

# Unit 1

## Psychology's History and Approaches

### Modules

- 1 Psychology's History
- 2 Psychology's Big Issues and Approaches
- 3 Careers in Psychology

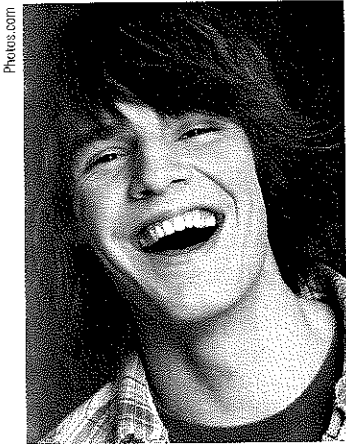
For people whose exposure to psychology comes from news stories and TV, psychologists seem to analyze personality, offer counseling, dispense child-raising advice, examine crime scenes, and testify in court. Do they? Yes, and much more. Consider some of psychology's research questions, which you will 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?*

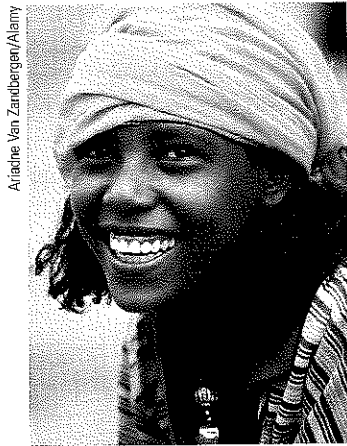


- Have you ever wondered what fosters school and work success? *Are some people just born smarter? And does sheer intelligence explain why some people get richer, think more creatively, or relate more sensitively?*
- Have you ever become depressed or anxious and wondered whether you'll ever feel "normal"? *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?*

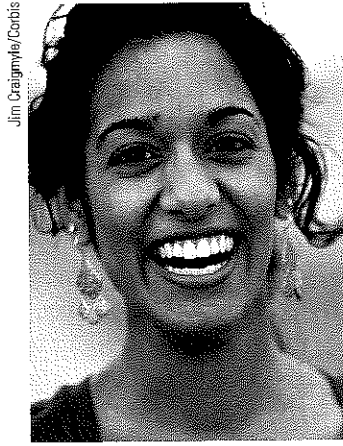
Psychology is a science that seeks to answer such questions about us all—how and why we think, feel, and act as we do.



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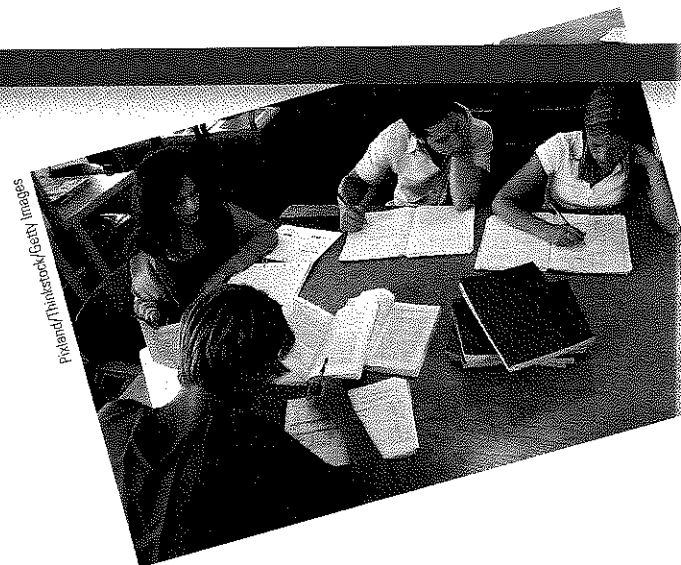
A smile is a smile the world around. Throughout this book, you will see examples not only of our cultural and gender diversity but also of the similarities that define our shared human nature. People in different cultures vary in when and how often they smile, but a naturally happy smile means the same thing anywhere in the world.

# Module 1

## Psychology's History

### Module Learning Objectives

- LO 1-1** Describe how psychology developed from its prescientific roots in early understandings of mind and body to the beginnings of modern science.
- LO 1-2** Describe some important milestones in psychology's early development.
- LO 1-3** Describe how psychology continued to develop from the 1920s through today.



