

Psychology AP
Summer Assignment
Ms. Van Duyne

1. Please read the attached first chapter of the textbook "Prologue: the Story of Psychology."
2. Please complete the two multiple choice quizzes. You may use the chapter as a reference.
3. Write a complete outline of the chapter. If you are unsure how to complete a proper outline, please research how to on-line.
4. Make hand written note cards for all bold faced terms in the chapter. One side should have the term and the other should have the complete definition.
5. Please be prepared to take a quiz during the first week of school on the material.

The following materials are due the first day of class:

- Outline (prologue)
- Note cards (prologue)
- Two multiple choice quizzes (Attached).

Please note that you will not receive any credit for late work.

Name _____

Date _____

AP Psychology

Summer Work 2012

Myers 8e Prologue Web Quiz 1

1. Which philosopher most clearly rejected the idea that the mind is separable from the body?

- a. Plato
 - b. Socrates
 - c. Aristotle
 - d. Descartes
-

2. Professor Schroeder argues that children have an innate concept of justice that enables them to make distinctions between fair and unfair rules. This argument is most consistent with the views of:

- a. Aristotle.
 - b. Socrates.
 - c. John Locke.
 - d. Francis Bacon.
-

3. In the context of debates over the origins of knowledge, nature is to nurture as _____ is to _____.

- a. Socrates; Plato
 - b. Plato; Descartes
 - c. Locke; Darwin
 - d. Descartes; Locke
-

4. Edward Titchener was concerned primarily with the study of:

- a. sensory experiences.
- b. maladaptive behaviors.
- c. inherited traits.
- d. social relationships.

5. The early school of psychology that employed the method of introspection was known as:

- a. psychiatry.
- b. behaviorism.
- c. naturalism.
- d. structuralism.

6. Who was the functionalist who authored a textbook for the emerging discipline of psychology?

- a. Wundt
- b. Watson
- c. Titchener
- d. James

7. Ivan Pavlov pioneered the study of:

- a. learning.
- b. perception.
- c. personality.
- d. mental illness.

8. Compared with the structuralists, early behaviorists were much less likely to focus on the study of:

- a. smiling.
- b. screaming.
- c. fighting.
- d. thinking.

9. Debates as to whether alcohol abuse is biologically determined or culturally influenced are most relevant to the issue of:

- a. nature versus nurture.
 - b. observation versus introspection.
 - c. behavior versus mental processes.
 - d. structuralism versus functionalism.
-

10. A unified understanding of the explanations provided by the neuroscience, cognitive, social-cultural, and other perspectives in psychology is most clearly provided by:

- a. structuralism.
 - b. behaviorism.
 - c. a psychodynamic perspective.
 - d. a biopsychosocial approach.
-

11. Understanding why the fear of darkness may have contributed to the survival of our human ancestors is most relevant to the _____ perspective.

- a. behavioral
 - b. cognitive
 - c. evolutionary
 - d. psychodynamic
-

12. Inherited traits are to learned habits as the _____ perspective is to the _____ perspective.

- a. behavioral; social-cultural
 - b. evolutionary; behavioral
 - c. social-cultural; neuroscience
 - d. neuroscience; evolutionary
-

13. Which perspective would be most relevant to understanding the role of spaced practice on long-term memory of information.

- a. psychodynamic
 - b. social-cultural
 - c. cognitive
 - d. behavior genetics
-

14. Basic research on persistent human traits like optimism and pessimism is most characteristic of the specialty known as _____ psychology.

- a. biological
- b. personality
- c. social
- d. developmental

15. Professor Thurstone conducts basic research to investigate whether a teacher's negative perceptions of some students can affect the students' subsequent academic performance. Professor Thurstone is most likely a _____ psychologist.

- a. clinical
- b. social
- c. biological
- d. personality

Myers 8e Prologue Web Quiz 2

1. The suggestion that psychology is less a set of facts than a method of evaluating ideas best highlights the _____ character of psychology.

- a. naturalistic
- b. humanistic
- c. scientific
- d. introspective

2. In debating the origins of knowledge, Plato and Aristotle disagreed about the relative importance of:

- a. basic and applied research.
- b. nature and nurture.
- c. behavior and mental processes.
- d. structuralism and functionalism.

3. Professor Boyd suggests that children in every culture can distinguish between costs and benefits because humans have an inborn understanding of economics. The professor's suggestion is most consistent with the views of:

- a. Plato.
- b. Aristotle.
- c. Francis Bacon.
- d. John Locke.

4. Who emphasized that mental processes could exist independently of physical states?

- a. Descartes
- b. Aristotle
- c. Wundt
- d. Watson

5. Edward Titchener used the research method known as:

- a. SQ3R.
- b. psychoanalysis.
- c. introspection.
- d. massed practice.

6. Which research method was introduced by structuralists to identify basic elements of sensory experience?

- a. psychoanalysis
- b. introspection
- c. behavior genetics
- d. spaced practice

7. Which school of psychology was most clearly concerned with the adaptive value of complex mental processes?

- a. structuralism
- b. behaviorism
- c. psychoanalysis
- d. functionalism

8. Wilhelm Wundt was both a:

- a. psychoanalyst and psychiatrist.
 - b. physiologist and philosopher.
 - c. sociologist and psychiatrist.
 - d. theologian and philosopher.
-

9. The growth potential of healthy people was emphasized by:

- a. Freudian psychology.
 - b. cognitive neuroscience.
 - c. structuralism.
 - d. humanistic psychology.
-

10. The importance of inherited behavioral traits was most clearly highlighted by:

- a. John Locke.
 - b. Darwin.
 - c. Watson.
 - d. B. F. Skinner.
-

11. Which perspective is most relevant to understanding the linkages between hormone levels and sexual motivation?

- a. behavioral
 - b. cognitive
 - c. psychodynamic
 - d. neuroscience
-

12. Focusing on the extent to which personality is influenced by motives outside one's own awareness is most relevant to the _____ perspective.

- a. neuroscience
 - b. behavioral
 - c. psychodynamic
 - d. social-cultural
-

13. A focus on the different marriage rituals practiced by members of different ethnic groups is of most relevance to the _____ perspective.

- a. evolutionary
- b. social-cultural
- c. psychodynamic
- d. cognitive

14. Professor Helms conducts basic research on the progressive changes in infants' perceptual skills during the first year of life. Professor Helms is most likely a _____ psychologist.

- a. social
- b. clinical
- c. personality
- d. developmental

15. Dr. Stevens provides psychotherapy to people who suffer from excessive anxiety. Dr. Stevens is most likely a _____ psychologist.

