## Unit Overview

Students often have preconceptions about what psychologists do. They will likely think that psychologists only listen to people's problems or analyze dreams. Although some psychologists do these things, they also study the mechanisms of memory, the importance of sleep, the effects of drug use and abuse, or the biology of depression. Studying this unit will help students expand their view of what psychology is and what psychologists do.

Unit I examines the history of psychology and the research methodologies psychologists use to study behavior and mental processes. Some key ideas explored in this unit include the following:

- The ways in which psychology has developed into a scientific discipline
- The important scientists and thinkers who have been influential in the development of psychology as a science
- The enduring questions psychologists seek to answer
- The levels of scientific analysis psychologists use to answer questions and explore issues
- The specific subfields that have evolved to study different types and genres of behavior and mental processes

## Alignment to AP® Course Description

**Topic 1: History and Approaches (2–4% of AP® Examination)**

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Unit Resources

Module 1

STUDENT ACTIVITIES
• Fact or Falsehood?
• Psychologist as Scientist
• The 20th Century’s Most Eminent Psychologists
• Psychology as Science (PAS) Scale

FLIP IT VIDEOS
• Structuralism vs. Functionalism

Module 2

TEACHER DEMONSTRATIONS
• Complementary Perspectives

STUDENT ACTIVITIES
• Fact or Falsehood?
• Self-Assessment on Some of Psychology’s Big Issues
• Illustrating Psychology’s Complementary Perspectives: The Case of Andrea Yates
• Is Human Nature Fixed or Changeable?
• Eliciting “Metaphors” for Learning and Teaching

Module 3

STUDENT ACTIVITIES
• Fact or Falsehood?
• Psychology’s Role in Basic Science Research
• The Scientific Approach
• Interviewing a Psychologist
• Psychology’s Applied Research
For people whose exposure to psychology comes from news stories and TV, psychologists seem to analyze personality, offer counseling, dispense child-rearing advice, examine crime scenes, and testify in court. Do they? Yes, and much more. Consider some of psychology’s research questions, which you will be learning more about in this text.

- Have you ever found yourself reacting to something as one of your biological parents would—perhaps in a way you vowed you never would—and then wondered how much of your personality you inherited? To what extent do genes predispose our person-to-person differences in personality? To what extent do home and community environments shape us?

- Have you ever worried about how to act among people of a different culture, race, gender, or sexual orientation? In what ways are we alike as members of the human family? How do we differ?

- Have you ever awakened from a nightmare and, with a wave of relief, wondered why you had such a crazy dream? How often, and why, do we dream?

- Have you ever played peekaboo with a 6-month-old and wondered why the baby finds the game so delightful? The infant reacts as though, when you momentarily move behind a door, you actually disappear—only to reappear out of thin air. What do babies actually perceive and think?
Have you ever wondered what fosters school and work success? Are some people just born smarter? And does sheer intelligence explain why some people get richer, think more creatively, or relate more sensitively?

Have you ever become depressed or anxious and wondered whether you'll ever feel “normal”? What triggers our bad moods—and our good ones? Where is the line between a normal mood swing and a psychological disorder for which someone should seek help?

Have you ever wondered how the Internet, video games, and electronic social networks affect people? How do today’s electronic media influence how we think and how we relate?

Psychology is a science that seeks to answer such questions about us all—how and why we think, feel, and act as we do.

Discussion Starter

Start off the class by using Module 1 Fact or Falsehood? from the TRM. The Fact or Falsehood? activities present students with statements that they must decide are either true or false. The statements tap into common beliefs and misconceptions about psychology. This activity may help students understand the module as they read.

Discussion Starter

This exercise helps many students to realize that their view of the discipline is too narrow and sets the tone for a course oriented toward psychological science. Ask students to write the name of “an eminent psychologist from the past” and “a living eminent psychologist and the work for which s/he is known” on an index card. Collect and read the responses. By the time you get to the 10th or so Freud, the class will be chuckling. Most students will leave the 2nd name blank. Tell students that psychologists do not consider Freud to be the father of psychology and most have real concerns about the scientific validity of his theory and method.


Teaching Tip

Have the students keep a running list of eminent psychologists they learn about as they work through this unit. They may be surprised at finding 13 names in Unit I alone!
TEACH
Teaching Tip
Students need to expand their definitions of psychology beyond the therapist and a couch. Emphasize that psychology is a wide-ranging discipline that can encompass any aspect of human and nonhuman behavior. All the questions Myers poses here represent only the tip of the iceberg when it comes to the range of topics studied in psychology.

TEACH
Interdisciplinary Connections
Have students read some key philosophical texts to understand how philosophers tried to address basic questions in psychology. Students can report about Plato’s “Allegory of the Cave” or Aristotle’s “On Memory and Reminiscence” to compare how modern psychology has evolved from these early philosophical contemplations on behavior and mental processes.

TEACH
Teaching Tip
Descartes promoted a concept called “dualism,” in which the mind and body were separate. In contrast, Aristotle promoted the idea of “monism,” in which the mind and body are inseparable. Have students discuss whether either idea has merit in light of today’s ideas in cognitive neuroscience.

Psychology’s Roots
Once upon a time, on a planet in this neighborhood of the universe, there came to be people. Soon thereafter, these creatures became intensely interested in themselves and in one another: “Who are we? What produces our thoughts? Our feelings? Our actions? And how are we to understand and manage those around us?”

Pre-Scientific Psychology
How did psychology develop from its pre-scientific roots in early understandings of mind and body to the beginnings of modern science?

We can trace many of psychology’s current questions back through human history. These early thinkers wondered: How does our mind work? How does our body relate to our mind? How much of what we know comes built in? How much is acquired through experience? In India, Buddha pondered how sensations and perceptions combine to form ideas. In China, Confucius stressed the power of ideas and of an educated mind. In ancient Israel, Hebrew scholars anticipated today’s psychology by linking mind and emotion to the body; people were said to think with their heart and feel with their bowels.

In ancient Greece, the philosopher-teacher Socrates (469–399 B.C.E.) and his student Plato (428–348 B.C.E.) concluded that mind is separable from body and continues after the body dies, and that knowledge is innate—born within us. Unlike Socrates and Plato, who derived principles by logic, Plato’s student Aristotle (384–322 B.C.E.) had a love of data. An intellectual ancestor of today’s scientists, Aristotle derived principles from careful observations. Moreover, he said knowledge is not preexisting (sorry, Socrates and Plato); instead it grows from the experiences stored in our memories.

The next 2000 years brought few enduring new insights into human nature, but that changed in the 1600s, when modern science began to flourish. With it came new theories of human behavior and new versions of the ancient debates. A frail but brilliant Frenchman named René Descartes (1595–1650) agreed with Socrates and Plato about the existence of innate ideas and mind’s being “entirely distinct from body” and able to survive its death. Descartes’ concept of mind forced him to conjecture, as people have ever since, how the immaterial mind and physical body communicate. A scientist as well as a philosopher, Descartes dissected animals and concluded that the fluid in the brain’s cavities contained “animal spirits.” These spirits, he surmised, flowed from the brain through what we call the nerves (which he thought were hollow) to the muscles, provoking movement. Memories formed as experiences opened pores in the brain into which the animal spirits also flowed.

Descartes was right that nerve paths are important and that they enable reflexes. Yet, genius though he was, and standing upon the knowledge accumulated from 99+ percent of our human history, he hardly had a clue of what today’s average 12-year-old knows. Indeed, most of the scientific story of our self-exploration—the story told in this book—has been written in the last historical eye-blink of human time.

Meanwhile, across the English Channel in Britain, science was taking a more down-to-earth form, centered on experiment, experience, and common-sense judgment. Francis Bacon (1561–1626) became one of the founders of modern science, and his influence lingers in the experiments of today’s psychological science. Bacon also was fascinated by the human mind and its failings. Anticipating what we have come to appreciate about our mind’s hunger to perceive patterns even in random events, he wrote that “the human
Psychological Science Is Born

What are some important milestones in psychology’s early development?

Philosophers’ thinking about thinking continued until the birth of psychology as we know it, on a December day in 1879, in a small, third-floor room at Germany’s University of Leipzig. There, two young men were helping an austere, middle-aged professor—Wilhelm Wundt, create an experimental apparatus. Their machine measured the time lag between people’s hearing a ball hit a platform and their pressing a telegraph key (Hunt, 1993). Curiously, people responded in about one-tenth of a second when asked to press the key as soon as they were consciously aware of perceiving the sound. (To be aware of one’s awareness takes a little longer.) Wundt was seeking to measure “atoms of the mind”—the fastest and simplest mental processes. So began the first psychological laboratory, staffed by Wundt and by psychology’s first graduate students. (In 1883, Wundt’s American student G. Stanley Hall went on to establish the first formal U.S. psychology laboratory, at Johns Hopkins University.)