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## 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?”

### AP® Exam Tip

To assist your active learning of psychology, Learning Objectives are grouped together at the start of each module, and then framed as questions that appear at the beginning of major sections.

## Prescientific Psychology



How did psychology develop from its prescientific 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 but 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

understanding, from its peculiar nature, easily supposes a greater degree of order and equality in things than it really finds" (*Novum Organum*, 1620). He also foresaw research findings on our noticing and remembering events that confirm our beliefs: "All superstition is much the same whether it be that of astrology, dreams, omens . . . in all of which the deluded believers observe events which are fulfilled, but neglect and pass over their failure, though it be much more common."

Some 50 years after Bacon's death, John Locke (1632–1704), a British political philosopher, sat down to write a one-page essay on "our own abilities" for an upcoming discussion with friends. After 20 years and hundreds of pages, Locke had completed one of history's greatest late papers (*An Essay Concerning Human Understanding*), in which he famously argued that the mind at birth is a *tabula rasa*—a "blank slate"—on which experience writes. This idea, adding to Bacon's ideas, helped form modern **empiricism**, the idea that what we know comes from experience, and that observation and experimentation enable scientific knowledge.

**empiricism** the view that knowledge originates in experience and that science should, therefore, rely on observation and experimentation.

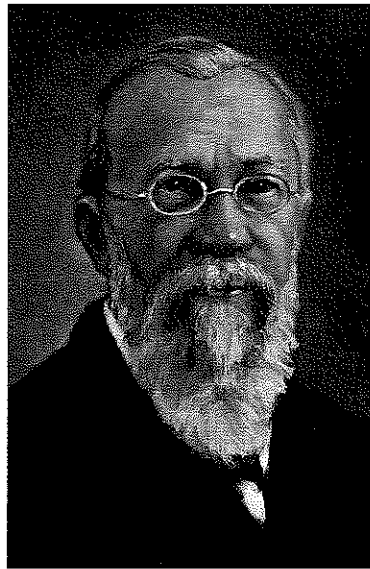
## Psychological Science Is Born

1-2

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 the sound occurred—and in about two-tenths 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.

### FYI

Information sources are cited in parentheses, with name and date. Every citation can be found in the end-of-book References, with complete documentation that follows American Psychological Association (APA) style.

### AP® Exam Tip

Every question on the AP® Psychology exam will reflect the fact that psychology is a science built on the tradition of Wundt and his laboratory. Correct answers on the test are based on what research has revealed; not on "common sense"!

**Edward Bradford Titchener**  
Titchener used introspection to search for the mind's structural elements.



## Thinking About the Mind's Structure

Soon after receiving his Ph.D. in 1892, Wundt's student Edward Bradford Titchener joined the Cornell University faculty and introduced **structuralism**. As physicists and chemists discerned the structure of matter, so Titchener aimed to discover the structural elements of mind. His method was to engage people in self-reflective *introspection* (looking inward), training them to report elements of their experience as they looked at a rose, listened to a metronome, smelled a scent, or tasted a substance. What were their immediate sensations, their images, their feelings? And how did these relate to one another? Titchener shared with the English essayist C. S. Lewis the view that "there is one thing, and only one in the whole universe which

we know more about than we could learn from external observation." That one thing, Lewis said, is ourselves. "We have, so to speak, inside information" (1960, pp. 18–19).

Alas, introspection required smart, verbal people. It also proved somewhat unreliable, its results varying from person to person and experience to experience. Moreover, we often just don't know why we feel what we feel and do what we do. Recent studies indicate that people's recollections frequently err. So do their self-reports about what, for example, has caused them to help or hurt another (Myers, 2002). As introspection waned, so did structuralism.