- a. social
- b. developmental
- c. clinical
- d. cognitive

Prologue: The Story of Psychology

- **Psychology's Roots**
 - Prescientific Psychology
 - Psychological Science Is Born
 - Psychological Science Develops
- **Contemporary Psychology**
 - Psychology's Big Debate
 - Psychology's Three Main Levels of Analysis
 - Psychology's Subfields
 - Close-Up: Your Study of Psychology*

"I have made a ceaseless effort not to ridicule, not to bewail, not to scorn human actions, but to understand them."

Benedict Spinoza, *A Political Treatise*, 1677

"What's it like being married to a psychologist?" people occasionally ask my wife. "Does he use his psychology on you?"

"So, does your Dad, like, analyze you?" my children have been asked many times by friends.

"What do you think of me?" asked one barber, hoping for an instant personality analysis after learning that I was a psychologist.

For these questioners, as for most people whose exposure to psychology comes from popular books, magazines, and TV, psychologists analyze personality, offer counseling, and dispense child-rearing advice.

Do they? Yes, and much more. Consider some of psychology's questions that from time to time you may wonder about:

Have you ever found yourself reacting to something just 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 are person-to-person differences in personality predisposed by one's genes? To what extent by the home and neighborhood environments?*

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 later out of thin air. *What do babies actually perceive and think?*

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 wondered what leads to school and work success? Are some people just born smarter? *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?*

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

Such questions provide grist for psychology's mill because psychology is a science that seeks to answer all sorts of questions about us all: how we think, feel, and act.

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 smile *means* the same thing anywhere in the world.



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Robert Caputo/Stock, Boston

Throughout the text you will find Objectives to help focus your reading, and at the end of each major section, the Learning Outcomes will help you review what you've read.

Throughout the text, important concepts are **boldfaced**. As you study, you can find these terms with their definitions in a nearby margin and in the Glossary at the end of the book.

Psychology's Roots

OBJECTIVE 1 | Define *psychology*.

Once upon a time, on a planet in your neighborhood of the universe, there came to be people. Soon thereafter, these creatures became intensely interested in themselves and in one another. They wondered, “*Who are we? From where come our thoughts? Our feelings? Our actions? And how are we to understand—and to master or manage—those around us?*” Psychology’s answers to these wonderings have developed from international roots in philosophy and biology into a science that aims to describe and explain how we think, feel, and act. Today we define **psychology** as *the scientific study 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 in Chapter 1 and throughout this book, is less a set of findings than a way of asking and answering questions. As a science, psychology evaluates competing ideas with careful observation and rigorous analysis. In its attempt to describe and explain human nature, psychological science welcomes hunches and plausible-sounding theories. And it puts them to the test. If a theory works—if the data support its predictions—so much the better for that theory. If the predictions fail, the theory will be revised or rejected.

My aim in this text, 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.

But first, let’s consider the roots of today’s psychology to help us appreciate psychologists’ varied perspectives.

Prescientific Psychology

OBJECTIVE 2 | Trace psychology’s prescientific roots, from 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 do our minds work? How do our bodies relate to our minds? How much of what we know comes built in? How much is acquired through experience? In India, for example, 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 hearts and feel with their bowels.

In ancient Greece, the philosopher-teacher Socrates (469–399 B.C.) and his student Plato (428–348 B.C.) concluded that mind is separable from body and continues after the body dies, and that knowledge is innate—born within us. As Socrates lay dying, Plato’s future student, a teenager named Aristotle (384–322 B.C.), was developing a sharp mind in another part of Greece. Aristotle’s love of data distinguished him from Socrates and Plato, who derived principles by logic. An intellectual ancestor of today’s scientists, Aristotle derived principles from careful observations. His observations told him that “the soul is not separable from the body, and the same holds good of particular parts of the soul” (*De Anima*). Moreover, he said knowledge is *not* preexisting (sorry, Socrates and Plato); instead, it grows from the experiences stored in our memories.

▣ **psychology** the scientific study of behavior and mental processes.

▣ **empiricism** the view that (a) knowledge comes from experience via the senses, and (b) science flourishes through observation and experiment.

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 the mind's being “entirely distinct from the 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's chapters—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*). 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 latest and greatest late papers (*An Essay Concerning Human Understanding*), in which he famously argued that the mind at birth is a blank slate—a “white paper”—on which experience writes. This idea, adding to Bacon's ideas, helped form modern **empiricism**, the view that knowledge originates in experience and that science should, therefore, rely on observation and experimentation.

Psychological Science Is Born

OBJECTIVE 3 | Explain how the early psychologists sought to understand the mind's structure and functions, and identify some of the leading psychologists who worked in these areas.

Philosophers' thinking about thinking continued until the birth of psychology as we know it, on a December day in 1879, in a small room on the third floor of a shabby building 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). Later, the researchers compared this lag with the time required for slightly more complex tasks. 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



A seventeenth-century view of nerves. In his *Treatise of Man*, Descartes proposed the hydraulics of a simple reflex.

Information sources are cited in parentheses, with name and date, then provided fully in the References section at the book's end.

Wilhelm Wundt

Wundt (far left) established the first psychology laboratory at the University of Leipzig, Germany.



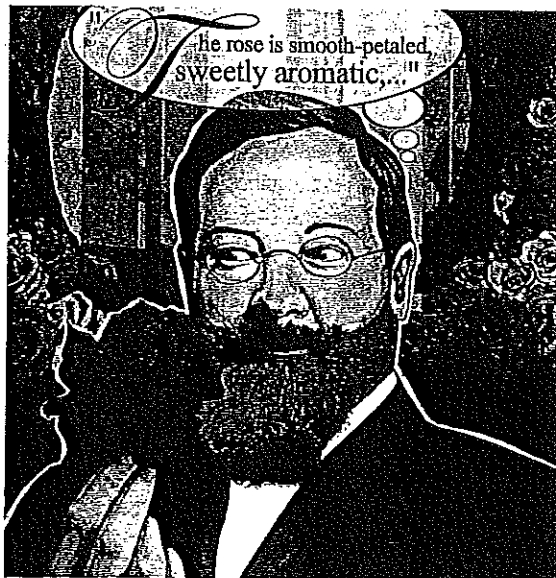
takes a little longer.) Wundt was seeking to measure “atoms of the mind”—the fastest and simplest mental processes. Thus began what many consider psychology’s first experiment, launching the first psychological laboratory, staffed by Wundt and psychology’s first graduate students.

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* and *functionalism*, described here, and Gestalt psychology, behaviorism, and psychoanalysis, described in later chapters.

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 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

▣ **structuralism** an early school of psychology that used introspection to explore the elemental structure of the human mind.



