review—for enhanced learning.

Chapter 1 • Practice Test

1. The definition of psychology focuses on both _____ and _____.
 - a. behaviors; structures
 - b. behaviors; mental processes
 - c. mental processes; functions
 - d. mental processes; structures
 2. To what goal of psychology is “level of analysis” most relevant?
 - a. explaining what happens
 - b. describing what happens
 - c. predicting what will happen
 - d. controlling what happens
 3. If you want to _____ what will happen, you first must be able to _____ what will happen.
 - a. describe; explain
 - b. describe; control
 - c. control; predict
 - d. explain; predict
 4. While watching a horror film, Betty suppressed her emotions but Hilda did not. You would expect Betty to eat _____ comfort food than Hilda and _____ non-comfort food.
 - a. more; the same amount of
 - b. more; less
 - c. the same amount of; more
 - d. less; more
 5. Who founded the first laboratory that was devoted to experimental psychology?
 - a. William James
 - b. Wilhelm Wundt
 - c. Max Wertheimer
 - d. John Dewey
 6. A researcher tells you that her main goal is to understand mental experiences as the combination of basic components. It is most likely that she finds the historical roots of her research in
 - a. functionalism.
 - b. the humanist perspective.
 - c. structuralism.
 - d. the evolutionary perspective.
 7. Who was the first woman to serve as president of the American Psychological Association?
 - a. Margaret Washburn
 - b. Anna Freud
 - c. Jane Goodall
 - d. Mary Calkins
 8. Two professors at universities in Boston and Mumbai are collaborating on a research project to determine how their students in the United States and India respond to the same reasoning problems. It's likely that they take a _____ perspective in their research.
 - a. humanistic
 - b. sociocultural
 - c. biological
 - d. psychodynamic
 9. The _____ perspective draws on the ways in which human mental abilities serve adaptive purposes.
 - a. cognitive
 - b. humanistic
 - c. evolutionary
 - d. sociocultural
 10. When you're home with the flu, you spend a lot of time watching CourtTV. You weren't surprised to see a _____ psychologist testifying during a trial.
 - a. health
 - b. social
 - c. forensic
 - d. developmental
 11. What type of question would a cognitive psychologist be likely to ask?
 - a. Why do children sometimes have imaginary friends?
 - b. Why do some students get sick every time they have a major exam?
 - c. How can we design a keyboard for a computer that allows people to type more quickly?
 - d. How are bilingual individuals able to switch between their two languages?
 12. Which type of psychologist is *least* likely to focus on genetic aspects of human psychology?
 - a. industrial–organizational psychologists
 - b. developmental psychologists
 - c. personality psychologists
 - d. biological psychologists
 13. Individuals with advanced degrees in psychology are most likely to be working in
 - a. academic settings.
 - b. hospitals and clinics.
 - c. business and government.
 - d. independent practice.
 14. In assessments of violence risk, _____ counts as a dynamic factor.
 - a. gender
 - b. substance abuse
 - c. stability of family upbringing
 - d. age at first conviction
 15. In what phase of P4QR should you try to relate the textbook material to your prior knowledge about a topic?
 - a. Reflect
 - b. Recite
 - c. Review
 - d. Question
- ## ESSAY QUESTIONS
1. With respect to the goals of psychology, why is it appropriate to characterize psychologists as “rather optimistic”?
 2. Why is it often good to consider the same research question from several of psychology's seven perspectives?
 3. Why does the field of psychology include both research and application?