"You don't know your own mind." -JONATHAN SWIFT, *POLITE CONVERSATION*, 1738

## Thinking About the Mind's Functions

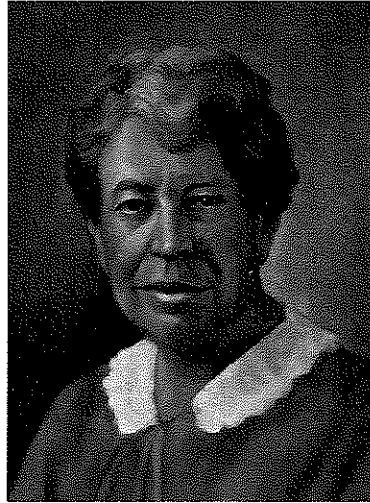
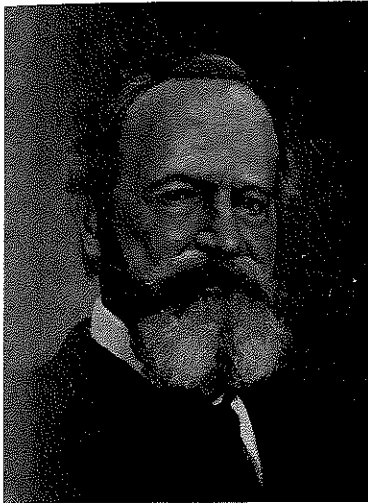
Hoping to assemble the mind's structure from simple elements was rather like trying to understand a car by examining its disconnected parts. Philosopher-psychologist William James thought it would be more fruitful to consider the evolved functions of our thoughts and feelings. Smelling is what the nose 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, adjust 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 spunk 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

**structuralism** early school of thought promoted by Wundt and Titchener; used introspection to reveal the structure of the human mind.

**functionalism** early school of thought promoted by James and influenced by Darwin; explored how mental and behavioral processes function—how they enable the organism to adapt, survive, and flourish.



**William James and Mary Whiton Calkins** James was a legendary teacher-writer who authored an important 1890 psychology text. He mentored Calkins, who became a pioneering memory researcher and the first woman to be president of the American Psychological Association (APA).

**Margaret Floy Washburn** The first woman to receive a psychology Ph.D., Washburn synthesized animal behavior research in *The Animal Mind*.

later, psychologists and psychology students were lobbying Harvard to posthumously award Calkins the Ph.D. she earned [*Feminist Psychologist*, 2002].) Calkins nevertheless went on to become a distinguished memory researcher and the APA's first female president in 1905.

When Harvard denied Calkins the claim to being psychology's first female psychology Ph.D., that honor fell to Margaret Floy Washburn, who later wrote an influential book, *The Animal Mind*, and became the second female APA president in 1921. Although Washburn's thesis was the first foreign study Wundt published in his journal, her gender meant she was barred from joining the organization of **experimental psychologists** (who explore behavior and thinking with experiments), despite its being founded by Titchener, her own graduate adviser (Johnson, 1997). What a different world from the recent past—1996 to 2013—when women claimed two-thirds or more of new U.S. psychology Ph.D.s and were 9 of the 18 elected presidents of the science-oriented Association for Psychological Science. In Canada and Europe, too, most recent psychology doctorates have been earned by women.

James' influence reached even further through his dozens of well-received articles, which moved the publisher Henry Holt to offer a contract for a textbook of the new science of psychology. James agreed and began work in 1878, with an apology for requesting two years to finish his writing. The text proved an unexpected chore and actually took him 12 years. (Why am I not surprised?) More than a century later, people still read the resulting *Principles of Psychology* and marvel at the brilliance and elegance with which James introduced psychology to the educated public.

**experimental psychology** the study of behavior and thinking using the experimental method.

## Psychological Science Develops



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

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."

### AP® Exam Tip

There are lots of important people in psychology. As you study, focus on the significance of their accomplishments. You are more likely to be tested on what a finding means than who discovered it.

**John B. Watson and Rosalie Rayner**  
Working with Rayner, Watson championed psychology as the science of behavior and demonstrated conditioned responses on a baby who became famous as "Little Albert." (More about Watson's controversial study in Module 26.)



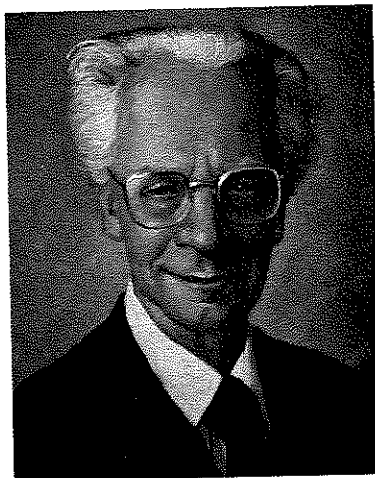
And so it continued until the 1920s, when the first of two larger-than-life American psychologists appeared on the scene. Flamboyant and provocative John B. Watson, and later the equally provocative B. F. Skinner, dismissed introspection and redefined *psychology* as "the scientific study of observable 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.)

