Fifth Edition

Psychology

STEPHEN L. FRANZOI

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To the women in my life, Cheryl, Amelia, and Lillian;

To my parents, Lou and Joyce;

And to my brother and sister, Randy and Susie:

Together, and singly, they influence the essential elements of my life.

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EXPLORE IT EXERCISES

Preface

Journey of Discovery

My own study of psychology and my career in this scientific discipline have been a true journey of discovery. Growing up in a small town did not offer many opportunities to learn about the social sciences. However, during my first year in college, I was introduced to psychology and became hooked. I spent the following summer reading a stack of psychology books. Since then, I am repeatedly reminded that the science of psychology is a valuable way to understand behavior and the process of living on this planet.

What can I offer you as an enticement to read this book? Well, are you interested in becoming more competent in dealing with future life events? Psychology involves the "study of the mind." As such, introductory psychology offers you the hope that course material will help you better understand, not only other people, but also yourself. Seeking such knowledge is a distinguishing feature of young adulthood, and the college experience is specifically designed to foster this quest. In writing this text, I sought to bring into these pages that same message of hope and discovery that infuses the entire field of psychology. Does this sort of journey interest you?

I have written this text in a way that introduces you to the science of psychology as a journey of discovery undertaken both by researchers in their search for knowledge over the past century and by students over the course of the term. I explain how psychology has expanded our understanding of how people think, feel, and behave, while it also motivates you to apply this knowledge to better understand yourself and others. By regularly encouraging you to consider how psychological knowledge relates to your own life, I place your learning experience within a personally relevant context that benefits retention of course material, while also fostering self-insights that can be applied to your daily living.

The history of psychology is filled with compelling stories of how researchers' intense interest in learning about the nature of human and animal behavior led them on a journey of discovery that eventually culminated in important new knowledge. The fundamental difference between our often informal, anecdotally based personal journeys of discovery and the journeys of discovery found in psychology is that the vehicle employed in the latter journeys is the scientific method. Throughout *Psychology*, I tell selected discovery stories in psychology so that you will appreciate both the human element and the ever-evolving nature of scientific knowledge and insight.

Following Chapter 1's introduction to psychology, which covers the field's history and areas of specialization, Chapter 2 is devoted to the vehicle for psychological discovery—research methodology. This chapter provides a solid base for understanding the scientific enterprise of psychology; and it encourages a healthy, scientific skepticism of the many, often contradictory, commonsense truisms we learn from others. Discussion of the science of psychology is further reinforced by Appendix A, "Statistical Reasoning," at the end of the text.

Encouraging Self-Discovery

While encouraging you to analyze the scientific journey of discovery in psychology, the text also facilitates a personal journey of discovery by including more than 20 Self-Discovery Questionnaires that ask you to consider how the specific text material relates to your life. These self-report questionnaires are those that researchers currently use, and the results of studies employing them are part of the text material. Thus, as you learn about various psychological theories and relevant research findings, you also learn something about yourself. Examples of Self-Discovery Questionnaires include "Who Am I?" (Chapter 4), "Are You a Morning or a Night Person?" (Chapter 6), "Do You Have an Internal or an External Locus of Control?" (Chapter 12), and "Are You Typically an Optimist or a Pessimist?" (Chapter 15).

Applying Psychology to Everyday Experiences

Beyond self-report questionnaires, the text also includes more than 20 Explore It Exercises in which you actively experience how specific psychological processes work. Examples of Explore It Exercises are "Are You Color-Blind?" (Chapter 5), How Can You Meditate?" (Chapter 6), "Can You Use Your Knowledge of Semantic Networks to 'Read' People's Minds?" (Chapter 8), "Which Side of Your Brain Is More Active During Emotional Situations?" (Chapter 11), and "How Can You Increase Your Chances of Receiving Help in an Emergency?" (Chapter 16). The text also presents a Psychological Applications section

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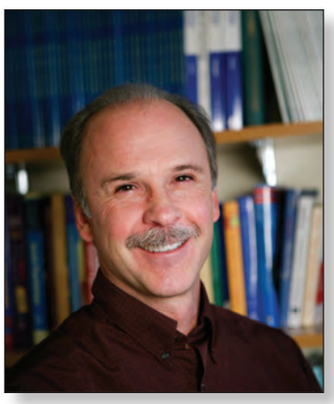
And Finally …

I welcome your comments and feedback. As soon as this text rolls off the press, I will begin collecting ideas for the next edition. The prospect of being able to develop a robust exchange of ideas with current users, both students and faculty, is truly exciting. You can reach me at: stephen.franzoi@marquette.edu.

Very best wishes,
Steve Franzoi

About *the* Author

Stephen L. Franzoi is Professor of Psychology at Marquette University in Milwaukee, Wisconsin. Born and raised in Iron Mountain, Michigan, Dr. Franzoi is proud to call himself a "Yuper" (a native of the Upper Peninsula of Michigan, or U.P.). Dr. Franzoi received his BS in both psychology and sociology from Western Michigan University and his MA and PhD from the University of California at Davis; he was also postdoctoral fellow at Indiana University before joining Marquette's faculty. Dr. Franzoi has served as assistant editor of *Social Psychology Quarterly* and associate editor of *Social Problems*. At Marquette University, Professor Franzoi teaches introductory psychology courses and is also the author of the textbook *Social Psychology* (sixth edition). He is an active researcher in the areas of body esteem and self-awareness. Over the years, Dr. Franzoi has discussed his research in many popular media outlets, including *The New York Times, USA Today, National Public Radio,* and the *Oprah Winfrey Show*. He and Cheryl Figg are the proud parents of Amelia and Lillian. In his spare time, he enjoys relaxing with his family, bicycling, making wine, and playing bocce ball.



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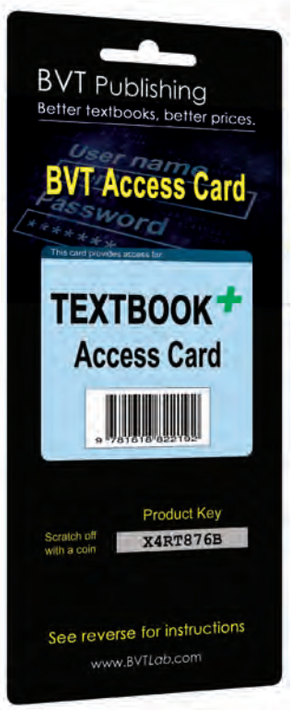

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Chapter One

Introduction to Psychology

Chapter Outline

1.1 What Is Psychology?

a Psychology Is the Scientific Study of Mental Processes and Behavior.
b Most Psychologists Believe that There Are Lawful Patterns of Behavior.

1.2 Early Pioneers

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b William James and Functionalism Analyzed the Functions of the Mind.
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d The Neuroscience Perspective Focuses on the Nervous System.
e Evolutionary Psychology Studies How Behavior Is Shaped by Natural Selection.
f The Sociocultural Perspective Studies How Behavior Is Shaped by Social and Cultural Forces.
g Psychology's Subfields Tend to Have Either a Research or Application Emphasis.

Psychological Applications: *How Did Psychological Research Influence the U.S. Supreme Court's 1954 Decision to Desegregate Schools?*

Quest—An act or instance of seeking; an adventurous journey.

The theme of this book is that both the science of psychology and your own life are journeys of discovery. Throughout your life you will undertake many quests, and a substantial number of these will lead to failure. Others, however, will be fabulously successful due to a combination of factors, including good planning, skill, effort, fortunate circumstances, and the assistance of others. Certainly, one very important lesson in life is to learn to distinguish the foolish from the profound quests. Perhaps an even more important lesson is that it is absolutely essential to undertake quests regularly because in such quests—both the large and the small variety—you develop new ways of looking at yourself and the world. With this thought in mind, let's begin.