Before long, this new science of psychology became organized into different branches, or schools of thought, each promoted by pioneering thinkers. These early schools included structuralism, functionalism, and behaviorism, described here (with more on behaviorism in Modules 26–30), and two schools described in later modules: Gestalt psychology (Module 19) and psychoanalysis (Module 55).

Wilhelm Wundt

Wundt established the first psychology laboratory at the University of Leipzig, Germany.

Online Activities

Have students find out what important events happened in psychology on their birthdays. Warren Street maintains a website where students can search for important events in psychology on any date. Have students create a poster detailing a few of the events that happened on their birthdays. Students can visit Today in the History of Psychology at www.cwv.edu/~warren/today.html.

Enrichment

An interesting story that you can tell students: The birth of modern psychology occurred in December 1879 in Leipzig, Germany. Wundt and 2 students—Max Friedrich, a German, and G. Stanley Hall, an American—set up an experiment on the 3rd floor of a shabby building called Konvikt (“hostel” or “retreat”). The 3 men intended to collect data for Friedrich’s dissertation on “the duration of apperception”—the time lag between the subject’s recognition that he has heard the ball hit a platform and his pressing of the telegraph key.


Teach

Interdisciplinary Connections

The idea of the tabula rasa has been influential in both science and politics. Discuss with students how the idea of a blank slate might inform one’s views about behavior.

Concept Connections

Connect John Locke’s idea of the tabula rasa with John B. Watson’s ideas (discussed on page 16) about behaviorism. Watson believed he could take any infant and raise the child in a chosen environment to create any type of person he might want. He believed environment was the main component of psychology, just as Locke believed.

Many students view psychologists as strictly mental health professionals and in some cases as teachers. Because of this, students are unaware of the large percentage of psychologists who conduct research. The TRM includes an easy but powerful activity to get students thinking about psychologists as scientists and considering their misconceptions of what a psychologist is. Please see Student Activity: Psychologist as Scientist in the TRM.
The different schools of thought that emerged in the early days of psychology’s evolution as a science can be confusing to students. Have students view the Flip it Video: Structuralism vs. Functionalism, provided on the companion website, to reinforce the differences among the early schools of thought. Students can also use this video to review and study for future tests on this topic.

Common Pitfalls
Structuralism and Functionalism, the two early schools of thought in psychology, are often confusing to students. Because these two concepts are less relevant to their later study of psychology, helping them appreciate the differences between them now will be useful at test time:

- Structuralism has its basis in Wundt’s European perspective. Titchener established this school based on his work as Wundt’s student in Germany.
- Functionalism is based on William James’ ideas about psychology having practical applications to life.
- Structuralists sought to identify what the mind and consciousness were.
- Functionalists sought to identify how the mind and consciousness worked.

Concept Connections
William James, whom many consider to be one of the fathers of psychology, developed a theory of emotion that is explained in more detail in Unit VIII. The James–Lange theory of emotion proposes that the physiological and cognitive experiences of emotion occur simultaneously. James developed the theory independently of Carl Lange, so they both share credit for the theory.

Thinking About the Mind’s Functions
Hoping to assemble the mind’s structure from simple elements was rather like trying to understand a car by examining its disconnected parts. Philosopher-psychologist William James thought it would be more fruitful to consider the evolved functions of our thoughts and feelings: Smelling is what the nose does; thinking is what the brain does. But why do the nose and brain do these things? Under the influence of evolutionary theorist Charles Darwin, James assumed that thinking, like smelling, developed because it was adaptive—it contributed to our ancestors’ survival. Consciousness serves a function. It enables us to consider our past, adapt to our present, and plan our future. As a functionalist, James encouraged explorations of down-to-earth emotions, memories, willpower, habits, and moment-to-moment streams of consciousness.

James’ greatest legacy, however, came less from his laboratory than from his Harvard teaching and his writing. When not plagued by ill health and depression, James was an impish, outgoing, and joyous man, who once recalled that “the first lecture on psychology I ever heard was the first I ever gave.” During one of his wise-cracking lectures, a student interrupted and asked him to get serious (Hunt, 1993). He loved his students, his family, and the world of ideas, but he tired of painstaking chores such as proofreading. “Send me no proofs!” he once told an editor. “I will return them unopened and never speak to you again” (Hunt, 1993, p. 145).

James displayed the same spank in 1890, when—over the objections of Harvard’s president—he admitted Mary Whiton Calkins into his graduate seminar (Scarborough & Furumoto, 1987). (In those years women lacked even the right to vote.) When Calkins joined, the other students (all men) dropped out. So James tutored her alone. Later, she finished all the requirements for a Harvard Ph.D., outscoring all the male students on the qualifying exams. Alas, Harvard denied her the degree she had earned, offering her instead a degree from Radcliffe College, its undergraduate sister school for women. Calkins resisted the unequal treatment and refused the degree. (More than a century
In psychology's early days, Wundt and Titchener focused on inner sensations, images, and feelings. James, too, engaged in introspective examination of the stream of consciousness and of emotion. Sigmund Freud emphasized the ways emotional responses to childhood experiences and our unconscious thought processes affect our behavior. Thus, until the 1920s, psychology was defined as "the science of mental life."

Students will need to learn about the importance and contributions of many psychologists to succeed in AP® Psychology. The TRM includes a list of the 100 most eminent psychologists of the 20th century. Either individually or in small groups, have students do one of the following:

- Identify the most important contributions of 1 or more of the psychologists on the list.

- Develop an argument for why a specific psychologist who is not on the most eminent list should be (or vice versa).

- Debate the relative rankings of two psychologists.

- Prepare a biography of one of the psychologists.

See Student Activity: The 20th Century's Most Eminent Psychologists in the TRM for more information on this project.

Have students consider the contributions of the following people in psychology:

- Dorothea Dix (1802–1887)—helped reform inhumane treatments for psychological disorders.

- Francis Cecil Sumner—the first African American man to receive a Ph.D. in psychology (Clark University, 1920).

- Inez Beverly Prosser—the first African American woman to receive a Ph.D. in psychology (the University of Cincinnati, 1933).

- Kenneth Clark and Mamie Phipps Clark—Kenneth was the first African American president of the APA (1970), and he and Mamie Phipps Clark conducted research cited in the 1954 Brown v. Board of Education Supreme Court decision.

- Ellen Langer—the first woman granted tenure in psychology at Harvard University in 1981.

- Judith Rodin—the first female president of an Ivy League school (the University of Pennsylvania, 1993).

Students can consult the Key Contributors online appendix for more information and a study guide on psychology’s key contributors at www.worthpublishers.com/MyersAP2e.
against the behaviorist view.

students, pitting the humanistic view behavior. Set up a debate among your relative strengths of their views on engaged in lively debates about the 

ner, the prominent behaviorist, often humanistic psychology, and B. F. Skin-

Active Learning

Carl Rogers, one of the founders of humanistic psychology, and B. F. Skin-

Common Pitfalls

Humanistic psychology is often referred to in history books as the "3rd force" in psychology. Students often don't understand why humanistic psychology has this nickname. At the time of its beginnings in the 1950s and 1960s, psychologists followed either the behaviorist or the psychoanalytic perspective. Humanistic psychology offered a 3rd way of thinking about behavior:

- Humanistic psychologists, unlike psychoanalytic psychologists, believed people were essentially good.
- Humanistic psychologists, unlike behaviorists, believed humans were unique and distinct from animals.

And so it continued until the 1920s, when the first of two larger-than-life American psychologists appeared on the scene. Flamboyant and provocative John B. Watson, and later the equally provocative B. F. Skinner, dismissed introspection and redefined psychology as "the scientific study of observable behavior." After all, they said, science is rooted in observation. You cannot observe a sensation, a feeling, or a thought, but you can observe and record people's behavior as they respond to different situations. They further suggested that our behavior is influenced by learned associations, through a process called conditioning. Many agreed, and the behaviorists were one of two major forces in psychology well into the 1960s. (More on these psychologists in Modules 26–30.)

The other major force was Freudian psychology, which emphasized the ways our unconscious thought processes and our emotional responses to childhood experiences affect our behavior. (In modules to come, we'll look more closely at Sigmund Freud's teachings, including his theory of personality and his views on unconscious sexual conflicts and the mind's defenses against its own wishes and impulses. We will also study the psychodynamic approach, which is the updated, modern-day version of Freud's ideas.)

As the behaviorists had done in the early 1900s, two other groups rejected the definition of psychology that was current in the 1960s. The first, the humanistic psychologists, led by Carl Rogers and Abraham Maslow, found both Freudian psychology and behaviorism too limiting. Rather than focusing on the meaning of early childhood memories or the learning of conditioned responses, the humanistic psychologists drew attention to ways that current environmental influences can nurture or limit our growth potential, and to the importance of having our needs for love and acceptance satisfied. (More on this in Module 57.)

Concept Connections

Behaviorism has its roots in empiricism, which was defined earlier in this module. Behaviorists like Watson and Skinner believed scientific psychology at the time relied too much on introspection, where people would describe their experiences. Behaviorists believed that focusing on observable behaviors was a more scientific approach than introspection.