Edward Bradford Titchener
Used introspection to search for the mind’s structural elements.

their immediate sensations, their images, their feelings? And how did these relate to one another? Titchener shared with the English essayist C. S. Lewis (1960, pp. 18–19) 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.”

Alas, structuralism waned as introspection waned. Introspection required smart, verbal people. It also proved somewhat unreliable, its results varying from person to person and experience to experience. Moreover, 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). Often we just don’t know why we feel what we feel and do what we do.

Thinking About the Mind’s Functions

Unlike those hoping to assemble the structure of mind from simple elements—which was rather like trying to understand a car by examining its disconnected parts—philosopher-psychologist William James thought it 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 circumstances, and plan our future. As a **functionalist**, James encouraged explorations of down-to-earth emotions, memories, will power, habits, and moment-to-moment streams of consciousness.

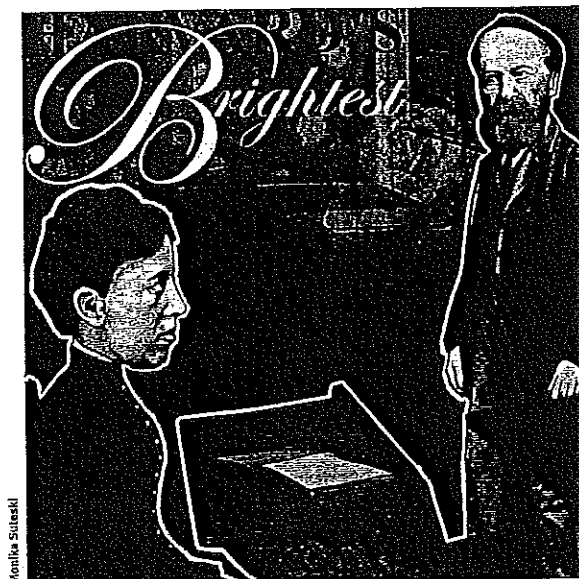
James’ greatest legacy, however, came less from his laboratory than from his Harvard teaching and his writing. When not plagued by ill health and depression, James was an impish, outgoing, and joyous man, who once recalled that “the first lecture on psychology I ever heard was the first I ever gave.” During one of his wise-cracking lectures, a student interrupted and asked him to get serious (Hunt, 1993). He was reportedly one of the first American professors to solicit end-of-course student evaluations of his teaching. He loved his students, his family, and the world of ideas, but 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 Calkins into his graduate seminar (Scarborough &

■ **functionalism** a school of psychology that focused on how mental and behavioral processes function—how they enable the organism to adapt, survive, and flourish.

You don’t know your own mind.”

Jonathan Swift, *Polite Conversation*, 1738



**William James and
Mary Whiton Calkins**

James, legendary teacher-writer, mentored Calkins, who became a pioneering memory researcher and American Psychological Association president.



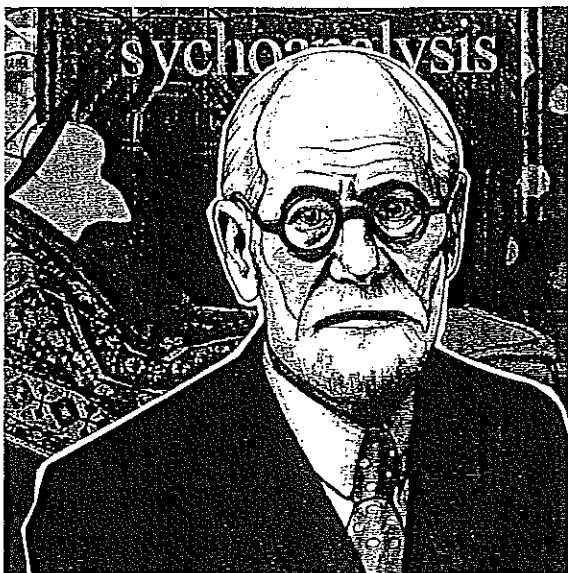
Margaret Floy Washburn

The first woman to receive a psychology Ph.D.; synthesized animal behavior research in *The Animal Mind*.

▣ **humanistic psychology** historically significant perspective that emphasized the growth potential of healthy people; used personalized methods to study personality in hopes of fostering personal growth.

Sigmund Freud

Famed personality theorist and therapist, whose controversial ideas influenced humanity's self-understanding.



Furumoto, 1987). When Calkins joined, all the other students dropped. (In those years women lacked even the right to vote.) 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 later, psychologists and psychology students were lobbying Harvard to posthumously award the Ph.D. she earned (*Feminist Psychologist*, 2002).

Calkins nevertheless became a distinguished memory researcher and the American Psychological Association's (APA's) first female president in 1905. What a different world from the recent past—1996 to 2005—when women claimed two-thirds or more of new psychology Ph.D.s and were 5 of the 10 elected presidents of the science-oriented American Psychological Society. In Canada and Europe, too, most recent psychology doctorates have been earned by women.

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 founded by Titchener, her own graduate adviser (Johnson, 1997).

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 work 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.

Psychological Science Develops

OBJECTIVE 4 | Describe the evolution of psychology as defined from the 1920s through today.

This 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. Ivan Pavlov, who pioneered the study of learning, was a Russian physiologist. Sigmund Freud, who developed an influential theory of personality, was an Austrian physician. Jean Piaget, the last century's most influential observer of children, was a Swiss biologist. This list of pioneering psychologists—"Magellans of the mind," as Morton Hunt (1993) has called them—illustrates psychology's origins in many disciplines and countries.

The rest of the story of psychology—the subject of this book—develops at many levels. With activities ranging from psychotherapy to the study of nerve cell activity, *psychology* is not easily defined. Wundt and Titchener focused on *inner* sensations, images, and feelings. James, too, engaged in introspective examination of the stream of consciousness and of emotion. Freud emphasized the ways emotional



Monthe Sznieski

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.”



Monthe Sznieski

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

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.”

From the 1920s into the 1960s, American psychologists, initially led by flamboyant and provocative John B. Watson and later by the equally provocative B. F. Skinner, dismissed introspection and redefined *psychology* as “the scientific study of observable behavior.” After all, said these *behaviorists*, 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.