My personal and professional journey of discovery in psychology began when I was an undergraduate student. Besides taking psychology courses, I also began conducting psychological studies. One of my more interesting undergraduate studies involved an investigation of the members of a very curious and

The followers of Guru Maharaji Ji believed that this 16-year-old leader of the Divine Light Mission was "Lord of the Universe." How did they respond when the guru's mother proclaimed that he was no longer the Perfect Master?

popular religious cult. Allow me to describe this study by briefly transporting you back in time to the fall of 1974.

It was a pleasantly mild Midwest day in Kalamazoo, Michigan. I sat across from Dave, a young and energetic man of 21, in a small, two-story house that was the residence or ashram of the local Divine Light Mission. This was a red-letter day for me as an aspiring psychologist, and I wanted to be careful how I asked the question foremost in my mind. The Divine Light Mission was a neo-Hindu religious movement from India that had been receiving much national attention during the past few years. For two months I had visited the ashram, administering to each member the same set of personality tests. I was trying to understand why so many people were attracted to this new Eastern religion. Dave had been a devoted member for more than two years, despite the protests of his family. I was a senior in college with aspirations for graduate study in psychology. Now I had the opportunity, with Dave's help, to observe some classic psychological principles in operation.

That year, the Divine Light Mission claimed a worldwide membership of 6 million, with about 80,000 located in the United States. The leader of this new religious movement was a 16-year-old boy from India named Guru Maharaj Ji, who was hailed by his disciples (who were called Premies) as being "Lord of the Universe" and "Divine Incarnation." Premies believed that this young boy was about to usher in the New Age of Peace. Potential followers were promised salvation if they received the "Knowledge," which was described as being infinite and therefore unexplainable.

Although Guru Maharaj Ji touted himself as a divine entity, he was not immune to the allure of earthly pleasures. Rolls-Royces, Jaguars, airplanes, motorcycles, townhouses and mansions staffed with servants, as well as an elaborate assortment of Batman comic books and squirt guns were but a few of his material indulgences. What allowed the young guru to live in such luxury were thousands of unpaid Premies, like Dave, who operated a host of enterprises, including ten Divine Sales thrift stores, a "Cleanliness Is Next To Godliness" janitorial service, and a vegetarian restaurant in New York City. In addition to the income generated by these businesses, upon joining, all new members' financial assets were routinely funneled into the mission's accounts, as was any income earned from worldly jobs.

Which brings me back to why I was sitting across from Dave in the ashram. The previous day, the national media had reported that Guru Maharaj Ji had skipped town and eloped with his secretary. Upon learning of this youthful, and decidedly ungodlike, flight of spontaneous passion, his mother had publicly pronounced that Guru Maharaj Ji was no longer the Perfect Master. Instead, she angrily proclaimed that his older brother was the new divine incarnation. Within one day's time, members of the religious movement were being told to believe that Guru Maharaj Ji had gone from being the Perfect Master of their 6-million-member mission to being spiritually "grounded" by his "Holy Mother." The question I was intent on asking Dave was how the members of the Kalamazoo ashram were going to reconcile this turn of events. After all, they had paid a high price to gain admission to this religious cult that promised them contact with divine salvation. Yet now the Mission that was their life's work and the seat of their spirituality was in danger of crumbling. Had Dave begun questioning the spirituality of his guru and his own commitment to the Divine Light Mission?

Dave's reply was immediate and unwavering. He told me that these recent events were all part of the Perfect Master's plan of ushering in the New Age of Peace. If anything, Dave stated, Guru Maharaj Ji was now more in his thoughts than before, and he was even more certain that the New Age would be dawning soon.

Does Dave's strengthened conviction in the face of troubling evidence to the contrary surprise you? Was his reaction different from what you might expect from a normal person? Was it irrational? Was Dave suffering from some sort of mental illness?

Because I had been exposed to research and theories within psychology during my undergraduate studies, I did not think that Dave's thinking reflected a psychological disorder. As I sat talking to this devoted follower of this new religion, I strongly suspected that his far-fetched rationalizations were more similar to the normal and all-too-ordinary thoughts of someone caught in a very uncomfortable psychological position. Years ago, psychologist Leon Festinger (1957) had outlined a theory to explain how our need to maintain consistency between our beliefs can often lead to irrational behavior. That is, if people simultaneously hold two thoughts that are inconsistent ("I've paid a high price to follow Guru Maharaj Ji" and "Guru Maharaj Ji is a spiritual fraud"), this will create internal conflict that people will try to reduce or eliminate. The greater their investment in particular beliefs (for example, "Guru Maharaj Ji is a god and worth my devotion"), the more difficult it is for people to reject these beliefs. Known as the theory of *cognitive dissonance* (see Chapter 16), Festinger's ideas provided an explanation for how normally rational individuals can engage in some rather odd forms of thought and behavior while trying to justify their past actions.

A journey of a thousand miles starts from beneath one's feet.

—Lao-Tzu, Chinese philosopher, sixth century BC

For Dave and most other Premies, their personal journey of discovery with Guru Maharaj Ji did not last much longer following this explosive incident; and today he has few remaining followers in this country. Yet for me, studying the Divine Light Mission represented one of the first of many scientific journeys of discovery that I have undertaken as a psychologist during the past 35 years. Many of you reading this textbook will feel an intensity of interest similar to mine in learning as much as possible about the science of psychology. For others whose passions burn for different life pursuits, this text and the course in which it is offered can still provide valuable knowledge that will serve them well while following their own desires.

Wheresoever you go, go with all your heart.

—Confucius, Chinese philosopher, 551–479 BC

At its heart, the science of psychology is a journey of discovery undertaken both by researchers in their search for knowledge over the past 100-odd years and by you, the student, over the course of the term. Throughout this text, as you learn how psychology has expanded our understanding of the ways people think, feel, and behave (the discipline's journey of discovery), I will encourage you to apply this knowledge to better understand yourself and others (your own journey of discovery).

1.1 What Is Psychology?

PREVIEW

- *How do psychologists seek to understand people and other animals?*
- *Does the search for lawful patterns of behavior mean that psychologists do not believe in free will?*

1.1a Psychology Is the Scientific Study of Mental Processes and Behavior.

A basic necessity for any successful journey is to know how to read the road signs. For you, the reader of this textbook, this means understanding the terminology. The

Psychology The scientific study of mental processes and behavior

term **psychology** comes from the Greek words *psyche*, meaning "mind," and *logos*, meaning "the study of." In its broadest sense, psychology is the scientific study of mental processes and behavior. This means that psychologists are interested in using scientific methods (see Chapter 2) to understand how we and other living creatures think, feel, and act. Have you ever wondered what your brain does while you sleep, or why you daydream? Do you think that TV violence can incite real-world violence? Can you accurately remember childhood events? What does it mean to be intelligent? Why do we fall in love? These are the sorts of questions studied by psychologists.

Psychiatry A branch of medicine concerned with the diagnosis and treatment of psychological disorders. (The roughly comparable specialty area in psychology is known as clinical psychology.)

People often confuse psychology with **psychiatry**, a branch of medicine practiced by physicians and concerned with the diagnosis and treatment of psychological disorders. Psychology also deals with the diagnosis and treatment of such disorders (see Chapters 13 and 14), but this interest represents only one area of specialization in a discipline that has a much broader scope than psychiatry (see Section 1.3g). Psychiatrists have completed medical school and obtained an MD (doctor of medicine), whereas psychologists have completed graduate school in psychology and obtained a PhD (doctor of philosophy) or, in some cases, the Psy.D. (doctor of psychology). While psychologists with PhDs have extensive training in the scientific method and in conducting research, psychologists with Psy.D.s have extensive training only in providing services such as psychotherapy and have limited research experience.

The purpose of psychology is to give us a completely different idea of the things we know best.

—Paul Valéry, French poet/writer, 1871–1945

1.1b Most Psychologists Believe that There Are Lawful Patterns of Behavior.