And so it continued until the 1920s, when the first of two larger-than-life American psychologists appeared on the scene. Flamboyant and provocative John B. Watson, and later the equally provocative B. F. Skinner, dismissed introspection and redefined psychology as "the scientific study of observable behavior." After all, they said, science is rooted in observation. You cannot observe a sensation, a feeling, or a thought, but you can observe and record people's behavior as they respond to different situations. They further suggested that our behavior is influenced by learned associations, through a process called conditioning. Many agreed, and the behaviorists were one of two major forces in psychology well into the 1960s. (More on these psychologists in Modules 26–30.)

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Concept Connections

Point out another school of thought in psychology that is mentioned in Unit IV: Gestalt psychology—an early school of psychology from Germany (in a revolt against Wundt’s ideas) that studied how people organized perceptual experiences in understandable ways. The Gestalt psychologists are famous for developing rules on how we organize what we sense and perceive, and for the statement that “the whole is greater than the sum of its parts.”
Common Pitfalls

What are some important milestones in psychology’s early development?

1. Wilhelm Wundt established the first psychological laboratory in 1879 in Germany.
2. Two early schools of psychology were structuralism and functionalism.
3. Structuralism, promoted by Wundt and Titchener, used self-reflection to learn about the mind’s structure. Functionalism, promoted by James, explored how behavior and thinking function.

What event defined the founding of modern scientific psychology?

The rebellion of a second group of psychologists during the 1960s is now known as the cognitive revolution, and it led the field back to its early interest in mental processes, such as the importance of how our mind processes and retains information. Cognitive psychology scientifically explores the ways we perceive, process, and remember information. Cognitive neuroscience, an interdisciplinary study, has enriched our understanding of the brain activity underlying mental activity. The cognitive approach has given us new ways to understand ourselves and to treat disorders such as depression, as we shall see in Module 71.

The key word in psychology’s definition is science. Psychology, as I will emphasize throughout this book, is less a set of findings than a way of asking and answering questions. My aim, then, is not merely to report results but also to show you how psychologists play their game. You will see how researchers evaluate conflicting opinions and ideas. And you will learn how all of us, whether scientists or simply curious people, can think smarter when describing and explaining the events of our lives.

Before You Move On

1. How do you think psychology might change as more and more women contribute their ideas to the field?
2. What event defined the founding of modern scientific psychology?

Test Yourself

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

AP® Exam Tip

Memory research reveals a testing effect: We retain information much better if we actively retrieve it by self-testing and rehearsing. (More on this in the Close-up box at the end of Module 2.) To bolster your learning and memory, take advantage of all the self-testing opportunities you’ll find throughout this text. These “Before You Move On” sections will appear at the end of each main section of text. The Ask Yourself questions will help you make the material more meaningful to your own life (and therefore more memorable). You can check your answers to the Test Yourself review questions in Appendix E at the end of the book.

Module 1 Review

How did psychology develop from its prescientific roots in early understandings of mind and body to the beginnings of modern science?

• Psychology traces its roots back through recorded history to India, China, the Middle East, and Europe. Buddha and Confucius focused on the power and origin of ideas. The ancient Hebrews, Socrates, Plato, and Aristotle pondered whether mind and body are connected or distinct, and whether human ideas are innate or result from experience.
• Descartes and Locke reengaged those ancient debates, with Locke offering his famous description of the mind as a “blank slate” on which experience writes. The ideas of Bacon and Locke contributed to the development of modern empiricism.

What are some important milestones in psychology’s early development?

1. Wilhelm Wundt established the first psychological laboratory in 1879 in Germany.
2. Two early schools of psychology were structuralism and functionalism.
3. Structuralism, promoted by Wundt and Titchener, used self-reflection to learn about the mind’s structure. Functionalism, promoted by James, explored how behavior and thinking function.

How did psychology continue to develop from the 1920s through today?

• Early researchers defined psychology as a “science of mental life.”

Active Learning

On the board, draw a horizontal line and write “Physics and Chemistry” at one end and “Art and Philosophy” at the other. Tell students the line represents a continuum along which the various disciplines can be placed, and ask where psychology should be on the continuum. Starting at one end of the line, have students raise their hands when you reach the point where they have placed psychology. Stop at the point where approximately half the class raise their hands and mark that location. Ask students why they have placed it where they have.

Answers to Multiple-Choice Questions

1. c  3. e  5. c
2. b  4. c

Answer to Practice FRQ 2

1 point: Edward Titchener.

1 point: Structuralists attempted to discover the structural elements of the mind by using a process called introspection.

1 point: Individuals reported elements of their experience when presented with specific objects.

1 point: Titchener was attempting to gain an insider’s perspective into the minds of others.

1 point: Titchener wanted to predict individual responses to those objects or experiences to which the participants had earlier replied.

**Multiple-Choice Questions**

1. By seeking to measure “atoms of the mind,” who established the first psychology laboratory?
   - a. Sigmund Freud
   - b. John B. Watson
   - c. Wilhelm Wundt
   - d. G. Stanley Hall
   - e. William James

2. Which philosopher proposed that nerve pathways allowed for reflexes?
   - a. Socrates
   - b. René Descartes
   - c. John Locke

3. Who coined the term “tabula rasa” (blank slate) to help explain the impact experience has on shaping an individual?
   - a. Francis Bacon
   - b. René Descartes
   - c. John B. Watson

4. Which of the following best describes research typical of Wilhelm Wundt’s first psychology laboratory?
   - a. Examining the unconscious to determine behavior motivation
   - b. Using a brain-scanning device to determine the impact events have on brain function
   - c. Measuring the reaction time between hearing a sound and pressing a button
   - d. Studying helping behavior, based on the premise that people are good
   - e. Examining how collective life experiences combine to create individuality

5. With which of the following statements would John B. Watson most likely agree?
   - a. Psychology should study the growth potential in all people.
   - b. Psychology should study the unconscious.
   - c. Psychology should focus on observable behavior.
   - d. Psychology should study mental thought processes.
   - e. Psychology should study how culture and beliefs impact an individual.

**Practice FRQs**

1. The definition of psychology changed as the field evolved during the early years. Why did John B. Watson object to the definition preferred by Wundt, Titchener, and James? What group of psychologists did Watson’s ideas influence? How did Watson redefine psychology?

   **Answer**
   1 point: Watson objected to the “science of mental life” because he felt it was impossible to be scientific without observation.

   1 point: Watson’s ideas influenced the behaviorists.

2. Identify the founder of structuralism, and explain structuralism’s four foundational concepts.

   **(6 points)**

   • In the 1920s, under the influence of John B. Watson and the behaviorists, the field’s focus changed to the “scientific study of observable behavior.”

   • In the 1960s, the humanistic psychologists and the cognitive psychologists revived interest in the study of mental processes.

   • Psychology is now defined as the science of behavior and mental processes.

   • In the 1940s, the behaviorists expanded their focus to include learning and motivation.

   **(Note: If you are a student using these Multiple-Choice Questions for self-testing, please consult with your teacher to check your answers.)**

   **“FRQ” stands for “Free-Response Question.” The AP® exam contains two of these essay-style questions, which count for one-third of your final score. The actual FRQs will be complex, requiring you to integrate knowledge from across multiple modules, like the practice questions you will find at the end of each unit in this text. These simpler “Practice FRQs” that appear at the end of each module, along with a sample grading rubric, will help you get started practicing this skill.**
Module 2

Psychology’s Big Issues and Approaches

Module Learning Objectives

2-1 Summarize the nature–nurture debate in psychology.
2-2 Describe psychology’s three main levels of analysis and related perspectives.
2-3 Identify psychology’s main subfields.
2-4 Explain how psychological principles can help you learn and remember, and do better on the AP® exam.

The young science of psychology developed from the more established fields of philosophy and biology. Wundt was both a philosopher and a physiologist. James was an American philosopher. Freud was an Austrian physician. Ivan Pavlov, who pioneered the study of learning (Module 26), was a Russian physiologist. Jean Piaget, the last century’s most influential observer of children (Module 47), was a Swiss biologist. These “Magellans of the mind,” as Morton Hunt (1993) has called them, illustrate psychology’s origins in many disciplines and many countries.

Like those early pioneers, today’s psychologists are citizens of many lands. The International Union of Psychological Science has 71 member nations, from Albania to Zimbabwe. In China, the first university psychology department began in 1978; by 2008 there were nearly 200 (Han, 2008; Tversky, 2008). Moreover, thanks to international publications, joint meetings, and the Internet, collaboration and communication now cross borders. Psychology is growing and it is globalizing. The story of psychology—the subject of this book—continues to develop in many places, at many levels, with interests ranging from the study of nerve cell activity to the study of international conflicts.

Across the world, psychologists are debating enduring issues, viewing behavior from the differing perspectives offered by the subfields in which they teach, work, and do research.

Psychology’s Biggest Question

2-1 What is psychology’s historic big issue?