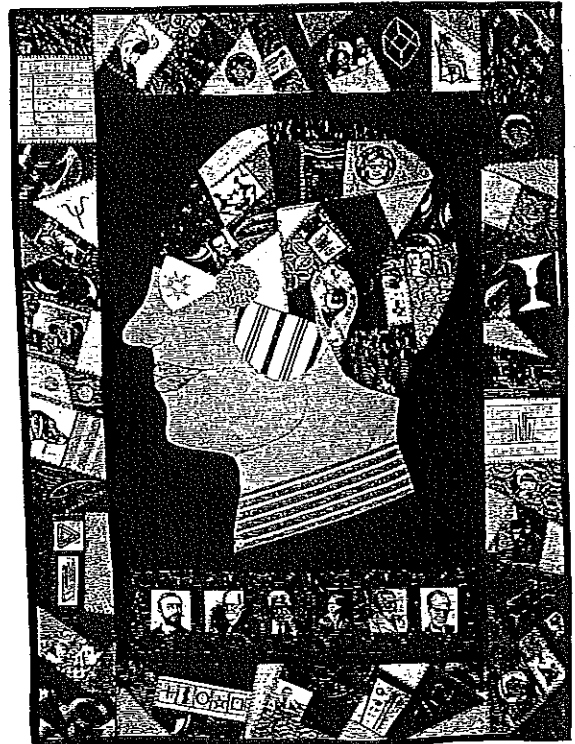
Humanistic psychology was a softer, 1960s response to Freudian psychology and to behaviorism, which pioneers Carl Rogers and Abraham Maslow found too mechanistic. Rather than calling up childhood memories or focusing on learned behaviors, Rogers and Maslow both emphasized the importance of current environmental influences on our growth potential, and the importance of meeting our needs for love and acceptance.

In the 1960s, psychology began to recapture its initial interest in mental processes through studies of how our mind processes and retains information. This *cognitive revolution* supported ideas developed by earlier psychologists, such as the importance of considering internal thought processes, but it expanded upon those ideas to explore scientifically the ways we perceive, process, and remember information. Cognitive psychology and more recently *cognitive neuroscience* (the study of the interaction of thought processes and brain function) have been especially beneficial in helping to develop new ways to understand and treat disorders such as depression, as we shall see in Chapter 16.

To encompass psychology’s concern with observable behavior *and* with inner thoughts and feelings, we define *psychology* today as the scientific study of behavior *and* mental processes.

Psychology’s scope and history

In her quilt, “Crazy About Psychology,” Nancy S. Breland, a psychology professor at the College of New Jersey, captures images and people from psychology’s first century.



Courtesy Nancy S. Breland

>> LEARNING OUTCOMES

Psychology's Roots

OBJECTIVE 1 | Define *psychology*.

Psychology is the scientific study of behavior (anything an organism does) and mental processes (subjective experiences inferred from behavior). The key word in this definition is *science*.

OBJECTIVE 2 | Trace psychology's prescientific roots, from 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, where many scholars spent their lives wondering about people. In their attempt to understand human nature, they looked carefully at how our minds work and how our bodies relate to our minds.

More than 2000 years ago, Buddha and Confucius focused on the power and origin of ideas. In other parts of the world, the ancient Hebrews, Socrates, his student Plato, and Plato's student Aristotle pondered whether mind and body are connected or distinct, and whether human ideas are innate or result from experience. In the 1600s, René Descartes and John Locke reengaged aspects of those ancient debates, and Locke coined his famous description of the mind as a "white paper." The ideas of Francis Bacon and John Locke were important ingredients in the development of modern empiricism, the view that knowledge comes from experience through the senses and that science should rely on observation and experimentation.

OBJECTIVE 3 | Explain how the early psychologists sought to understand the mind's structure and functions, and identify some of the leading psychologists who worked in these areas.

Psychology as we know it today was born in a laboratory in Germany in the late 1800s, when Wilhelm Wundt ran the

first true experiments in psychology's first lab. Soon, the new discipline formed branches. Edward Bradford Titchener and other structuralists searched for the basic elements of the mind by training people to look inward and describe the smallest units of their experiences. In an attempt to understand how mental and behavioral processes help us to adapt, survive, and flourish, William James and other functionalists tried to explain why we do what we do. James also wrote a popular text for the new discipline.

OBJECTIVE 4 | Describe the evolution of psychology as defined from the 1920s through today.

Until the 1920s, psychology was a "science of mental life" studied through introspection. Then American behaviorists, led by John B. Watson and later by B. F. Skinner, changed psychology's focus to the study of observable behavior. In the 1960s, humanistic psychologists drew attention to the importance of environmental influences, personal growth, and the needs for love and acceptance. Also in the 1960s, the cognitive revolution began to refocus psychology's interest in mental processes, with special attention to perception, information processing, and memory. Cognitive neuroscientists are broadening our understanding of these and other processes in today's psychology, which views itself as a "science of behavior and mental processes."

ASK YOURSELF: How do you think psychology might change as more people from non-Western countries contribute their ideas to the field?*

*The Ask Yourself questions will help you reflect on the key issues and connect them to your own life. Making these issues personally meaningful will make them memorable.

▣ **nature-nurture issue** the longstanding controversy over the relative contributions that genes and experience make to the development of psychological traits and behaviors.

▣ **natural selection** the principle that, among the range of inherited trait variations, those contributing to reproduction and survival will most likely be passed on to succeeding generations.

Contemporary Psychology

Like its pioneers, today's psychologists are citizens of many lands. The International Union of Psychological Science has 69 member nations, from Albania to Zimbabwe. Nearly everywhere, membership in psychological societies is mushrooming—from 4183 American Psychological Association members and affiliates in 1945 to more than 160,000 today, with similarly rapid growth in Britain (from 1100 to 34,000). In China, five universities had psychology departments in 1985; by the century's end, there were 50 (Jing, 1999). Worldwide, some 500,000 people have been trained as psychologists, and 130,000 of them belong to European psychological organizations (Tikkanen, 2001). Moreover, thanks to international publications, joint meetings, and the Internet, collaboration and communication cross borders more now than ever: "We are moving rapidly towards a single world of psychological science," reports Robert Bjork (2000). Psychology is *growing* and it is *globalizing*.

Today's psychologists debate some enduring issues and view behavior from differing perspectives. They also teach, work, and do research in many different subfields.

Psychology's Big Debate

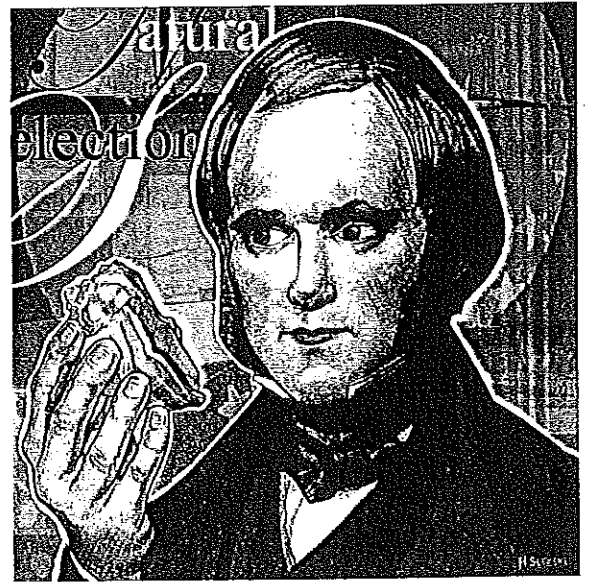
OBJECTIVE 5 | Summarize the nature-nurture debate in psychology, and describe the principle of natural selection.