**behaviorism** the view that psychology (1) should be an objective science that (2) studies behavior without reference to mental processes. Most research psychologists today agree with (1) but not with (2).

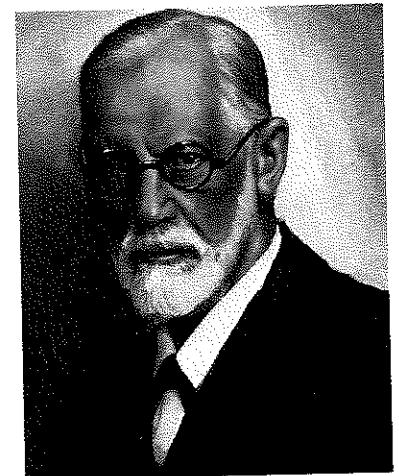
**humanistic psychology** a historically significant perspective that emphasized the growth potential of healthy people.

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.)



**B. F. Skinner** A leading behaviorist, Skinner rejected introspection and studied how consequences shape behavior.



**Sigmund Freud** The controversial ideas of this famed personality theorist and therapist have influenced humanity's self-understanding.

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.

To encompass psychology's concern with observable behavior *and* with inner thoughts and feelings, today we define **psychology** as the *science of behavior and mental processes*. Let's unpack this definition. *Behavior* is anything an organism *does*—any action we can observe and record. Yelling, smiling, blinking, sweating, talking, and questionnaire marking are all observable behaviors. *Mental processes* are the internal, subjective experiences we infer from behavior—sensations, perceptions, dreams, thoughts, beliefs, and feelings.

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

### ► ASK YOURSELF

How do you think psychology might change as more and more women contribute their ideas to the field?

### ► TEST YOURSELF

What event defined the founding of modern scientific psychology?

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

**cognitive neuroscience** the interdisciplinary study of the brain activity linked with cognition (including perception, thinking, memory, and language).

**psychology** the science of behavior and mental processes.

## 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

**1.1** 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*.

**1.2** What are some important milestones in psychology's early development?

- Wilhelm Wundt established the first psychological laboratory in 1879 in Germany.
- Two early schools of psychology were *structuralism* and *functionalism*.
- 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.

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

- Early researchers defined *psychology* as a "science of mental life."



- 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.

## Multiple-Choice Questions\*

- By seeking to measure "atoms of the mind," who established the first psychology laboratory?
  - Sigmund Freud
  - John B. Watson
  - Wilhelm Wundt
  - G. Stanley Hall
  - William James
- Which philosopher proposed that nerve pathways allowed for reflexes?
  - Socrates
  - René Descartes
  - John Locke
  - Aristotle
  - Plato
- Who coined the term "tabula rasa" (blank slate) to help explain the impact experience has on shaping an individual?
  - Francis Bacon
  - René Descartes
  - John B. Watson
  - Sigmund Freud
  - John Locke
- Which of the following best describes research typical of Wilhelm Wundt's first psychology laboratory?
  - Examining the unconscious to determine behavior motivation
  - Using a brain-scanning device to determine the impact events have on brain function
  - Measuring the reaction time between hearing a sound and pressing a button
  - Studying helping behavior, based on the premise that people are good
  - Examining how collective life experiences combine to create individuality
- With which of the following statements would John B. Watson most likely agree?
  - Psychology should study the growth potential in all people.
  - Psychology should study the unconscious.
  - Psychology should focus on observable behavior.
  - Psychology should study mental thought processes.
  - Psychology should study how culture and beliefs impact an individual.

## Practice FRQs\*\*

- 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?

**1 point:** Watson's ideas influenced the behaviorists.

**1 point:** Watson preferred limiting psychology to behavior, because behavior could be observed and scientifically analyzed.

- Identify the founder of structuralism, and explain structuralism's four foundational concepts.

**(6 points)**

### Answer

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

\*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.