Are our human traits present at birth, or do they develop through experience? This has been psychology’s biggest and most persistent issue. As we have seen, the debate over the nature–nurture issue is ancient. The ancient Greeks debated this, with Plato assuming that we

AP® Exam Tip
Pay close attention to what David Myers, your author, is emphasizing as he tells the story of psychology. When he says the nature–nurture issue is the biggest question in psychology, that’s a sign. It’s a safe bet that this concept will be covered on the AP® exam.
The issue of natural selection shapes behaviors as well as bodies. Darwin argued that natural selection shapes behaviors as well as bodies.

**Common Pitfalls**

Some students may be uncomfortable discussing Darwin’s theory of evolution. They may feel that his theory conflicts with their religious beliefs. Have students focus on the key elements of evolution that are important to psychology: natural selection and adaptation within species. These ideas have a significant scientific basis in all species, including humans. Focus more on how one’s present environment would necessitate physical and psychological adaptation for the success of future generations.

**Critical Questions**

Have students consider the following questions:

- What aspects of evolution help explain some of your daily behaviors?
- How can evolutionary psychologists help people recover from depression?
- Have students focus on the key elements of evolution that are important to psychology: natural selection and adaptation within species. These ideas have a significant scientific basis in all species, including humans. Focus more on how one’s present environment would necessitate physical and psychological adaptation for the success of future generations.

**Common Pitfalls**

Address several misunderstandings about evolutionary psychology:

- Evolution does not imply genetic determinism.
- Behavior can be changed.
- Organisms do not have a conscious or unconscious goal of maximizing gene reproduction. Rather, the most adaptive traits will survive due to natural selection.


**Critical Questions**

Have students consider the following questions:

- What aspects of evolution help explain some of your daily behaviors?
- How can evolutionary psychologists help people recover from depression?

**Active Learning**

Use these quick demonstrations to show that many traits and behaviors are inherited.

- Have students draw a straight horizontal line on a sheet of paper. When the tip of their ring finger is placed on the line, does the tip of the forefinger also reach the line? (Research indicates that short forefingers are determined by a recessive trait in females, whereas in males, it is dominant.)
Psychology’s Three Main Levels of Analysis

What are psychology’s levels of analysis and related perspectives?

Each of us is a complex system that is part of a larger social system. But each of us is also composed of smaller systems, such as our nervous system and body organs, which are composed of still smaller systems—cells, molecules, and atoms.

These tiered systems suggest different levels of analysis, which offer complementary outlooks. It’s like explaining why horrific school shootings have occurred. Is it because the shooters have brain disorders or genetic tendencies that cause them to be violent? Because they have been rewarded for violent behavior? Because we, in the United States, live in a gun-promoting society that accepts violence? Such perspectives are complementary because “everything is related to everything else” (Breuer, 1996). Together, different levels of analysis form an integrated biopsychosocial approach, which considers the influences of biological, psychological, and social-cultural factors (FIGURE 2.1).

Biopsychosocial approach: This integrated viewpoint incorporates various levels of analysis and offers a more complete picture of any given behavior or mental process.

Psychological influences:
- learned fears and other learned expectations
- emotional responses
- cognitive processing and perceptual interpretations

Biological influences:
- natural selection of adaptive traits
- genetic predispositions responding to environment
- brain mechanisms
- hormonal influences

Social-cultural influences:
- presence of others
- cultural, societal, and family expectations
- peer and other group influences
- compelling models (such as in the media)

In this fast-paced world we live in, we must be mindful of the differing views from biology, psychology, and social-cultural studies. To analyze any behavior you will discuss. For instance, in Unit XIV, Social Psychology, students could fill in the biological, psychological, and social-cultural reasons why someone might perform this behavior. This will help students understand how even the simplest behavior is really rather complex. You can challenge students by having them conduct the same procedures for a more complex behavior, like obesity. For practice with this concept, use Teacher Demonstration: Complementary Perspectives from the TRM.

Views of anger: How would each of psychology’s levels of analysis explain what’s going on here?

AP Exam Tip

You will see versions of Figures 2.1 through 2.3 throughout the text. Spend some time right now familiarizing yourself with how the figure’s three corners might contribute to behavior or mental processes, the very stuff of psychology.

FIGURE 2.1 Biopsychosocial approach: This integrated viewpoint incorporates various levels of analysis and offers a more complete picture of any given behavior or mental process.

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Module 2

1 1

Module 2

1 1
Concept Connections

Point out the different technologies that psychologists use to study how cognition and biology interact. These technologies—fMRI, CT scan, EEG, PET scan—are used to study the brain and diagnose mental and physical illness. These are discussed more thoroughly in Unit III.

Teaching Tip

The psychodynamic perspective is less concerned with the sexual emphasis Freud advocated. Psychodynamic psychologists focus more on childhood relationships and how these affect normal adult behavior.

Table 2.1 Psychology’s Approaches

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Focus</th>
<th>Sample Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral</td>
<td>How we learn observable responses</td>
<td>How do we learn to fear particular objects or situations? What is the most effective way to alter our behavior, say, to lose weight?</td>
</tr>
<tr>
<td>Biological</td>
<td>How the body and brain enable emotions, memories, and sensory experiences; how genes combine with environment to influence individual differences</td>
<td>How do pain messages travel from the hand to the brain? How is blood chemistry linked with moods and motives? To what extent are traits such as intelligence, personality, sexual orientation, and depression attributable to our genes? To our environment?</td>
</tr>
<tr>
<td>Cognitive</td>
<td>How we encode, process, store, and retrieve information</td>
<td>How do we use information in remembering? Reasoning? Solving problems?</td>
</tr>
<tr>
<td>Evolutionary</td>
<td>How the natural selection of traits has promoted the survival of genes</td>
<td>How does evolution influence behavior tendencies?</td>
</tr>
<tr>
<td>Humanistic</td>
<td>How we meet our needs for love and acceptance and achieve self-fulfillment</td>
<td>How can we work toward fulfilling our potential? How can we overcome barriers to our personal growth?</td>
</tr>
<tr>
<td>Psychodynamic</td>
<td>How behavior springs from unconscious drives and conflicts</td>
<td>How can someone’s personally traits and disorders be explained by unfulfilled wishes and childhood traumas?</td>
</tr>
<tr>
<td>Social-cultural</td>
<td>How behavior and thinking vary across situations and cultures</td>
<td>How are we alike as members of one human family? How do we differ as products of our environment?</td>
</tr>
</tbody>
</table>

AP® Exam Tip

These perspectives will come up again and again throughout your AP® Psychology course, and they will be on the exam. You need to become very comfortable with the meaning of terms like cognitive, behavioral, and psychodynamic. Ask your teacher for clarification if you are the least bit unclear about what the perspectives mean.

Behavioral psychology: the scientific study of observable behavior, and its explanation by principles of learning.

Biological psychology: the scientific study of the links between biological (genetic, neural, hormonal) and psychological processes. (Some biological psychologists call themselves behavioral neuroscientists, neuropsychologists, behavior geneticists, physiological psychologists, or biopsychologists.)

- Someone working from the behavioral perspective might attempt to determine which external stimuli trigger angry responses or aggressive acts.
- Someone working from a biological perspective might study brain circuits that cause us to be “red in the face” and “hot under the collar,” or how heredity and experience influence our individual differences in temperament.
- Someone working from the cognitive perspective might study how our interpretation of a situation affects our anger and how our anger affects our thinking.
- Someone working from the evolutionary perspective might analyze how anger facilitated the survival of our ancestors’ genes.
- Someone working from the humanistic perspective (a historically important approach) might have been interested in understanding how angry feelings affect a person’s potential for growth. As we will see, modern-day positive psychology incorporates humanistic psychology’s emphasis on human flourishing.
- Someone working from the psychodynamic perspective (which evolved from Freud’s psychoanalysis) might view an outburst as an outlet for unconscious hostility.
- Someone working from the social-cultural perspective might explore how expressions of anger vary across cultural contexts.

The point to remember: Like two-dimensional views of a three-dimensional object, each of psychology’s perspectives is helpful. But each by itself fails to reveal the whole picture.
Psychology’s Subfields

What are psychology’s main subfields?

Picturing a chemist at work, you probably envision a white-coated scientist surrounded by glassware and high-tech equipment. Picture a psychologist at work and you would be right to envision:

- A white-coated scientist probing a rat’s brain.
- An intelligence researcher measuring how quickly an infant shows boredom by looking away from a familiar picture.
- An executive evaluating a new “healthy lifestyle” training program for employees.
- Someone at a computer analyzing data on whether adopted teens’ temperaments more closely resemble those of their adoptive parents or their biological parents.
- A therapist listening carefully to a client’s depressed thoughts.
- A researcher visiting another culture and collecting data on variations in human values and behaviors.

The cluster of subfields we call psychology is a meeting ground for different disciplines.