During its short history, psychology has wrestled with some issues that will reappear throughout this book. The biggest and most persistent issue (and the focus of Chapter 3) concerns *the relative contributions of biology and experience*. As we have seen, the origins of this **nature-nurture** debate are ancient. Do our human traits develop through experience, or do we come equipped with them? The ancient Greeks debated this, with Plato assuming that character and intelligence are largely inherited and that certain ideas are also inborn, and Aristotle countering that there is nothing in the mind that does not first come in from the external world through the senses. In the 1600s, philosophers rekindled the debate. Locke rejected the notion of inborn ideas, offering his notion that the mind is a blank sheet on which experience writes. Descartes disagreed, believing that some ideas are innate.

Two centuries later, Descartes' views gained support from a curious naturalist. In 1831, an indifferent student but ardent collector of beetles, mollusks, and shells set sail on what was to prove a historic round-the-world journey. The 22-year-old voyager was Charles Darwin, and for some time afterward, he pondered the incredible species variation he had encountered, including tortoises on one island that differed from those on other islands of the region. Darwin's 1859 *Origin of Species* explained this diversity of life by proposing an evolutionary process. From among chance variations in organisms, he believed, nature selects those that best enable an organism to survive and reproduce in a particular environment. Darwin's principle of **natural selection**—"the single best idea anyone has ever had," says philosopher Daniel Dennett (1996)—is still with us nearly 150 years later as an organizing principle of biology. Evolution also has become an important principle for twenty-first century psychology. This would surely have pleased Darwin, for he believed his theory explained not only animal structures (such as why polar bear coats are white) but also animal behaviors (such as the emotional expressions associated with lust and rage).

The nature-nurture debate weaves a thread from the distant past to our time. Today's psychologists have continued the debate by asking:

- How are differences in intelligence, personality, and psychological disorders influenced by heredity and by environment?
- Is children's grammar mostly innate or formed by experience?



Monika Sureski

Charles Darwin

Argued that natural selection shapes behaviors as well as bodies.



Dennis Deegan/Corbis



Tim Wright/Corbis

A nature-made nature-nurture experiment

Because identical twins have the same genes, they are ideal participants in studies designed to shed light on hereditary and environmental influences on temperament, intelligence, and other traits. Studies of identical and fraternal twins provide a rich array of findings—described in later chapters—that underscore the importance of both nature and nurture.

▣ **levels of analysis** the differing complementary views, from biological to psychological to social-cultural, for analyzing any given phenomenon.

▣ **biopsychosocial approach** an integrated perspective that incorporates biological, psychological, and social-cultural levels of analysis.

- Are sexual behaviors more “pushed” by inner biology or “pulled” by external incentives?
- Should we treat depression as a disorder of the brain or a disorder of thought—or both?
- How are we humans alike (because of our common biology and evolutionary history) and different (because of our differing environments)?
- Are gender differences biologically predisposed or socially constructed?

The debate continues. Yet over and over again we will see that in contemporary science the nature-nurture tension dissolves: *Nurture works on what nature endows*. Our species is biologically endowed with an enormous capacity to learn and adapt. Moreover, every psychological event (every thought, every emotion) is simultaneously a biological event. Thus depression can be *both* a thought disorder and a brain disorder.

Psychology’s Three Main Levels of Analysis

OBJECTIVE 6 | Identify the three main levels of analysis in the biopsychosocial approach, and explain why psychology’s varied perspectives are complementary.

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 different systems suggest different **levels of analysis**, which offer complementary outlooks. It’s like explaining why grizzly bears hibernate. Is it because hibernation enhanced their ancestors’ survival and reproduction? Because their inner physiology drives them to do so? Because cold environments hinder food gathering during winter? Such perspectives are complementary, because “everything is related to everything else” (Brewer, 1996). Together, different levels of analysis form an integrated **biopsychosocial approach**, which considers the influences of biological, psychological, and social-cultural factors (**FIGURE 1**). Each level provides a valuable vantage point for looking at behavior, yet each by itself is incomplete.

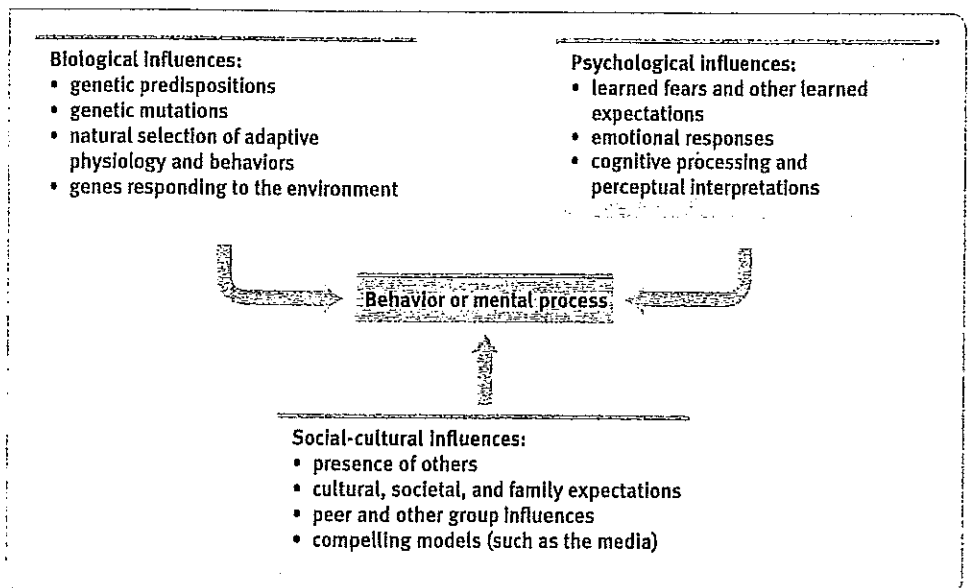


FIGURE 1

Biopsychosocial approach

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

TABLE
PSYCHOLOGY'S CURRENT PERSPECTIVES

Perspective	Focus	Sample Questions
Neuroscience	How the body and brain enable emotions, memories, and sensory experiences	How are messages transmitted within the body? How is blood chemistry linked with moods and motives?
Evolutionary	How the natural selection of traits promotes the perpetuation of one's genes	How does evolution influence behavior tendencies?
Behavior genetics	How much our genes and our environment influence our individual differences	To what extent are psychological traits such as intelligence, personality, sexual orientation, and vulnerability to depression attributable to our genes? To our environment?
Psychodynamic	How behavior springs from unconscious drives and conflicts	How can someone's personality traits and disorders be explained in terms of sexual and aggressive drives or as the disguised effects of unfulfilled wishes and childhood traumas?
Behavioral	How we learn observable responses	How do we learn to fear particular objects or situations? What is the most effective way to alter our behavior, say, to lose weight or stop smoking?
Cognitive	How we encode, process, store, and retrieve information	How do we use information in remembering? Reasoning? Solving problems?
Social-cultural	How behavior and thinking vary across situations and cultures	How are we—as Africans, Asians, Australians, or North Americans—alike as members of one human family? As products of different environmental contexts, how do we differ?