In trying to understand the means by which we operate in our life's journey, psychologists have struggled with the following fundamental question: Do we freely choose our actions, or are they determined beforehand by factors beyond our awareness and control?

Determinism The belief that all events have causes

During the fourth century BC, the Greek philosopher Democritus was a proponent of **determinism**, the belief that human behavior is no different from any other physical action—that it is caused by lawful patterns that can be understood and predicted. If this is true, then all human decisions, from our clothing preferences to our career choices, are controlled—and ultimately determined—by our genetics, present environment, and past experiences (Sappington, 1990). In contrast to this perspective, the seventeenth-century French philosopher and mathematician René Descartes rejected determinism and argued instead that people—but not other animals—have **free will**, meaning that they have absolutely unlimited power of free choice. If such choices were really free, human behavior itself would be random and impossible to understand or predict (Slife & Fisher, 2000).

Free will The belief that there are absolutely no limitations on people's power of free choice

The free will versus determinism debate is still a topic of discussion in psychology, but most psychologists and other social scientists believe in what could be called *probabilistic determinism* (Frosch & Johnson-Laird, 2011). This means that although psychological phenomena cannot be predicted with 100 percent certainty, they do occur with a regularity that is not random and can be reasonably understood using scientific methods.

Does embracing probabilistic determinism mean that you must reject the belief in free will, and vice versa? Not necessarily. In fact, many philosophers of science contend that free will is not possible unless some form of determinism is true (Carnap, 1966). What they mean is that, if behavior did not occur with a regularity that could be reasonably predicted, it would be impossible for people to make free choices. A choice involves an intentional selection of one course of action over another. Yet how could a choice possibly be made if the consequences of alternative actions could not be predicted? For example, when trying to decide what classes to take next semester,

One of the annoying things about believing in free will and individual responsibility is the difficulty of finding somebody to blame your problems on. And when you do find somebody, it's remarkable how often his picture turns up on your driver's license.

—P. J. O'Rourke, U.S. social satirist, b. 1947

Photo courtesy of Figzoi

Actors and audience members follow certain rules of behavior during a theatrical performance that can be predicted with a good deal of accuracy. For example, actors generally interact only with other actors, and the audience does not walk onto the stage. How does their behavior illustrate the psychological concept of probabilistic determinism?

your choices are often based on professors' reputations for being predictably knowledgeable and fair. If you did not believe you could predict these personal qualities with at least some degree of accuracy, you would have no basis for choosing one professor over another. Thus, it may well be that events must be somewhat predictable for free choice to have any meaning.

The will is never free—it is always attached to an object, a purpose. It is simply the engine in the car—it can't steer.

—Joyce Cary, British author, 1888–1957

- Psychologists employ scientific methods to understand how humans and other animals think, feel, and act.
- Most psychologists are probabilistic determinists, meaning they believe that psychological phenomena occur with a regularity that is not random and can be reasonably understood using scientific methods.

1.2 Early Pioneers

PREVIEW

- *Who was considered the world's first psychologist?*
- *Why was William James's approach to psychology called functionalism?*
- *What aspect of the mind did Sigmund Freud emphasize?*
- *Why was John Watson's behaviorism considered radically different from earlier perspectives?*

- *How did Gestalt psychology differ from structuralism?*
- *Has psychology been free of prejudice and discrimination?*

Any brief history will omit some of the numerous individuals who made valuable contributions as they ushered in psychology as a scientific discipline. However, let me introduce you to the individuals who have been ranked by prominent historians as some of the most important psychologists of all time and the schools of thought that they spawned (Korn et al, 1991; Skokal, 2002).

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Wilhelm Wundt, the founder of psychology

1.2a Wilhelm Wundt and Structuralism Examined the Structure of the Mind.

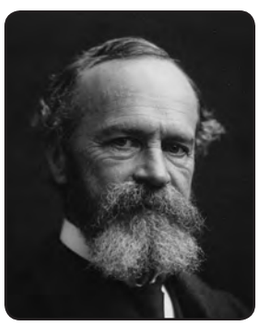
Most historians call Wilhelm Wundt (pronounced "Vill-helm Voont", 1832–1920) the "world's first psychologist." Wundt wrote the first textbook in the field of psychology in 1874, and in 1879 he established the first institute for research in experimental psychology at the University of Leipzig in Germany (Kim, 2009). Although in the early years no formal psychology courses were offered at the institute, many students from Europe and the United States traveled to Leipzig to study the psychology of consciousness. Wundt's method for studying the mind was known as *introspection*, a research technique in which trained observers would report on the contents of their own immediate states of consciousness. His model of consciousness, which his student Edward Titchener later named **structuralism**, sought to identify the components of the conscious mind.

Structuralism An early theory in psychology that sought to identify the components of the conscious mind

We take issue … with every treatment of psychology that is based on simple self-observation or on philosophical presuppositions.

—Wilhelm Wundt, 1832–1920

Between 1876 and 1919, more than 100 students obtained doctoral degrees studying psychological topics under Wundt's supervision (Fernberger, 1933; Tinker, 1932). Some of his more illustrious students were Titchener (1867–1927), who named and popularized structuralism in America; G. Stanley Hall (1844–1924) who founded the American Psychological Association in 1892; Hugo Münsterberg (1863–1916) America's first industrial psychologist; James McKeen Cattell (1860–1944), a pioneer in the study of individual differences; and Viktor Henri, a collaborator with Alfred Binet in developing the first intelligence tests. In addition to his students from North America and Europe, Wundt trained students from other countries, including Japan and China. Indeed, Wundt's influence on the first generation of psychologists was so great that most contemporary psychologists can probably trace their historical lineage back to him (Blumenthal, 2002).



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William James, the first major American psychologist

1.2b William James and Functionalism Analyzed the Functions of the Mind.

William James (1842–1910) was one of the first American students who visited Wundt in Leipzig. However, he quickly concluded that Wundt's approach to psychology was not to his liking. James's desire was to understand how the mind affects what people do rather than to merely identify its components. In addition, James' approach to psychology had little to do with laboratory studies and relied heavily on his own rich ideas and eloquent writing instead (Hoffman & Thelen, 2010). Because of James's interest in how the conscious mind helps humans survive and successfully adapt to their environment—that is, how the mind functions—his approach to psychology came to be called **functionalism**. James's theory of emotion (discussed in Chapter 11, Section 11.5d), his contention that there are two different kinds of memory, and his analysis of the psychology of religion are still highly regarded today.

Functionalism An early approach to psychology that studied how the conscious mind helps humans survive and successfully adapt to their environment

In 1890, James published a brilliant two-volume text entitled *Principles of Psychology*, which quickly established its author as America's foremost psychologist

and is still considered a classic among classics. In addition to his superb writing and brilliant ideas, James was a masterful teacher at Harvard University; he even wrote a popular book, *Talks to Teachers* (1899), which offered practical advice to teachers. Unlike Wundt, James had a relatively small group of students. Among them were such luminaries as James Angell (1869–1949), who further developed functionalism); Mary Calkins (1863–1930), a pioneer in memory research; Edward Thorndike (1874–1949), who investigated trial-and-error animal learning; and Robert Woodworth (1869–1962), a pioneer in motivation and drive theory.

Journey of Discovery

At the beginning of the twentieth century, Hermann Ebbinghaus (1850–1909), one of psychology's pioneers, stated, "Psychology has a long past, but only a short history." What do you think he meant by this statement?

Although James is widely regarded as one of psychology's most influential thinkers, during the last decade of his life he abandoned the discipline and established himself as America's best-known philosopher since Ralph Waldo Emerson (1803–1882). James described his philosophy, known as *pragmatism*, as a "philosophy without humbug." Arguing that there are no such things as absolute beliefs or truths, he stated that all beliefs must be judged by whether they produce practical benefits for the person. In other words, beliefs do not work because they are true; rather, they are true because they work. Thus, if a person's belief in God produces practical benefits, such as a sense of security and psychological health, then for that person the existence of God is a personal truth. Pragmatism proved to be an extremely popular philosophy in early twentieth-century America.