“Psychology is a hub scientific discipline,” said Association for Psychological Science president John Cacioppo (2007). Thus, it’s a perfect home for those with wide-ranging interests. In its diverse activities, from biological experimentation to cultural comparisons, the tribe of psychology is united by a common quest: describing and explaining behavior and the mind underlying it.

There is even a branch of psychology devoted to studying the measurement of our abilities, attitudes, and traits: psychometrics.

I see you! A biological psychologist might view this child’s delighted response as evidence of brain maturation. A cognitive psychologist might see it as a demonstration of the baby’s growing knowledge of his surroundings. For a social-cultural psychologist, the role of grandparents in different societies might be the issue of interest. As you will see throughout this book, these and other perspectives offer complementary views of behavior.

Common Pitfalls

The psychology subfields described in this section of Module 2 are not exhaustive. You may want to supplement this list by referencing several sources, including the American Psychological Association’s (APA) list of divisions. Module 3 and Appendix D: Preparing for Further Psychology Studies also include information on various careers and subfields in psychology. It is important that students recognize the great diversity of subfields in psychology that might appear on the AP® exam.
Some psychologists conduct basic research that builds psychology's knowledge base. In the pages that follow, we will meet a wide variety of such researchers, including

- biological psychologists exploring the links between brain and mind.
- developmental psychologists studying our changing abilities from womb to tomb.
- cognitive psychologists experimenting with how we perceive, think, and solve problems.
- educational psychologists studying influences on teaching and learning.
- personality psychologists investigating our persistent traits.
- social psychologists exploring how we view and affect one another.

(Read on to the next module for a more complete list of what psychologists in various professions do and where they work.)

These and other psychologists also may conduct applied research, tackling practical problems. Industrial-organizational (I/O) psychologists, for example, use psychology’s concepts and methods in the workplace to help organizations and companies select and train employees, boost morale and productivity, design products, and implement systems. Within that domain, human factors psychologists focus on the interaction of people, machines, and physical environments. (More on this subject in Enrichment Module 82.)

Although most psychology textbooks focus on psychological science, psychology is also a helping profession devoted to such practical issues as how to have a happy marriage, how to overcome anxiety or depression, and how to raise thriving children. As a science, psychology at its best bases such interventions on evidence of effectiveness. Counseling psychologists help people to cope with challenges and crises (including academic, vocational, and marital issues) and to improve their personal and social functioning. Clinical psychologists assess and treat mental, emotional, and behavior disorders. Both counseling and clinical psychologists administer and interpret tests, provide counseling and therapy, and sometimes conduct basic and applied research. By contrast, psychiatrists, who also may provide psychotherapy, are medical doctors licensed to prescribe drugs and otherwise treat physical causes of psychological disorders.

We will study the history of therapy, including the role of pioneering Dorothea Dix, in the Therapy unit. Reformers such as Dix and Philippe Pinel led the way to humane treatment of those with psychological disorders.

To balance historic psychology’s focus on human problems, Martin Seligman and others (2002, 2005, 2011) have called for more research on human strengths and human flourishing.
Their positive psychology scientifically explores “positive emotions, positive character traits, and enabling institutions.” What, they ask, can psychology contribute to a “good life” that engages one’s skills, and a “meaningful life” that points beyond oneself?

Rather than seeking to change people to fit their environment, community psychologists work to create social and physical environments that are healthy for all (Bradshaw et al., 2010; Trickett, 2009). For example, if school bullying is a problem, some psychologists will seek to change the bullies. Knowing that many students struggle with the transition from elementary to middle school, they might train individual kids how to cope. Community psychologists instead seek ways to adapt the school experience to early adolescent needs.

To prevent bullying, they might study how the school and neighborhood foster bullying.

With perspectives ranging from the biological to the social, and with settings from the laboratory to the clinic, psychology relates to many fields. As we will see in Module 3, psychologists teach in medical schools, law schools, and high schools, and they work in hospitals, factories, and corporate offices. They engage in interdisciplinary studies, such as psychosocial (the psychological analysis of historical characters), psycholinguistics (the study of language and thinking), and psychoacoustics (the study of sound together).

Psychology also influences modern culture. Knowledge transforms us. Learning about the solar system and the germ theory of disease alters the way people think and act. Learning about psychology’s findings also changes people. They less often judge psychological disorders as moral failings, treatable by punishment and ostracism. They less often regard disorders as moral failings, treatable by punishment and ostracism. They less often regard psychosocial (the psychological analysis of historical characters), psycholinguistics (the study of language and thinking), and psychoacoustics (the study of sound together).

Dorothea Dix (1802–1887)

“...call your attention to the state of the insane persons confined within this Commonwealth, in cases.”

Applied research: scientific study that aims to solve practical problems.

Industrial-organizational (I/O) psychology: the application of psychological concepts and methods to optimizing human behavior in workplaces.

Human factors psychology: an I/O psychology subfield that explores how people and machines interact and how machines and physical environments can be made safe and easy to use.

Counseling psychology: a branch of psychology that assists people with problems in living (often related to school, work, or marriage) and in achieving greater well-being.

Clinical psychology: a branch of psychology that studies, assesses, and treats people with psychological disorders.

Psychiatry: a branch of medicine dealing with psychological disorders, practiced by physicians who sometimes provide medical (for example, drug) treatments as well as psychological therapy.

Positive psychology: the scientific study of human functioning, with the goals of discovering and promoting strengths and virtues that help individuals and communities to thrive.

Community psychology: a branch of psychology that studies how people interact with their social environments and how social institutions affect individuals and groups.

Point out to students that positive psychology is the modern evolution of humanistic psychology. Positive psychology holds many of the same ideals as humanistic psychology—discovering human potential and fulfillment—but relies more on scientific methodology rather than theorizing to explore ideas.

Consider inviting psychological professionals to your classroom to discuss the variety of career options available to students of psychology. You may also want to ask local research psychologists if they have any projects your students could help with as lab interns. Applying psychology in this way can help your students appreciate what psychologists do.
Improve Your Retention—and Your Grades!

How can psychological principles help you learn and remember, and do better on the AP® exam?

Do you, like most students, assume that the way to cement your new learning is to re-read? What helps even more—and what this book therefore encourages—is repeated self-testing and rehearsal of previously studied material. Memory researchers Henry Roediger and Jeffrey Karpicke (2006) call this phenomenon the testing effect. They note that “testing is a powerful means of improving learning, not just assessing it.”

In one of their studies, students recalled the meaning of 40 previously learned Swahili words much better if tested repeatedly than if they spent the same time restudying the words (Karpicke & Roediger, 2008).

As you will see in Modules 31–33, to master information you must actively process it. Your mind is not like your stomach, something to be filled passively; it is more like a muscle that grows stronger with exercise. Countless experiments reveal that people learn and remember best when they put material in their own words, reframe it, and then review and reinterpret it again.

The SQ3R study method incorporates these principles (McDaniel et al., 2009; Robinson, 1970). SQ3R is an acronym for its five steps: Survey, Question, Read, Retrieve, Review. 

To study a module, first survey, taking a bird’s-eye view. Scan the headings, and notice how the module is organized. Before you read each main section, try to answer its numbered Learning Objective Question (for this box: “How can psychological principles help you learn and remember, and do better on the AP® exam?”). Roediger and Bridgid Finn (2010) have found that “trying and failing to retrieve the answer is actually helpful to learning.” Those who test their understanding before reading and discover what they don’t yet know, will learn and remember better.

Then read, actively searching for the answer to the question. At each sitting, read only as much of the module (usually a single main section) as you can absorb without tiring. Read actively and critically. Ask questions. Take notes. Make the ideas your own: “How does what you’ve read relate to your own life? Does it support or challenge your assumptions? How convincing is the evidence?”

Having read a section, retrieve its main ideas. Test yourself. This will not only help you figure out what you know, the testing itself will help you learn and retain the information more effectively. Even better, test yourself repeatedly. To facilitate this, I offer self-testing opportunities in each module—for example, in the Before You Move On sections. After answering the Test Yourself questions there, you can check your answers in Appendix E at the end of the text and reread as needed.

Finally, review. Read over any notes you have taken, again with an eye on the module’s organization, and quickly review the whole module. Write or say what a concept is before reviewing it.

Surveys, question, read, retrieve, review. I have organized this book’s modules to facilitate your use of the SQ3R study system. Each module begins with a list of objectives that aid your survey. Headings and the numbered Learning Objective Questions at the beginning of main sections suggest issues and concepts you should consider as you read. The material is organized into sections of readable length. At the end of main sections is a “Before You Move On” box with Ask Yourself and Test Yourself questions that help you retrieve what you know. The Module Review provides answers to the learning objective questions along with helpful review questions. The Unit Review offers a list of Key Terms and Key Contributors, along with AP® Exam Practice Questions. Appendix C, Psychological Science’s Key Contributors, at the end of this text will also be an important review tool—especially in preparing for the AP® exam. In addition to learning psychology’s key concepts and key people, you will also need to learn the style of writing that is required for success on the exam. The sample grading rubrics provided for some of the Free-Response Questions (essay-style questions) in the Module and Unit Reviews will help get you started.