Consider, for example, how psychology's varied perspectives described in TABLE 1, can supplement one another and shed light on anger.

- Someone working from the *neuroscience perspective* might study the brain circuits that produce the physical state of being "red in the face" and "hot under the collar."
- Someone working from the *evolutionary perspective* might analyze how anger facilitated the survival of our ancestors' genes.
- Someone working from the *behavior genetics perspective* might study how heredity and experience influence our individual differences in temperament.
- Someone working from the *psychodynamic perspective* might view an outburst as an outlet for unconscious hostility.
- Someone working from the *behavioral perspective* might study the facial expressions and body gestures that accompany anger, or might attempt to determine which external stimuli result in angry responses or aggressive acts.



Gabe Palmer/Corbis

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

Want to learn more? See Appendix A, *Careers in Psychology*, at the end of this book for more information about psychology's subfields and to learn about the many interesting options available to those with bachelor's, master's, and doctoral degrees in psychology.

- Someone working on the *cognitive perspective* might study how our interpretation of a situation affects our anger and how our anger affects our thinking.
- Someone working on the *social-cultural perspective* might explore which situations produce the most anger, and how expressions of anger vary across cultural contexts.

This important point—that different perspectives can complement one another—is also true of the different academic disciplines. Each academic perspective has its questions and its limits. A perfume manufacturer needs chemistry to create its products, psychology to know what will sell, and marketing and business to turn a profit. Differing academic perspectives are like different two-dimensional views of a three-dimensional object. Each two-dimensional perspective is helpful, but by itself fails to reveal the whole picture.

So bear in mind psychology's limits. Don't expect it to answer the ultimate questions, such as those posed by Russian novelist Leo Tolstoy (1904): "Why should I live? Why should I do anything? Is there in life any purpose which the inevitable death that awaits me does not undo and destroy?" Instead, expect that psychology will help you understand why people think, feel, and act as they do. Then you should find the study of psychology fascinating and useful.

Psychology's Subfields

OBJECTIVE 7 | Identify some of psychology's subfields, and explain the difference between clinical psychology and psychiatry.

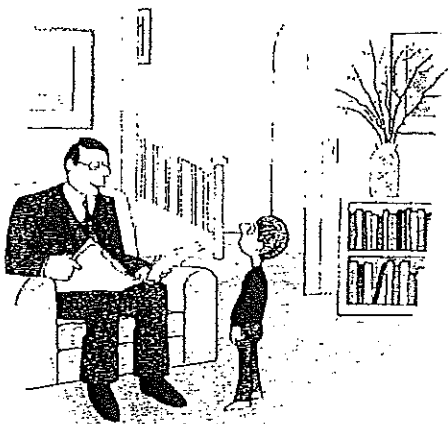
Psychology is a collection of diverse subfields. Some psychologists do basic research, some do applied research, and some provide professional services. Picturing a chemist at work, you probably envision a white-coated scientist surrounded by glassware and high-tech equipment. Picture a psychologist 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 becomes bored with (looks away from) a familiar picture.
- an executive evaluating a new "healthy life-styles" training program for employees.
- someone at a computer keyboard analyzing data on whether adopted teens' temperaments more closely resemble those of their adoptive parents or those of their biological parents.
- a therapist listening carefully to a client's depressed thoughts.
- a traveler en route to another culture to collect data on variations in human values and behaviors.
- a teacher or writer sharing the joy of psychology with others.

The cluster of subfields we call psychology has less unity than most other sciences. But there is a payoff: Psychology is a meeting ground for different disciplines and is thus a perfect home for those with wide-ranging interests. In their diverse activities, from biological experimentation to cultural comparisons, a common quest unites the tribe of psychology: to describe and explain behavior and the mind underlying it.

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:

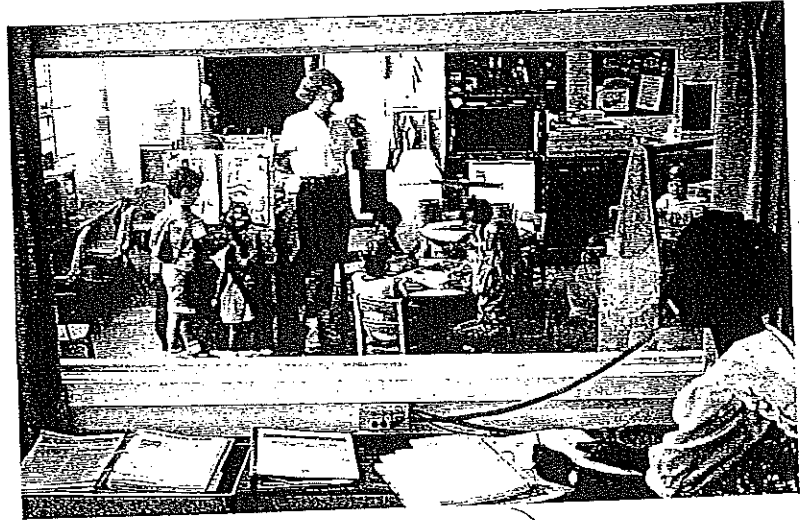
- *Biological psychologists* exploring the links between brain and mind
- *Developmental psychologists* studying our changing abilities from womb to tomb
- *Cognitive psychologists* experimenting with how we perceive, think, and solve problems
- *Personality psychologists* investigating our persistent traits
- *Social psychologists* exploring how we view and affect one another



"I'm a social scientist, Michael. That means I can't explain electricity or anything like that, but if you ever want to know about people I'm your man."