I wished, by treating Psychology like a natural science, to help her to become one.

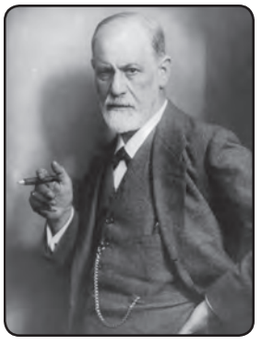
—William James, 1842–1910

1.2c Sigmund Freud and Psychoanalysis Examined How the Unconscious Mind Shapes Behavior.

The third prominent person to shape psychology during its early years was Sigmund Freud (1856–1939), an Austrian physician trained as a neurologist. Actually, because Freud was a physician, his proper title is "psychiatrist" rather than "psychologist." Despite this technicality, psychology still claims him as an important founder of one of the early schools of thought in the discipline.

Instead of working in the lab (as Wundt did) or teaching at the university (as James did), Freud developed his approach to psychology through clinical practice. Based on his work with patients who suffered from ailments that had no known physical causes, Freud developed a theory that all human behavior is determined by hidden or unconscious motives and desires that are sexual in nature. In a very real sense, he contended that part of our personality never matures and that the "adult" side of our personality struggles to control the "infant" side, with only limited success.

Freud's emphasis on the unconscious mind stood in sharp contrast to Wundt's and James's studies of conscious experience. The belief that most of the mind is inaccessible to a person's conscious awareness led Freud and his followers to develop therapy techniques and personality tests designed to reveal this hidden domain. This approach to psychology, which Freud called **psychoanalysis**, influenced the study of such diverse topics as dreams, childhood development, aggression, sexuality, creativity, motivation, personality, and psychotherapy (Kafka, 2002).



Wikimedia Commons

Sigmund Freud, the founder of psychoanalysis

Psychoanalysis An approach to psychology that studies how the unconscious mind shapes behavior

I am actually not at all a man of science, not an observer, not an experimenter, not a thinker. I am by temperament not but a conquistador—an adventurer, if you want it translated—with all the curiosity, daring, and tenacity of a man of this sort.

—Sigmund Freud, 1856–1939

Freud's writings attracted many followers to psychoanalysis. Among the brightest of this group were Alfred Adler (1870–1936), founder of individual psychology; Carl Jung (1875–1961), founder of analytic psychology: and Karen Horney (1885–1952), one of the first psychologists to emphasize social rather than biological determinants of gender differences. Yet Freud was intolerant of disagreement or dissent. When each of these people developed ideas that challenged some of Freud's cherished concepts, they either left or were expelled from the psychoanalytic inner circle. In response to these challenges, Freud established a committee of loyal followers whose job it was to repulse critics of psychoanalysis. Although no other psychologist comes close to matching Freud's impact on popular culture, his reluctance to submit psychoanalysis to critical examination stunted its development as a scientific theory. In Chapter 12, Section 12.2, we will examine Freud's theory of personality and its influence on contemporary psychological theories.

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John Watson, the founder of behaviorism

1.2d John Watson and Behaviorism Investigated Observable Behavior.

Just as psychoanalysis is closely associated with Sigmund Freud, so is behaviorism intimately intertwined with John Watson (1878–1958). As an adolescent, Watson did not appear even remotely destined for greatness. Coming from a broken home, he was a poor and disruptive student who was arrested twice by the authorities. Despite these early troubles, Watson convinced the president of a local South Carolina college to admit him as a "sub-freshman" at the age of 16. In this new world, Watson thrived, fell in love with the psychology taught in his philosophy courses, and eventually was awarded the first PhD degree from the department of psychology at the University of Chicago in 1903.

Watson's research with rats, dogs, and other animals caused him to question the three current schools of psychology that analyzed the structure, content, and function of the mind. His subjects couldn't talk or introspect, and thus, there was no hope that they could reveal the seeming mysteries of the mind. Perhaps partly because of this fact, Watson came to believe that rather than studying hidden psychological processes, psychology should study observable behavior; and his approach came to be called **behaviorism**. In 1913, Watson published an article entitled "Psychology as the Behaviorist Views It," in which he challenged his fellow psychologists to abandon the other schools of thought because their focus of study, consciousness, was neither a definable term nor a usable concept. His opening paragraph spelled out the direction for this new school:

Behaviorism An approach to psychology that studies observable behavior rather than hidden mental processes; also referred to as the *behavioral perspective*

> Psychology as the Behaviorist sees it is a purely objective, experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential parts of its methods, nor is the scientific value of its data dependent upon the readiness with which they lend themselves to interpretation in terms of consciousness. The behaviorist, in his efforts to get a unitary scheme of animal responses, recognizes no dividing line between man and brute. The behavior of man, with all its refinement and complexity, forms only a part of the behaviorist's total scheme of investigation. (Watson, 1913, p. 158)

Watson's radical behaviorism struck a responsive chord among many American psychologists who shared his impatience with what they considered the fuzziness of the other schools within psychology (Schnaitter, 1987). Underlying behaviorism was a philosophy known as *logical positivism*, which contended that all knowledge should be expressed in terms that can be verified empirically or through direct

observation. These new psychologists sought to describe, explain, predict, and control behavior. Within two years (1915), Watson was elected president of the American Psychological Association (APA).

Like William James before him, Watson did not complete his career in the field of psychology. Yet, unlike James, this change in career path was not of his choosing. Just as behaviorism was establishing itself as the dominant school within psychology, Watson was forced to resign from Johns Hopkins University due to a sexual affair with a research assistant. Unable to secure another academic position following this scandal, Watson began a new career devising market research techniques in advertising. In addition to this work, Watson for a time wrote many popular books and magazine articles related to psychology, and he was in great demand as a lecturer and radio commentator. Although his academic career spanned fewer than 20 years, Watson is still regarded as the leader of the behaviorist revolution in psychological thought. His approach to understanding behavior dominated psychology in North America from the 1920s through the 1950s (Innis, 1992).

BVT Lab

Flashcards are available for this chapter at www.BVTLab.com.

1.2e Max Wertheimer and Gestalt Psychology Studied How the Mind Organizes Stimuli into Meaningful Wholes.

During the first decades of the twentieth century, **Gestalt psychology** gained prominence primarily as a critique of—and an alternative to—structuralism (King & Wertheimer, 2005). *Gestalt* is a German word that means shape or form. The founder of this school of psychology, Max Wertheimer (1880–1943), criticized Wundt's structuralism for attempting to understand the conscious mind by identifying and analyzing its components. Instead, Wertheimer contended, "The whole is different from the sum of its parts." That is, our perceptions are not to be understood as the mind passively responding to a simple combination of individual elements, but rather as the mind actively organizing stimuli into meaningful wholes. Wertheimer and his colleagues, Wolfgang Köhler (1887–1967) and Kurt Koffka (1886–1941), produced many demonstrations of the unity of perceptual processes.

Gestalt psychology The approach to psychology that studies how the mind actively organizes stimuli into meaningful wholes

Figure 1-1 is an example of how our perceptions emerge as wholes, not parts. When looking at the four dots in Figure 1-1a, most people perceive them as corners of an invisible square rather than as separate, discrete objects. However, when three of the dots are increased in size in Figure 1-1b, most people see the configuration of a triangle and a separate dot. This dot example illustrates the *laws of grouping*, which

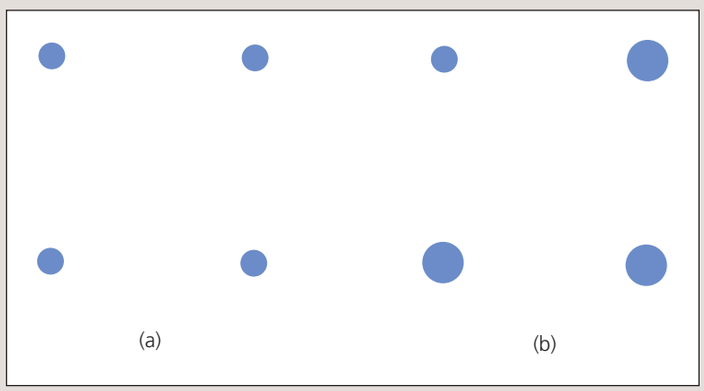


FIGURE 1-1

Gestalt Psychology Stressed that Perception Strives Toward a Complete Form

(a) These four dots are likely to be perceived as a square. (b) However, if three of the dots become twice as big while the fourth remains the same size, the four dots are likely to be perceived as a triangle (of larger dots) and a single dot.

describe how people tend to group discrete stimuli together into a meaningful whole (see Chapter 5, Section 5.5a).