Five additional study tips may further boost your learning:

**Distribute your study time.** One of psychology’s oldest findings is that spaced practice promotes better retention than massed practice. You’ll remember material better if you space your time over several study periods—perhaps one hour a day, six days a week—rather than cram it into one long study blitz. For example, rather than trying to read an entire module in a single sitting, read just one main section and then turn to something else. Interleaving your study of psychology with your study of other subjects boosts long-term retention and protects against overconfidence (Kornell & Bjork, 2008; Taylor & Rohrer, 2010).

Spacing your study sessions requires a disciplined approach to managing your time. (Richard O. Straub explains time management in a helpful preface at the beginning of this text.)

**Interleaving** involves mixing practice on different concepts versus massed practice, which involves practicing several related concepts sequentially.
Students may be hesitant to use SQ3R for their daily studying. Students—especially those taking their first AP® course—typically have not developed methodical study habits in their other classes. They often rely on inefficient study techniques—using flashcards, rewriting their notes, glancing over the textbook right before the test. These habits, though at times effective in the short term, often don’t lend themselves to long-term recall and understanding. Encourage students to use SQ3R throughout the year. You will need to help them develop habits that utilize SQ3R by creating assignments that make them use the technique. You may want to create some type of formative assessment that will monitor and reward those who use SQ3R as their main study tool. Emphasize that while SQ3R may seem cumbersome at first, this type of studying makes future study sessions shorter and more efficient as knowledge builds throughout the year.

Exit Assessment
Have students use the SQ3R method to study for this module. They can write out their process as they study, submitting it for your review.
Module 2 Review

What is psychology’s historic big issue?
- Psychology’s biggest and most enduring issue has been the nature–nurture issue, which focuses on the relative contributions of genes and experience.
- Charles Darwin’s view that natural selection shapes behaviors as well as bodies is an important principle in contemporary psychology.
- Today’s science emphasizes the interaction of genes and experiences in specific environments.

What are psychology’s levels of analysis and related perspectives?
- The biopsychosocial approach integrates information from three differing but complementary levels of analysis: the biological, psychological, and social-cultural.
- This approach offers a more complete understanding than could usually be reached by relying on only one of psychology’s current perspectives (biological, evolutionary, psychodynamic, behavioral, cognitive, and social-cultural) or historically influential perspectives (such as the humanistic approach).

What are psychology’s main subfields?
- Within the science of psychology, researchers may conduct basic research to increase the field’s knowledge base (often in biological, developmental, cognitive, educational, personality, and social psychology) or applied research to solve practical problems (in industrial-organizational and human factors psychology).
- Psychometric psychologists study measurement methods.
- Those who engage in psychology as a helping profession may assist people as counseling psychologists (helping people with problems in living or achieving greater well-being) or as clinical psychologists, studying and assessing people with psychological disorders and treating them with psychotherapy. (Psychiatrists also study, assess, and treat people with disorders, but as medical doctors, they may prescribe drugs in addition to psychotherapy.)
- Positive psychology attempts to discover and promote traits that help people to thrive.
- Community psychologists work to create healthy social and physical environments.

How can psychological principles help you learn and remember, and do better on the AP® exam?
- The testing effect shows that learning and memory are enhanced by actively retrieving, rather than simply rereading, previously studied material.
- The SQ3R study method—survey, question, read, retrieve, and review—applies the principles derived from memory research.
- Five additional tips are (1) distribute your study time; (2) learn to think critically; (3) process class information actively; (4) overlearn; (5) be a smart test-taker.

Multiple-Choice Questions

1. Which of the following perspectives is most likely to address how the encoding, storing, and retrieval of information might alter our thoughts?
   a. Behavioral
   b. Psychodynamic
   c. Humanistic
   d. Cognitive
   e. Biological

2. Who among the following would most likely study the interaction of people, machines, and physical environments?
   a. Human factors psychologist
   b. Personality psychologist
   c. Industrial-organizational psychologist
   d. Counseling psychologist
   e. Experimental psychologist
3. Psychiatrists differ from psychologists in that they
   a. help people cope with challenges and crises.
   b. conduct research.
   c. explore how we view and affect one another.
   d. experiment with how people perceive, think, and
      solve problems.
   e. are medical doctors licensed to prescribe medication.

4. A humanistic psychologist working with some poets
   might ask which of the following questions?
   a. How can we get them to reach their highest potential?
   b. How did their childhood experiences impact their
      current behavior?
   c. How have rewards and punishments shaped their
      behavior?
   d. How do society's attitudes affect their writing topics?
   e. How do their brains differ from those of other
      successful people?

Practice FRQs

1. George is said to have an “easy-going” personality. How
   might the biopsychosocial approach be used to explain
   an easy-going personality?

Answer
1 point: Biological factors would include George's genetic,
physiological, and chemical makeup. For instance, George's
easy-going manner may be the result of brain chemistry.

1 point: Psychological factors would include a discussion
of how George learned that an easy-going personality
makes people want to spend time with him. In response, he
keeps anxiety and negative feelings to himself. He has the
perception that others do not want to deal with his stress
and anxiety.

1 point: Social-cultural factors would include George's
family or cultural upbringing and expectations. If those who
surround George expect him to be relaxed and laid-back, and
this is what is supported in his community, George will be
likely to act accordingly.

2. Six months ago, Carlos emigrated from Spain to the
   United States. Although fluent in English and an honor
   student in Spain, Carlos has had difficulty completing
   his assignments since moving to the United States. His
   parents don’t understand why he is not succeeding like
   he did in his last school. Carlos has quit participating in
   family traditions.

   Explain how each of the following psychological
   perspectives might explain Carlos’ behavior:
   a. psychodynamic
   b. cognitive
   (2 points)

3. Psychiatrists differ from psychologists in that they
   a. help people cope with challenges and crises.
   b. conduct research.
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      behavior?
   d. How do society's attitudes affect their writing topics?
   e. How do their brains differ from those of other
      successful people?

5. Betsy works in a human resources department. She plans
   training sessions, recruits people to work for the company,
   and implements techniques to boost morale around the
   office. Of the following, Betsy is most likely a(n)
   a. developmental psychologist.
   b. personality psychologist.
   c. counseling psychologist.
   d. educational psychologist.
   e. industrial-organizational psychologist.

Answer to Practice FRQ 2

1 point: The psychodynamic perspective
emphasizes unconscious drives
and past experiences. Carlos may have
some repressed memories from Spain
that are not allowing him to fit in and
be as successful as he was.

1 point: The cognitive perspective
emphasizes how we use information
that affects our thinking to solve
problems. Carlos thinks that if he cannot be
as successful at school as he once was,
then maybe his family customs are not
as important as well. Thus, he shows
little interest in all aspects of his life,
school, and family.
**Module 3**

**Careers in Psychology**

**Module Learning Objective**

Describe what psychologists in various professions do and where they work.

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If you major in psychology, you will graduate with a scientific mindset and an awareness of basic principles of human behavior (biological mechanisms, development, cognition, psychological disorders, social interaction). This background will prepare you for success in many areas, including business, the helping professions, health services, marketing, law, sales, and teaching. You may even go on to graduate school for specialized training to become a psychology professional. This module describes psychology's specialized subfields.

If you are like most students, you may be unaware of the wide variety of specialties and work settings available in psychology (Terre & Stoddard, 2000). To date, the American Psychological Association (APA) has formed 56 divisions. Let's look at some of the basic research, applied research, and helping profession careers (arranged alphabetically) in the main specialty areas of psychology, most of which require a graduate degree in psychology.

### Basic Research Subfields

**Cognitive Psychologists** study thought processes and focus on such topics as perception, language, attention, problem solving, memory, judgment and decision making, forgetting, and intelligence. Research interests include designing computer-based models of thought processes and identifying biological correlates of cognition. As a cognitive psychologist, you might work as a professor, industrial consultant, or human factors specialist in an educational or business setting.

**Consulting psychologist** Cognitive psychologists may advise businesses on how to operate more effectively by understanding the human factors involved.

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This module was written by Jennifer Zwolinski, Associate Professor of Psychology at the University of San Diego.

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AP® Exam Tip

You are about to read about a lot of career possibilities in psychology. Note the division between basic subfields and applied subfields. The work of some of these specialties is pretty obvious; it’s not that hard to figure out in general what an educational psychologist or a health psychologist might do. Devote extra attention to those specialties that may be unfamiliar to you.

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DEVELOPMENTAL PSYCHOLOGISTS: conduct research on age-related behavioral changes and apply their scientific knowledge to educational, child-care, policy, and related settings. As a developmental psychologist, you would investigate change across a broad range of topics, including the biological, psychological, cognitive, and social aspects of development. Developmental psychology informs a number of applied fields, including educational psychology, school psychology, child psychopathology, and gerontology. The field also informs public policy in areas such as education and child-care reform, maternal and child health, and attachment and adoption. You would probably specialize in a specific stage of the life span, such as infancy, childhood, adolescence, or middle or late adulthood. Your work setting could be an educational institution, day-care center, youth group program, or senior center.