Michael Newman/Photo Edit

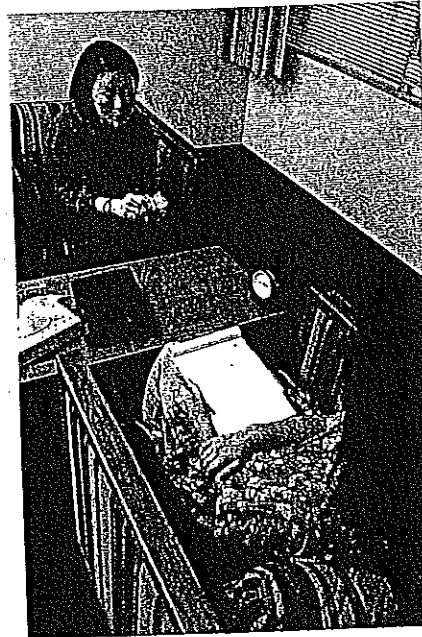


Jeff Greenberg/PhotoEdit

These psychologists also may conduct **applied research** that tackles practical problems. So do other psychologists, such as *industrial/organizational psychologists* as they study and advise on behavior in the workplace. They use psychology's concepts and methods to help organizations and companies select and train employees more effectively, to boost morale and productivity, to design products, and to implement systems.

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. **Counseling psychologists** help people cope with challenges (including academic, vocational, and marital issues) by recognizing their strengths and resources. **Clinical psychologists** assess and treat mental, emotional, and behavior disorders (APA, 2003). 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 often provide psychotherapy, are medical doctors licensed to prescribe drugs and otherwise treat physical causes of psychological disorders. (Some clinical psychologists are lobbying for a similar right to prescribe mental health-related drugs, and in 2002 the state of New Mexico granted that right to specially trained and licensed psychologists.)

With perspectives ranging from the biological to the social, and with settings from the laboratory to the clinic, psychology relates to many disciplines. More and more, psychology connects with fields ranging from mathematics to biology to sociology to philosophy. And more and more, psychology's methods and findings aid other disciplines. Psychologists teach in medical schools, law schools, and theological seminaries, and they work in hospitals, factories, and corporate offices. They engage in interdisciplinary studies, such as psychohistory (the psychological analysis of historical characters), psycholinguistics (the study of language and thinking), and psychoceramics (the study of crackpots).¹



Michael Newman/Photo Edit

Psychology:

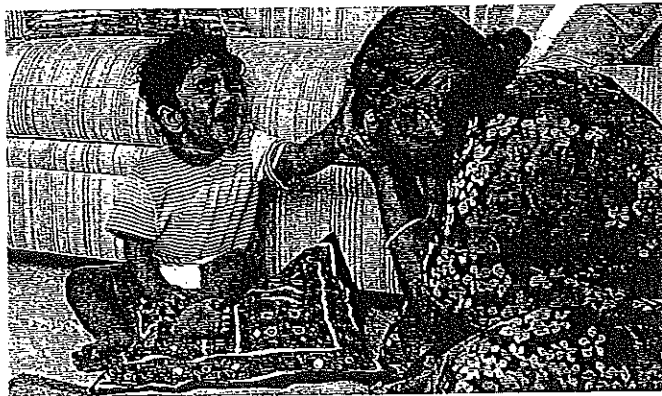
A science and a profession
Psychologists experiment with, observe, test, and treat behavior. Here we see psychologists testing a child, recording children's behavior, and doing face-to-face therapy.

- ▣ **basic research** pure science that aims to increase the scientific knowledge base.
- ▣ **applied research** scientific study that aims to solve practical problems.
- ▣ **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.

¹Confession time: I wrote the last part of this sentence on April Fools' Day.

I see you!

A biological psychologist might view this child's delighted response as evidence for brain maturation. A cognitive psychologist might see it as a demonstration of the baby's growing knowledge of his surroundings. For a cross-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.



Laura Dwight

Once expanded to the dimensions of a larger idea, [the mind] never returns to its original size."

Oliver Wendell Holmes, 1809–1894

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 psychology's findings also changes people: They less often judge psychological disorders as a moral failing, treatable by punishment and ostracism. They less often regard and treat women as men's mental inferiors. They less often view and rear children as ignorant, willful beasts in need of taming. "In each case," notes Morton Hunt (1990, p. 206), "knowledge has modified attitudes, and, through them, behavior." Once aware of psychology's well-researched ideas—about how body and mind connect, how a child's mind grows, how we construct our perceptions, how we remember (and misremember) our experiences, how people across the world differ (and are alike)—your mind may never again be quite the same.

➤ LEARNING OUTCOMES

Contemporary Psychology

Psychology is growing and globalizing, as psychologists in 69 countries around the world work, teach, and do research in many subfields.

OBJECTIVE 5 | Summarize the nature-nurture debate in psychology, and describe the principle of natural selection.

Psychology's biggest and most enduring issue concerns the balance between the influences of nature (genes) and nurture (all other influences, from conception to death). Philosophers had long debated whether nature (the view of Plato and Descartes) or nurture (the view of Aristotle and Locke) was more important. Charles Darwin proposed a mechanism—the principle of natural selection—by which nature selects chance variations that enable organisms to survive and reproduce in particular environments. Psychologists now believe that in most cases, every psychological event is simultaneously a biological event. A great deal of research, including studies of identical and fraternal twins, sheds light on the relative importance of these two sets of influences on such traits as personality and intelligence.

OBJECTIVE 6 | Identify the three main levels of analysis in the biopsychosocial approach, and explain why psychology's varied perspectives are complementary.

The biopsychosocial approach integrates information from

the biological, psychological, and social-cultural levels of analysis. Psychologists study human behaviors and mental processes from many different perspectives (including the neuroscientific, evolutionary, behavior genetics, psychodynamic, behavioral, cognitive, and social-cultural perspectives). Melding the information gathered from these many lines of research creates a more complete understanding of behaviors and mental processes than would be available from any one viewpoint alone.

OBJECTIVE 7 | Identify some of psychology's subfields, and explain the difference between clinical psychology and psychiatry.

Psychology's subfields encompass basic research (often done by biological, developmental, cognitive, personality, and social psychologists), applied research (sometimes conducted by industrial/organizational psychologists), and clinical applications (the work of counseling and clinical psychologists). Clinical psychologists study, assess, and treat (with psychotherapy) people with psychological disorders; psychiatrists also study, assess, and treat people with disorders, but they are medical doctors who can prescribe medication as well as offer psychotherapy.

ASK YOURSELF: When you signed up for this course, what did you think psychology would be all about?

CLOSE-UP:

YOUR STUDY OF PSYCHOLOGY

OBJECTIVE 8 | Describe some effective study techniques.