Besides creating new ways of thinking about perception, Wertheimer, Köhler, and Koffka analyzed learning and problem solving; however, they always treated these topics as whole phenomena. Later, one of their colleagues, Kurt Lewin (1890–1947), applied the Gestalt approach to understanding social behavior; he and his students were instrumental in shaping the development of a new area of specialization, social psychology.

There is one final story to tell about these pioneers in Gestalt psychology. They were Germans whose careers spanned a time of great social turmoil in their country, culminating in the Nazis taking control of the government and instituting anti-Semitic laws. During this period, the majority of German academics and scientists either kept quiet or actively supported Adolf Hitler (Wyatt & Teuber, 1944). Notable exceptions were the Gestalt psychologists. For example, at about the same time that Wertheimer was removed from his faculty position at the University of Berlin and expelled from Germany, Köhler wrote a highly critical article of the Nazi regime in the German equivalent of *The New York Times*; this was the last anti-Nazi article to be published under the Nazis. When all professors were ordered to begin their lectures with the Nazi salute, at his next class—and with numerous Nazis in the audience—Köhler responded by flipping his hand in a caricature of the Nazi salute as he outlined his opposition to the government (Crannell, 1970). Such open defiance was extremely dangerous, and eventually all four men were expelled from the country and relocated to the United States. There, they influenced the next generation of American psychologists (Ash, 2002).

Journey of Discovery

Consider the five early perspectives in psychology. What contribution did each make to our understanding of thinking and behavior?

1.2f Despite Discrimination, Women and Ethnic Minorities Shaped Psychology.

Do you think it is simply a coincidence that the founders of the early schools of thought in psychology were all White men? On this issue, psychology reflected the cultural prejudices of the times, asserting that White men were intellectually superior to women and to members of all other racial and ethnic groups. Due to this institutionalized sexism and racism during the first seventy-five years of psychology's existence, women and minorities were generally excluded from graduate education (Kimmel, 1992; Minton, 2000). Those fortunate enough to be allowed to pursue a career in psychology generally had a substandard environment in which to conduct their research. Despite such impediments, many women and ethnic minorities made valuable contributions to the development of psychology (Furomoto & Scarborough, 2002).

A good example of the prejudice and discrimination faced by women in psychology is the career of Mary Calkins, who completed all requirements for a PhD at Harvard University in 1895. William James described her dissertation defense as "the most brilliant examination for the PhD that we have had at Harvard." Yet, despite being enthusiastically recommended for her doctoral degree

Archives of the History of American Psychology—The University of Akron

Mary Calkins, the first female president of the American Psychological Association

by James and her other professors, Calkins was denied the PhD because the university did not grant degrees to women. Harvard, like most universities at the time, allowed women to attend graduate classes only as "hearers," and thus they were not considered full-fledged graduate students. Indeed, when James first allowed Calkins to enroll in his seminar as a hearer, the male students walked out in protest—leaving Calkins as the sole student with her professor. Can you imagine how you might react to such blatant discrimination? Keep in mind that excluding women from most professions was the accepted practice throughout society. Would you fight the discrimination? If so, how would you fight?

Archives of the History of American Psychology—The University of Akron

Margaret Washburn, the first woman to receive a PhD in psychology

In 1902, Harvard offered Calkins a PhD from its sister college, Radcliffe; however, she declined, stating that accepting it would mean that she also accepted the college's sexist policies. Pursuing the few career paths open to her, Calkins became a non-PhD professor at all-female Wellesley College. There, she established one of the first psychology laboratories in the United States, pioneered research in short-term memory, and in 1905 became the first woman president of the American Psychological Association. Despite this distinguished career, in 1930 Harvard again rejected a petition presented by several famous alumni to award Calkins her previously earned PhD (Madigan & O'Hara, 1992). Even more remarkably, in 2002 Harvard again resisted efforts to grant Calkins the degree she had earned more than a century ago.

Mentally the negro is inferior to the white. … deterioration in mental development is no doubt very largely due to the fact that after puberty sexual matters take the first place in the negro's life and thoughts.

—***Encyclopaedia Britannica***, 1911

The first woman to actually receive her doctorate in psychology was Margaret Washburn (1871–1939) in 1894 at Cornell University (Furomoto, 1992). During her distinguished career, Washburn was a research pioneer in comparative psychology and served as president of the American Psychological Association in 1921 (Dewsbury, 1992). Like Calkins, but unlike most of her male colleagues, Washburn never married because a woman's decision to marry generally required her not to work outside the home.

It is not possible for every woman to be a scholar, a doctor, a lawyer, or possibly to attain the highest position in professions where competition with men is keen. As members of school boards, factory inspectors, poor law guardians, and sanitary inspectors, they have had ample scope for gratifying their ambition and energy.

—***Encyclopaedia Britannica***, 1911

In addition to this discrimination, even when women found a place within psychology, their contributions often went unrecognized by contemporaries. One such example is Bärbel Inhelder, a student of the developmental psychologist Jean Piaget (see Chapter 4, Section 4.3a). Despite collaborating with the pioneer of cognitive development on eight books, providing significant insight into cognitive processes and mental retardation, and even playing an instrumental role in discovering formal operational thinking in adolescents, Inhelder never received the acclaim she deserved (Muller et al., 2004).

Similar obstacles also impeded the careers of ethnic minorities (Schultz & Schultz, 2000). The first African American to receive a PhD in psychology was Gilbert Jones, who obtained his degree from the University of Jena in Germany in 1901 (Guthrie, 1976). Thirty-two years later, Inez Prosser, after teaching many years with a master's degree, became the first African-American woman to receive her doctorate in psychology from the University of Cincinnati. Despite the discrimination faced by African Americans during these early years, many made significant contributions to this budding science. For example, in 1920 the structural psychologist J. Henry Alston discovered how we sense heat and cold from our skin receptors (see Chapter 5, Section 5.4b). In the field of social psychology, Kenneth Clark and Mamie Phipps Clark's groundbreaking research in the 1930s and 1940s on the self-concept of Black children provided the scientific justification for the U.S. Supreme Court to end the practice of racially segregated education (see the end-of-chapter "Psychological Application" section). In 1971, Kenneth Clark became the first African American to be elected president of the American Psychological Association.

AP Wide World Photo

George Sanchez (1906–1972), early pioneer in educational and cultural psychology

Hispanic psychologists have also made many important contributions (Guthrie, 1976). For example, George Sanchez was an influential educational and cultural psychologist who was a civil rights advocate and an early critic of using culturally biased psychological tests in assessing Mexican-American children. Similarly, John Garcia pioneered research on taste aversion in the 1960s (see Chapter 7, Section 7.1d).

As you can see from this brief overview, women and minorities in psychology had to overcome considerable social obstacles before they could position themselves to contribute to the development of the new science. During the past quarter century, career opportunities for women and ethnic minorities in psychology have expanded; and this greater diversity has challenged old assumptions of human behavior and spurred the study of previously overlooked populations. Today, in the United States about half of all psychologists holding doctoral degrees are women, they make up almost three-fourths of all the new PhDs, and they now outnumber men as members of the American Psychological Association by almost 2 to 1 (American Psychological Association, 2008; Cynkar, 2007). Moreover, members of ethnic minority groups now account for about 23 percent of graduate students in psychology masters degree and doctoral programs. Similar diversity trends are also found in Canada.