EDUCATIONAL PSYCHOLOGISTS are interested in the psychological processes involved in learning. They study the relationship between learning and physical and social environments, and they develop strategies for enhancing the learning process. As an educational psychologist, working in a university psychology department or school of education, you might conduct basic research on topics related to learning or develop innovative methods of teaching to enhance the learning process. You might design effective tests, including measures of aptitude and achievement. You might be employed by a school or government agency or charged with designing and implementing effective employee-training programs in a business setting.

EXPERIMENTAL PSYCHOLOGISTS: are a diverse group of scientists who investigate a variety of basic behavioral processes in humans and other animals. Prominent areas of experimental research include comparative methods of science, motivation, learning, thought, attention, memory, perception, and language. Most experimental psychologists identify with a particular subfield, such as cognitive psychology, depending on their interests and training. It is important to note that experimental research methods are not limited to the field of experimental psychology; many other subfields rely on experimental methodology to conduct studies. As an experimental psychologist, you would most likely work in an academic setting, teaching courses and supervising students’ research in addition to conducting your own research. Or you might be employed by a research institution, zoo, business, or government agency.

PSYCHOMETRIC AND QUANTITATIVE PSYCHOLOGISTS: study the methods and techniques used to acquire psychological knowledge. A psychometrician may update existing neuropsychological or personality tests or devise new tests for use in clinical and school settings or in business and industry. These psychologists also administer, score, and interpret such tests. Quantitative psychologists collaborate with researchers to design, analyze, and interpret the results of research programs. As a psychometric or quantitative psychologist, you will need to be well trained in research methods, statistics, and computer technology. You will most likely be employed by a university or college, testing company, private research firm, or government agency.

SOCIAL PSYCHOLOGISTS: are interested in our interactions with others. Social psychologists study how our beliefs, feelings, and behaviors are affected by and influence other people. They study topics such as attitudes, aggression, prejudice, interpersonal attraction, group behavior, and leadership. As a social psychologist, you would probably be a college or university faculty member. You might also work in organizational consultation, market research, or other applied psychology fields, including social neuroscience. Some social psychologists work for hospitals, federal agencies, or businesses performing applied research.
Active Learning

Forensic psychology has grown with the popularity of crime shows on TV.

- Have students research different jobs they could get with a forensic psychology degree.
- Contact the local police department to see if it employs a forensic psychologist. Inquire about the responsibilities such a person would have. Students can do this as a project and report back to the class.

Teaching Tip

Although a psychology degree is widely useful regardless of your career choice, working in psychology typically requires a postgraduate degree. Help students see that the training for psychologists—both academic and clinical—is no more rigorous than training to be a doctor or lawyer.

TRM | Active Learning

Students may want more details about what psychologists do on a daily basis. Use Student Activity: Interviewing a Psychologist or Student Activity: Psychology’s Applied Research from the TRM so that students can dig deeper into what it’s like to go down a particular career path in psychology.

Applied Research Subfields

FORENSIC PSYCHOLOGISTS apply psychological principles to legal issues. They conduct research on the interface of law and psychology, help to create public policies related to mental health, help law-enforcement agencies in criminal investigations, or consult on jury selection and deliberation processes. They also provide assessment to assist the legal community. Although most forensic psychologists are clinical psychologists, they might have expertise in other areas of psychology, such as social or cognitive psychology. Some also hold law degrees. As a forensic psychologist, you might work in a university psychology department, law school, research organization, community mental health agency, law-enforcement agency, court, or correctional setting.

HEALTH PSYCHOLOGISTS are researchers and practitioners concerned with psychology’s contribution to promoting health and preventing disease. As applied psychologists or clinicians, they may help individuals lead healthier lives by designing, conducting, and evaluating programs to stop smoking, lose weight, improve sleep, manage pain, prevent the spread of sexually transmitted infections, or treat psychosocial problems associated with chronic and terminal illnesses. As researchers and clinicians, they identify conditions and practices associated with health and illness to help create effective interventions. In public service, health psychologists study and work to improve government policies and health care systems. As a health psychologist, you could be employed in a hospital, medical school, rehabilitation center, public health agency, college or university, or, if you are also a clinical psychologist, in private practice.

INDUSTRIAL–ORGANIZATIONAL (I/O) PSYCHOLOGISTS study the relationship between people and their working environments. They may develop new ways to increase productivity, improve personnel selection, or promote job satisfaction in an organizational setting. Their interests include organizational structure and change, consumer behavior, and personnel selection and training. As an I/O psychologist, you might conduct workplace training or provide organizational analysis and development. You may find yourself working in business, industry, the government, or a college or university. Or you may be self-employed as a consultant or work for a management consulting firm.

NEUROPSYCHOLOGISTS investigate the relationship between neurological processes (structure and function of the nervous system) and behavior. As a neuropsychologist you might assess, diagnose, or treat central nervous system disorders, such as Alzheimer’s disease or stroke. You might also evaluate individuals for evidence of head injuries, learning and developmental disabilities, such as autism spectrum disorder, and other psychiatric disorders, such as attention-deficit/hyperactivity disorder (ADHD). If you are a clinical neuropsychologist, you might work in a hospital’s neurology, neurosurgery, or psychiatric unit. Neuropsychologists also work in academic settings, where they conduct research and teach.

REHABILITATION PSYCHOLOGISTS are researchers and practitioners who work with people who have lost optimal functioning after an accident, illness, or other event. As a rehabilitation psychologist, you would probably work in a medical rehabilitation institution or hospital. You might also work in a medical school, university, state or federal vocational rehabilitation agency, or in private practice serving people with physical disabilities.

Concept Connections

Help students identify famous psychologists who work in each subfield.

- Neuropsychologists: Nobel Laureate Roger Sperry and his colleague Michael Gazzaniga work with split-brain research; Richard Davidson conducts functional MRI research to determine satisfaction with life and other positive traits.

Active Learning

Have students research which universities offer graduate study in behavior genetics or related fields in neuropsychology.

- How many programs are there? Are any near where you live?
- What job opportunities are available to people who get a degree in behavior genetics?
Community psychologists collaborate with teachers, parents, and administrators, making recommendations to improve student learning. They could work in an academic setting, a federal or state government agency, a child guidance center, or a behavioral research laboratory.

Sport psychologists study the psychological factors that influence, and are influenced by, participation in sports and other physical activities. Their professional activities include coach education and athlete preparation, as well as research and teaching. Sport psychologists who also have a clinical or counseling degree can apply those skills to working with individuals with psychological problems, such as anxiety or substance abuse, that might interfere with optimal performance. As a sport psychologist, if you were not working in an academic or research setting, you would most likely work as part of a team or organization, or in a private capacity.

The Helping Professions

Clinical psychologists promote psychological health in individuals, groups, and organizations. Some clinical psychologists specialize in specific psychological disorders. Others treat a range of disorders, from adjustment difficulties to severe psychopathology. Clinical psychologists might engage in research, teaching, assessment, and consultation. Some hold workshops and lectures on psychological issues for other professionals or for the public.

Clinical psychologists work in a variety of settings, including private practice, mental health service organizations, schools, universities, industries, legal systems, medical systems, counseling centers, government agencies, and military services.

To become a clinical psychologist, you will need to earn a doctorate from a clinical psychology program. The APA sets the standards for clinical psychology graduate programs, offering accreditation (official recognition) to those who meet their standards. In all U.S. states, clinical psychologists working in independent practice must obtain a license to offer services such as therapy and testing.

Community psychologists work beyond focusing on specific individuals or families and deal with broad problems of mental health in community settings. These psychologists believe that human behavior is powerfully influenced by the interaction between people and their physical, social, political, and economic environments. They seek to promote psychological health by enhancing environmental settings, focusing on preventive measures and crisis intervention, with special attention to the problems of underserved groups and ethnic minorities. Given the shared emphasis on prevention, some community psychologists collaborate with other helping professionals.
ENGAGE
Active Learning
Have students investigate the role of insurance companies in mental health care. Students can find out whether insurance pays for such care that clinical, community, and counseling psychologists provide. Students can ask insurance agents or practicing psychologists how much treatment insurance covers.

TEACH
Teaching Tip
Because many students often want to enter psychology as a career to “help people,” it would be good to assist these students in finding areas of psychology that capitalize on their interests. Also, help them realistically calculate how long it takes to earn a professional degree.

CLOSE & ASSESS
Exit Assessment
Have students pick a career in psychology and outline the education and training necessary to enter that field.