The investment you are making in studying psychology should enrich your life and enlarge your vision. Although many of life's significant questions are beyond psychology, some very important ones are illuminated by even a first psychology course. Through painstaking research, psychologists have gained insights into brain and mind, depression and joy, dreams and memories. Even the unanswered questions can enrich us, by renewing our sense of mystery about "things too wonderful" for us yet to understand. What is more, your study of psychology can help teach you *how to ask and answer important questions*—how to think critically as you evaluate competing ideas and claims.

Having your life enriched and your vision enlarged (and getting a decent grade) requires effective study. As you will see in Chapter 9, 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 material best when they put it in their own words, rehearse it, and then review and rehearse it again.

A simple study method incorporates these principles. You can remember it as SQ3R: Survey, Question, Read, Review, and Reflect.

First, *survey* what you're about to read, including chapter outlines and section heads. Note a section's main topic, as indicated by the learning objective at the beginning. This will focus your reading and study.



Learning how to ask and answer important questions

The basic study tips in this box are beneficial to students at all levels and in all places, including these children at a village school in Niger.

Keep the learning objective in mind as a *question* you will attempt to answer as you *read* the section. Usually a single main chapter section will be as much as you can absorb without tiring. Treat each main chapter section as if it were a whole chapter. Read actively and critically. Ask questions. Make notes. Consider implications: How does what you've read support or challenge your assumptions? How convincing is the evidence? How does it relate to your own life?

Finally, *review* and *reflect*. To root a section's organization more deeply in your memory, rescan the section and the marginal definitions of key terms. Study the Learning Outcomes at the end of each section. Quiz yourself with the Test Yourself questions at the end of each chapter and, perhaps, by taking quizzes in the book's accompanying study guide and online learning resources (see page 17). Glance over your notes or highlighting. Then stop and let it all sink in. Better yet,

summarize the material for a friend or lecture about it to an imaginary audience.

Survey, question, read, review, reflect. I have organized the chapters to facilitate your using the SQ3R study method. Each chapter begins with an outline that helps you survey what is upcoming, and each main section begins with a learning objective. I have divided

chapters into three to five main sections of readable length. To assist your reviewing, each main section ends with a Learning Outcomes narrative summary. End-of-section Ask Yourself questions are designed to help you reflect—applying what you've learned to your own life to make the material more meaningful and memorable. The chapter ends with big-picture Test Yourself review questions and an organized reminder of key terms. Survey, question, read, review, reflect.

Five additional study hints 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. Spacing your study sessions requires a disciplined approach to managing your time. (Richard O. Straub explains time management in the helpful *Study Guide* that accompanies this text.) For example, rather than trying to read a whole chapter in a single sitting, read just one of the chapter's main sections and then turn to something else.

In class, listen actively. As psychologist William James urged some 100 years ago, “*No reception without reaction, no impression without . . . expression.*” Listen for the main idea and subideas in lectures. *Write them down.* Ask questions during and after class. In class, as in your private study, process the information actively and you will understand and retain it better.

Overlearn. Psychology tells us that “overlearning improves retention.” The more often students read a chapter and the fewer classes they miss, the better their exam scores are (Woehr & Cavell, 1993). Students frequently stop short of overlearning and overestimate how much they know. Really *learning* something requires more than momentarily understanding it. You may understand a chapter as you read it, but if you devote extra study time to rereading, to testing yourself, and to reviewing what you think you know, you will actually *learn* the material and retain your new knowledge longer.

Focus on the big ideas. It helps to step back periodically and see the big picture so that you know how all the facts and research fit together. To understand and appreciate psychology’s lessons, for example, it’s important to read about the research that informs them, but it is also important to watch for the bigger concepts and themes that psychologists construct from these smaller findings. Among this book’s big ideas are these:

- Critical thinking and scientific scrutiny help us think smarter about many things.

- We gain understanding by viewing a phenomenon from the biological, psychological, and social-cultural levels. Everything psychological is simultaneously biological. Yet our behavior is often influenced by our environment and our culture.
- Nature (our genes and our biological makeup) and nurture (our environment, our culture, and the world around us) work together in forming our traits and behaviors.
- We are creatures of our culture and gender, yet we are far more alike than different.
- Much of our human information processing is unconscious, below the radar screen of our awareness.

Be a smart test-taker. If a test contains both multiple-choice questions and an essay question, turn first to the essay. Read the question carefully, noting exactly what the instructor is asking. On the back of a page, pencil in a list of points you’d like to make, and then organize them. Before writing, put the essay aside and work through the multiple-choice questions. (As you do so, you may continue to mull over the essay question. Sometimes the objective questions will bring pertinent thoughts to mind.) Then reread the essay question, rethink your answer, and start writing. When you finish, proofread your work to eliminate spelling and grammatical errors that make you look less competent than you are.

When reading multiple-choice questions, don’t confuse yourself by

trying to imagine how each choice might be the right one. Try instead to answer the question as if it were a fill-in-the-blank. First, cover the answers, recall what you know, and complete the sentence in your mind. Then read the answers on the test and find the alternative that best matches your own answer.

As you read psychology, you will learn much more than effective study techniques. Psychology teaches us how to ask important questions—how to think critically as we evaluate competing ideas and popular claims. It deepens our appreciation for how we humans perceive, think, feel, and act. By so doing, it informs our living and enlarges our compassion. Through this book I hope to help guide you toward that end. As educator Charles Eliot said a century ago, “Books are the quietest and most constant of friends, and the most patient of teachers.”

>> LEARNING OUTCOMES

OBJECTIVE 8 | Describe some effective study techniques.

SQ3R is an effective study method in which you *survey* material before reading it, keep in mind a *question* you will try to answer as you *read*, and then *review* the material you have read and *reflect* on it to make it meaningful and memorable. Five additional types are to distribute study time, listen actively in class, overlearn, focus on big ideas, and be a smart test-taker.

REVIEW: The Story of Psychology

Test Yourself

1. What events defined the founding of scientific psychology?
2. What are psychology's major levels of analysis?

The Test Yourself questions offer you a handy self-test on the material you have just read. Answers to these questions can be found in Appendix B at the back of the book.

Terms and Concepts to Remember

psychology, p. 2

empiricism, p. 3

structuralism, p. 4

functionalism, p. 5

humanistic psychology, p. 7

nature-nurture issue, p. 9

natural selection, p. 9

levels of analysis, p. 10

biopsychosocial approach, p. 10

basic research, p. 12

applied research, p. 13

counseling psychology, p. 13

clinical psychology, p. 13

psychiatry, p. 13

WEB



To continue your study and review of *The Story of Psychology*, visit this book's Web site at www.worthpublishers.com/myers. You will find practice tests, review activities, and many interesting articles and Web links for more information on topics related to *The Story of Psychology*.