Despite these advances, more work is needed. For example, although the majority of new doctorates in psychology today are women, men are still far more likely than women to hold the most powerful positions of authority in university psychology departments (Kite et al., 2001; Peterson et al, 1998). It is also true that there are still far too few ethnic minorities in the discipline compared to their numbers in the general population. As an example, although Latinos make up about 13 percent of the U.S. population, fewer than 8 percent of graduate school students and only about 1 percent of psychology practitioners and psychology full professors are Latino (Dingfelder, 2005). Similar patterns are also found among African Americans. Thus, although women and ethnic minorities have begun to share more of the center stage with their White male colleagues, the twenty-first century still awaits a more diverse cast of characters in this ever-changing science. Some of you reading this textbook will be part of this new generation of psychologists. What would you do to encourage this greater diversity without unfairly limiting the opportunities of young White males?

Section REVIEW

- Wilhelm Wundt—identified as the world's first psychologist—developed structuralism, which sought to identify the components of the conscious mind.
- William James and functionalism studied how the conscious mind helps humans survive and successfully adapt to their environment (how the mind functions).
- Sigmund Freud and psychoanalysis studied how the unconscious mind shapes behavior.
- John Watson and behaviorism considered only observable behaviors to be legitimate topics for scientific inquiry.
- Max Wertheimer and Gestalt psychology studied how the mind actively organizes stimuli into meaningful wholes.
- Despite discrimination, many women and ethnic minorities made valuable contributions to the development of psychology.

1.3 Contemporary Perspectives and Areas of Specialization

PREVIEW

- *Which of the early psychological perspectives exist as contemporary perspectives?*
- *What prompted the development of humanistic psychology?*
- *What is emphasized in cognitive psychology?*
- *What is the primary focus of the neuroscience perspective?*
- *Which perspective explains the importance of genetic survival?*
- *How does the sociocultural perspective differ from the evolutionary perspective?*
- *What areas of specialization in psychology emphasize research over application?*
- *What areas of specialization in psychology emphasize application over research?*

Of the five early schools of psychology, only psychoanalysis and behaviorism have survived as contemporary perspectives—although even they have been significantly altered from their original form. A contemporary approach to psychotherapy is known as Gestalt therapy (see Chapter 14, Section 14.5b), but it has little more than its name in common with the early German school of Gestalt psychology. Instead, Gestalt psychology's influence is seen today in the specialty areas of cognitive and social psychology. It is also true that even elements of the now-defunct structuralist and functionalist schools continue to shape psychology in the early years of the twenty-first century. Let us briefly examine seven contemporary perspectives within psychology that shape not only current psychological theory and research but also its application in everyday settings.

1.3a Psychoanalysis and Behaviorism Still Influence Theory and Research.

Two of the early psychological perspectives—psychoanalysis and behaviorism—still exist today, although their emphases have shifted somewhat. For example, in explaining personality, many psychoanalysts today downplay Freud's emphasis on sexual drives and emphasize cultural experiences instead. Despite this shift in focus, the unconscious mind and early childhood experiences are still central areas of attention within this perspective. Yet many contemporary psychoanalysts, influenced by Erik Erikson's (1902–1994) writings, have rejected Freud's view that personality development, for all practical purposes, is complete by age 5. Instead, contemporary psychoanalysis generally accepts Erikson's (1980) view that personality is continually shaped and changed throughout life. Erikson's work is discussed in Chapter 4.

The central figure shaping contemporary behaviorism was B. F. Skinner (1904–1990), who stressed the role of consequences in controlling behavior (Rutherford, 2009). His research—which is discussed in Chapter 7—found that people and other animals tend to repeat behaviors that are followed by positive consequences and tend to avoid behaviors that bring negative consequences. For example, if you are rewarded for being helpful, you are likely to repeat such actions in the future; but you are unlikely to do so if your helpfulness is punished. In addition, this psychological perspective played a key role in insisting that psychologists precisely define and objectively measure the concepts they study. Although behaviorism does not exert

the influence over psychology that it once enjoyed, you will recognize its footprints throughout this text as you examine various psychological topics (Smith, 2002).

1.3b Humanistic Psychology and Positive Psychology Highlight Personal Growth.

Humanistic psychology An approach to psychology that emphasizes human beings' innate capacity for personal growth and their ability to consciously make choices

Arising from the dissatisfaction of many psychologists with both the psychoanalytic and behaviorist views of human nature, a third force exerted its influence on psychology in the 1950s. **Humanistic psychology** emphasizes people's innate capacity for personal growth and their ability to make conscious choices. Carl Rogers (1902–1987) and Abraham Maslow (1908–1970) were the primary architects of this perspective; both contended—like William James before them—that psychology should study people's unique subjective mental experiences of the world.

In the 1960s, humanistic psychology served as the intellectual inspiration of the *human potential movement*, which became a loosely knit social movement striving to help individuals achieve their full human potential. Both within psychology and throughout the larger culture, humanistic psychology has had a broad impact by stressing the important role that positive life experiences play in people's lives. Although the humanistic approach has been criticized for being the least scientifically based of all contemporary perspectives within psychology, its emphasis on conscious experience and the essential goodness of people has promoted the scientific study of previously neglected topics—such as self-awareness, love, helping behavior, and positive personality growth—all issues that we will explore in this text.

Positive psychology A new scientific approach to studying optimal human functioning that asserts that the normal functioning of human beings cannot be accounted for with purely negative (or problem-focused) terms

Within the past 10 years, a new psychological perspective called *positive psychology* has emerged, which is a direct descendant of the humanistic perspective. **Positive psychology** is a scientific approach to studying optimal human functioning that asserts that the normal functioning of human beings cannot be accounted for with purely negative (or problem-focused) terms. Because this new perspective is more firmly grounded in rigorous scientific methodology than is the traditional humanistic perspective, positive psychology may be in a better position to shape the future direction of psychology. Researchers who identify themselves as positive psychologists are currently studying what it means to be a well-adapted person and what makes people happy and optimistic in their daily living (McNulty & Fincham, 2012; Ong & Dulmen, 2007). For example, when does an optimistic view of life help you overcome hurdles to success, and when does it cause you to overlook impending failure? How can you take positive steps to reach important life goals, reduce social injustice in the world, and improve your life and the lives of others? These are some of the goals of positive psychology.

1.3c Cognitive Psychology Analyzes How the Mind Organizes and Interprets Experiences.

Cognitive psychology An approach to psychology that attempts to understand behavior by studying how the mind organizes perceptions, processes information, and interprets experiences

Accompanying the criticism of behaviorism by humanistic theorists were an increasing number of studies finding interesting phenomena that were difficult to explain without reintroducing the concept of consciousness. In the 1960s, when this evidence had reached a sufficient critical mass, the theoretical center of gravity in psychology shifted from behaviorism to cognitive psychology. The word *cognitive* comes from the Latin for "to know." **Cognitive psychology** is a psychological approach that attempts to understand behavior by studying how the mind organizes perceptions, processes information, and interprets experiences (Bargh & Mosella, 2008). For example, how do you remember a new friend's phone number? Or how

do you decide while serving on a jury whether a defendant is guilty or innocent? Cognitive theories provide insights into these kinds of mental processes. Two of the principal leaders of this cognitive revolution in psychology were George Miller, who made important discoveries in human memory, and Ulric Neisser, who coined the term "cognitive psychology" and wrote one of the first books in the field.