COPING WITH DISASTER
After Haiti’s disastrous 2010 earthquake, this community psychologist helped survivors cope with the loss of their homes and, for many, the deaths of family members and friends. So, the next time someone asks you what you could do with a psychology degree, tell them you will have a lot of options. You might use your acquired skills and understanding to get a job and succeed in any number of fields, or you might pursue graduate school and then career opportunities in associated professions. In any case, what you have learned about behavior and mental processes will surely enrich your life (Hammer, 2003).

ASK YOURSELF
Which of psychology’s specialties were you aware of before taking this course? Which seem most interesting to you?

TEST YOURSELF
Name the subfields that focus on a) people and their work environments, b) how people change over the life span, c) the human thinking involved in perceiving, remembering, speaking, and decision making, and d) diagnosing and treating psychological disorders.

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

Module 3 Review
3-1 What do psychologists in various professions do, and where do they work?

- The APA has formed 56 divisions.
- Psychology’s specialties include the basic research subfields (cognitive, developmental, educational, experimental, psychometric and quantitative, and social psychology); the applied research subfields (forensic, health, industrial-organizational, neuropsychology, rehabilitation, school, and sport psychology); and the helping professions (clinical, community, and counseling).
- Work settings for psychologists include a wide range of government agencies, industrial and business settings, clinics and counseling centers, health care institutions, schools, universities, and research organizations.
Multiple-Choice Questions

1. Which of the following psychologists most strongly emphasize that human behavior is powerfully influenced by the interaction between people and their physical, social, political, and economic environments?
   a. Community
   b. Clinical
   c. Counseling
   d. Industrial-organizational
   e. Rehabilitation

2. Which of the following psychologists would be most likely to investigate biological, psychological, cognitive, and social changes over time?
   a. Educational
   b. Experimental
   c. Social
   d. Cognitive
   e. Developmental

3. A psychologist investigates the methods teachers use to enhance student learning. With which of the following subfields is the psychologist most likely aligned?
   a. Educational psychology
   b. Experimental psychology
   c. School psychology
   d. Social psychology
   e. Forensic psychology

4. A psychologist works with children whose parents are divorcing. She helps them develop skills they need to cope with the situation. Of the following, what kind of psychologist is most likely helping these children?
   a. Industrial-organizational
   b. Social
   c. Research
   d. Counseling
   e. Community

5. Dwayne is interested in helping people make good decisions regarding their physical well-being. Dwayne should consider a career as a
   a. community psychologist.
   b. social psychologist.
   c. forensic psychologist.
   d. industrial-organizational psychologist.
   e. health psychologist.

Answers to Multiple-Choice Questions

1. a  3. a  5. e
2. e  4. d

Practice FRQs

1. Anisha, a high school junior, has been struggling recently in many areas of her life. She is overweight and spends several hours a day watching television. She is having trouble keeping up in her classes and says she cannot seem to keep her focus. She also is having trouble making friends and "fitting in" at school. Explain how the following applied psychologists might attempt to help Anisha's current situation.
   •  Health psychologists
   •  Social psychologists
   •  Counseling psychologists

   Answer

   1 point: A health psychologist might attempt to find ways to encourage Anisha to lead a more active lifestyle and focus on improving her diet and creating an exercise program. This should help her to lose some weight and become healthier in her daily habits.

2. Hurricane Katrina hit New Orleans in 2005, causing a staggering loss of life and cultural heritage and billions of dollars in damage. How might each of the following have contributed to making life better in New Orleans following the hurricane?
   •  Clinical psychologists
   •  Social psychologists

   Answer to Practice FRQ 2

   1 point: Clinical psychologists would help those with adjustment difficulties and help people cope with their losses.

   1 point: Social psychologists might focus on how the people of New Orleans' beliefs, feelings, and behaviors have been affected by the tragedy.
Answers to Multiple-Choice Questions

1. a
2. d
3. a
4. b
5. Which of the following kinds of psychologists would most likely explore how we process and remember information?
   a. Developmental
   b. Biological
   c. Social
   d. Cognitive
   e. Personality

6. According to the behaviorist perspective, psychological science should be rooted in what?
   a. Introspection
   b. Observation
   c. Cultural influences
   d. Growth potential
   e. Basic needs

7. Which of the following psychologists would most likely conduct psychotherapy?
   a. Biological
   b. Clinical
   c. Industrial-organizational
   d. Cognitive
   e. Evolutionary

8. Which field of psychology is most interested in studying the link between mental activity and brain activity?
   a. Humanistic psychology
   b. Gestalt psychology
   c. Cognitive neuroscience
   d. Psychodynamic perspective
   e. Evolutionary perspective

9. What was the main difference between the psychological thinking of Wilhelm Wundt and earlier philosophers who were also interested in thinking and behavior?
   a. Wundt was European, earlier philosophers were American.
   b. Wundt was the first professor from a major university interested in psychology.
   c. Wundt was the first scholar to call himself a psychologist.
   d. Wundt used psychotherapy techniques established by Freud to examine the thinking and behavior of healthy individuals.
   e. Wundt and his students gathered data about human thinking and behavior in a laboratory setting.

10. Which school of psychology focused on the adaptive nature of thinking and how our consciousness evolves to meet our needs?
    a. Functionalist
    b. Structuralist
    c. Behaviorist
    d. Humanistic
    e. Psychodynamic

11. The study of the importance of satisfying love and acceptance needs best describes which school of psychology?
    a. Behavioral
    b. Functionalist
    c. Humanistic
    d. Psychodynamic
    e. Structuralist

12. Which of the following statements is the best example of applied research?
    a. Investigating personality traits
    b. Using psychological concepts to boost worker productivity
    c. Experimenting with how people perceive different stimuli
    d. Studying the changing abilities of children from ages 2 to 5
    e. Exploring the neural changes that occur during adolescence

13. Self-reflective introspection about the elements of experience best describes a technique used by which school of psychology?
    a. Darwinists
    b. Empiricists
    c. Structuralists
    d. Behaviorists
    e. Psychiatrists

14. Which psychological perspective is most likely to focus on how our interpretation of a situation affects how we react to it?
    a. Psychodynamic
    b. Biological
    c. Social-cultural
    d. Evolutionary
    e. Cognitive

15. The science of behavior and mental processes is the definition of which field of study?
    a. Philosophy
    b. Cognitive neuroscience
    c. Basic research
    d. Psychology
    e. Applied research
Rubric for Free-Response Question 2

1 point: **Behaviorists** believe that our actions are determined by conditioning, such as what we were rewarded or punished for in our past. Behaviors are learned, thus behaviorists believe that our interaction with our environment, rather than genetic influences, determines our actions. (p. 6)

1 point: **The biological perspective** studies how brain chemistry, hormones, and heredity influence our thinking and behavior. This perspective emphasizes the nature side of the nature–nurture debate. (p. 12)

1 point: **Personality psychologists** believe that some personality traits are strongly influenced by genetics, but personality traits are also influenced by our environment. These theorists might focus on twin studies and other research studies that address the relative contributions of biology and the environment to our personality. (p. 14)

1 point: **Developmental psychologists** focus on how our development is influenced by both sides of the debate. Specifically, they might examine what kinds of traits and tendencies infants are born with (such as a specific temperament) and how this early genetic potential is changed through environmental influences. (pp. 14, 21)

Free-Response Questions

1. Arianna is nervous around large crowds, and often leaves social situations like school dances and parties because she feels like she might have a panic attack. Her father died when she was a young girl, but she still often has nightmares about his death. Arianna enjoys school, and because she generally receives good grades, she appreciates the positive feedback from her teachers that encourages her to improve her academic skills.

Using the seven major modern approaches to psychology, explain how each approach might explain Arianna’s behavior.

**Rubric for Free-Response Question 1**

1 point: The **biological approach** would likely attribute Arianna’s nervousness to brain chemistry, hormones, or genetic influences. (Page 12)

1 point: The **evolutionary approach** would explore how avoiding social crowds might have been a survival advantage for early humans, such as by reducing exposure to germs and violence. (Page 12)

1 point: The **psychodynamic approach** would examine Arianna’s early life and how she dealt with losing her father, focusing on Arianna’s childhood experiences and unconscious anxieties. (Page 12)

1 point: The **behavioral approach** would look at how Arianna has learned in the past through rewards and punishments. She may have had a negative experience in a large group in the past and as a result has learned to avoid social gatherings. (Page 12)

1 point: The **cognitive approach** would focus on examining how Arianna perceives situations. Her interpretation of social situations may impact the outcome. (Page 12)

1 point: The **humanistic approach** would look at how Arianna’s environment may have hindered her growth and self-fulfillment. (Page 12)

1 point: The **social-cultural approach** would examine how interactions within the cultures Arianna belongs to influence her expectations about social situations. If her family or other cultural influences encourage her to attend social functions, that might influence her to continue to try attending those kinds of events. (Page 12)

2. In thinking of the question of nature versus nurture, explain how each of the following schools of psychology would address this debate.

- Behaviorism
- Biological perspective
- Personality psychologists
- Developmental psychologists

(4 points)

Multiple-choice self-tests and more may be found at www.worthpublishers.com/MyersAP2e