The ascendancy of cognitive psychology coincided with the development of a new form of technology, namely, the computer. Cognitive psychologists argued that the mind is like a computer. Like a computer, the mind receives input from the environment, which it then transforms, stores, and later retrieves using a host of "programs," ultimately leading to specific response outputs. The computer is not only a useful metaphor for the mind. As new generations of computers are developed to actually work like the human brain, it also has become an invaluable subject of study, simulating human thought. Today, behaviorist John Watson's description of the brain as "a black box forever mysterious" is no longer true, thanks largely to the discoveries of cognitive psychologists. This perspective provides valuable insights into many of the topics we will examine throughout this text.

1.3d The Neuroscience Perspective Focuses on the Nervous System.

In recent years, as new techniques and instruments have been developed to examine the brain and how it reacts under different circumstances, psychologists have become increasingly interested in biological mechanisms (Hasselmo, 2012). The resulting attempts to understand behavior and mental processes by examining the nervous system have come to be known as the **neuroscience perspective**. In its study of how the brain communicates with itself and other body organs, as well as its attempt to understand elementary biochemical processes, this approach to psychology is focused on the most precise microscopic levels of analysis.

Neuroscience perspective An approach to psychology that attempts to understand behavior and mental processes by examining the nervous system

Although neuroscientists do study humans, they conduct a good deal of their research using animals with simpler brains, hoping that the knowledge gained in these studies will lead to greater understanding of the brain's building blocks (Eiland et al, 2012). For example, in attempting to better understand memory loss in *Alzheimer's disease* (the most common form of dementia in the elderly), a researcher might graft tissue from the brains of rat fetuses into the brains of elderly rats. If such a procedure improves the older rats' memory, this finding may provide a crucial clue to curing this disease in humans. Chapter 3 will introduce you to some of the discoveries uncovered by this neuroscientific approach.

A recurring debate in psychology related to biological explanations of behavior involves the degree to which individual differences are due to inborn biological processes versus environmental influences. Have you ever wondered why we, as individuals, often differ in our thinking and behavior? Are we born this way, or do these differences develop based on our life experiences? Philosophers have endlessly debated this issue. For example, in the fourth and third centuries BC, Plato argued that individual differences are largely inborn and due to heredity (nature), while Aristotle stressed the importance of environmental factors (nurture) and described the mind as a *tabula rasa*, or blank slate, that was later filled by life experiences. Which perspective on human nature makes more sense to you? Is there possibly a middle-ground position on this issue?

Nature-nurture debate The question of whether individual differences in behavior are primarily due to inborn biological processes or to environmental factors

This **nature-nurture debate** has been a classic controversy in psychology (Kellett, 2005). Followers of the nature position point toward the greater behavioral similarities found between identical twins (genetically the same) than between

fraternal twins (genetically not the same), using this as evidence for the influence of heredity. They further contend that the existence of similar behaviors among humans and other animals suggests the operation of similar biological processes. In contrast, advocates of the nurture position emphasize how people's thoughts, feelings, and behavior are shaped by the rewards and punishments they receive from their immediate surroundings. According to the nurturists, this type of learning—combined with the values and beliefs of the larger culture—forms the basis for differences in the way we live our lives.

As you will discover, the different perspectives within psychology tend to emphasize either nature or nurture points of view in their analysis of psychological events. However, what you will also learn is that most contemporary psychologists believe that human beings, like all other animals, are a product of both nature and nurture (Hall et al, 2004). Thus, instead of being opposing explanations of behavior, biological and environmental explanations often complement one another, adding a depth of understanding that cannot be achieved by considering only one alone (Goel, 2005).

It may metaphorically be said that natural selection is daily and hourly scrutinising … the slightest variations; rejecting those that are bad, preserving and adding up all that are good; silently and insensibly working, whenever and wherever opportunity offers, at the improvement of each organic being in relation to its organic and inorganic conditions of life. We see nothing of these slow changes in progress, … we see only that the forms of life are now different from what they formerly were.

—Charles Darwin, 1859, *On the Origin of Species*, pp. 90–91

1.3e Evolutionary Psychology Studies How Behavior Is Shaped by Natural Selection.

Evolutionary psychology An approach to psychology based on the principle of natural selection

Fueled by the growing belief in the social sciences that behavior is at least partly influenced by the effects of evolution, a perspective known as **evolutionary psychology** is increasingly being incorporated into psychological theories (Al-Shawaf & Buss, 2011). Yet, what is evolution? The evolutionary perspective is partly based on the writings of the biologist Charles Darwin (1809–1882), who theorized that changes in the population of a species occur over many generations due to the interaction of environmental and biological variables.

According to evolutionary theory, living organisms struggle to survive, and within each species, a great deal of competition and biological variation occurs between individuals (Darwin, 1859). Those members of a species with genetic traits best

Shutterstock

According to natural selection, animals that live in very cold and snowy environments will be more likely to survive and reproduce if their fur provides both insulating warmth and camouflage so that they blend in with the snow. Why doesn't the fur of zoo-housed polar bears turn darker to better match their zoo environment?

adapted for survival in their environment will produce more offspring; as a result, their numbers will increase in frequency in the population. As the environment changes, however, other members within the species possessing traits better suited to the new conditions will flourish, a process called **natural selection**. In this way, the environment selects which genetic traits will be passed on to future generations. As natural selection continues, and as the features best suited for survival change again and again, the result is **evolution**, a term that refers to the gradual genetic changes that occur in a species over generations. Reproduction is central to natural selection; the essence of the natural selection process is that the characteristics of some individuals allow them to produce more offspring than others. For example, in an environment that is mostly frigid and snowy, mammals with a lot of insulating fur are more likely to survive and reproduce than are those with less fur. Similarly, animals that look white are more likely than darker-appearing members of their species to blend in with the snow, which may protect them from predators or make them more stealthy hunters of prey (see accompanying photo of polar bears). This whiteness will lead to more offspring being produced. The result of this natural selection process—which transpires over thousands of generations—is that mammals from many species living in a frigid and snowy environment will have thick, white fur covering their bodies. Figure 1-2 depicts how natural selection causes evolutionary changes.

Natural selection The process by which organisms with inherited traits best suited to the environment reproduce more successfully than less well-adapted organisms over a number of generations which leads to evolutionary changes

Evolution The genetic changes that occur in a species over generations due to natural selection

One of the best-known documented examples of natural selection is the peppered moth *Biston betularia*, a common insect in Britain (Kettlewell, 1973). Before the industrial revolution, the vast majority of moths within this species were light-colored. However, by the late 1840s, people began to see much darker versions in heavily industrialized regions of the country. The reason for this change was that industrial pollutants had darkened the tree bark in the surrounding forests where the moths spent much of their time, making the lighter-colored ones much more

Natural selection, as it has operated in human history, favors not only the clever but the murderous.

—Barbara Ehrenreich, U.S. author and columnist, b. 1941

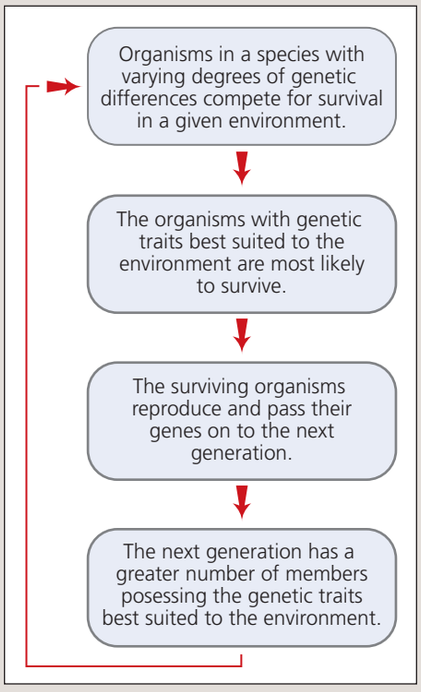


FIGURE 1-2

How Natural Selection Works

Environments are always undergoing changes. Throughout these changes, those organisms in a species that possess genetic traits that allow them to best adapt to the changes are most likely to survive, reproduce, and pass their genes on to the next generation. This is the reason that evolutionary theorists contend that it is the environment that "selects" which traits will be passed on to future generations. The result of this natural selection process is evolution.

vulnerable to predatory birds that hunt by sight. Under these altered environmental conditions, the darker moths now possessed better natural camouflage; and they survived and reproduced in greater numbers. By the mid-twentieth century, these dark-colored moths made up more than 90 percent of the peppered moth population in industrialized areas. However, in unpolluted areas of Britain, where the tree bark was much lighter in color, the lighter-colored moths continued to flourish. This is an example of how human activity can affect changes in the natural selection of other species.

The peppered moth story is a dramatic demonstration of natural selection, and a more recent development in this moth saga illustrates another important feature of evolution. In the 1960s, Britain began legislating tougher environmental laws. As the air in industrialized regions became cleaner, forest tree bark also lightened in color, resulting in lighter-colored moths becoming more prevalent once again (Campbell et al, 1994). This development illustrates that evolution does not necessarily result in species being transformed into more complex forms of life. Instead, the key feature of the evolutionary process involves the degree to which an organism's inborn traits help it adapt to its current environment. Thus, just as a trait that was once highly adaptive can become maladaptive if the environmental conditions change, the reverse is also true: A maladaptive trait can become extremely adaptive.

In summarizing the evolutionary process, keep in mind that it is ongoing. Every species on the planet is undergoing some sort of evolution, even though the speed of the process differs substantially across species. Species that experience a great deal of change in their environment, such as the peppered moth, evolve faster than those that live in stable environments. Also keep in mind that individual organisms do not evolve—populations evolve. Individuals play a role in evolution by interacting with the environment and having their genes screened by natural selection. Thus, individuals contribute to a change in their species' population by their own successes or failures in reproducing. Over many generations, the accumulated effects of literally thousands or even millions of individuals' reproductive successes and failures lead to evolution of the species. The specific role that genes play in reproduction will be discussed more fully in Chapter 3, Section 3.4a.

1.3f The Sociocultural Perspective Studies How Behavior Is Shaped by Social and Cultural Forces.

Sociocultural perspective An approach to psychology that emphasizes social and cultural influences on behavior

Culture The total lifestyle of people from a particular social grouping, including all the ideas, symbols, preferences, and material objects they share

While the evolutionary perspective examines how inherited genes shape the behavior of humans and other living creatures, the **sociocultural perspective** emphasizes the role that social and cultural factors play in explaining behavior (Kirschner & Martin, 2010). **Culture** is the total lifestyle of people from a particular social grouping, including all the ideas, symbols, preferences, and material objects that they share. It is a shared system of ideas about the nature of the world, and it consists of rules governing how people should think, feel, and act within this world.

Many countries contain a number of distinct cultures. For example, in the United States we can identify many cultural heritages, among them Native American, Hispanic, European, African, Asian, and Middle Eastern. In analyzing culture, it is important to understand that lifestyle changes over time. Thus, Native American culture today is not the same as Native American culture in the 1800s or even in the mid-1900s. This attention to social and cultural factors as a means of explaining human thought and behavior is a central element in many psychological theories.

Individualism and Collectivism

One aspect of culture that is very important in understanding the psychology of human behavior is the belief system concerning how individuals relate to their groups (Triandis, 1995). The human species has evolved within a social group sphere. One of the fundamental dilemmas we have faced throughout our existence is that each individual's inherent desire to pass its genes on to the next generation pushes her or him toward selfish, self-serving actions that can potentially threaten the survival of the individual's group, and thus the individual itself. Somehow, through the process of natural selection, we have struck a delicate balance between these conflicting tendencies. Today, the cultural belief systems known as *individualism* and *collectivism* are products of this evolutionary-based tension between the desire to selfishly maximize one's reproductive fitness and the need to cooperate with others in order to survive (Kâgitçibasi, 1994; Oyserman et al, 2002).

Individualism A philosophy of life stressing the priority of personal goals over group goals, a preference for loosely knit social relationships, and a desire to be relatively autonomous of others' influence

Collectivism A philosophy of life stressing the priority of group goals over individual goals, a preference for tightly knit social relationships, and a willingness to submit to the influence of ones' group

Individualism is a philosophy of life that stresses the priority of personal goals over group goals, a preference for loosely knit social relationships, and a desire to be relatively autonomous of others' influence. In contrast, **collectivism** is a philosophy of life that stresses the priority of group goals over individual goals, a preference for tightly knit social relationships, and a willingness to submit to the influence of one's group (Shulruf et al., 2011). Currently, 70 percent of the world's population lives in cultures with a collectivist orientation, which is a much older cultural belief system than individualism (Singelis et al, 1995). Individualism, which developed out of collectivism, is largely a manifestation of the mind-set of people living in industrialized societies.

Although we know that cultures differ in their individualist-collectivist orientations, we do not know whether one is better than the other in any ultimate evolutionary sense. In this text, we will periodically examine how the psychology of people from different cultures differs due to their individualist-collectivist bents. For example, in the Chapter 4 discussion of human development, you will discover that within collectivist societies childrearing practices tend to emphasize conformity, obedience, and knowing one's proper place, while within more individualist societies independence and self-reliance are stressed. One consequence of these differing views is that in an individualist society, people develop a belief in their own uniqueness and diversity. This sense of individuality is nurtured and fostered within the educational system, and its manifestation is considered a sign of maturity. On the other hand, in a collectivist society, uniqueness and individual differences are often seen only as impediments to proper self-growth. Instead, the person is thought to become most meaningful and complete when she or he is closely identified with—not independent of—the group.

Wikimedia Commons

Seventy percent of the world's population lives in collectivist societies. How might the thinking and behavior of these Japanese schoolchildren differ from that of children in the United States, Canada, and Europe?

Table 1-1 lists some of the differences between these two philosophies of life. The majority of social scientists consider individualism and collectivism to be two ends of a cultural continuum, with the United States, Canada, Australia, and Western European societies located more toward the individualist end and Asian, African, and Latin and South American nations situated near the collectivist end. Within both individualist and collectivist cultures, individualist tendencies tend to be stronger in large urban

TABLE 1-1 Differences Between Collectivist and Individualist Cultures

Collectivist Cultures	Individualist Cultures
Identity is given by one's group.	Identity is achieved by one's own striving.
Individuals are socialized to be emotionally dependent on their social group, and conformity is valued.	Individuals are socialized to be emotionally independent of their social group, and independence is valued.
Personal and group goals are generally consistent; when inconsistent, group goals have priority.	Personal and group goals are often inconsistent; when inconsistent, personal goals have priority.
Trust is placed in group decisions.	Trust is placed in individual decisions.

settings—where people are less dependent on group ties—whereas collectivist tendencies are more pronounced in small regional cities and rural settings—where social relationships are more interdependent (Kashima et al., 2004; Ma & Schoeneman, 1997).

Although many theorists see individualism and collectivism as two ends of a continuum, this means neither that individualist tendencies do not influence people living in collectivist cultures nor that collectivist yearnings do not shape individualists. Indeed, a growing number of theorists think of these differing ideologies as reflecting two seemingly universal and common human needs: the *need for autonomy* and the *need for communion* (Schwartz, 2003). Thus, although all humans have a need for both autonomy and communion, individualist cultures place greater value on autonomy, whereas collectivist cultures place greater value on communion. Because one of the goals of psychology is to understand how the past experiences and present conditions of others influence their interpretation of reality, these two contrasting cultural perspectives will periodically figure into our chapter discussions.

Are the Sociocultural and Evolutionary Perspectives Compatible?

Although the sociocultural and evolutionary perspectives offer different explanations for human behavior, psychologists today believe that cultural and evolutionary forces operate simultaneously in shaping thought and action (Buss & Schmitt, 2011). They argue that a culture is based on its people's relationship with the environment, and that the evolution of our species is a story of how we have adapted to our environment. Thus, just as our bodies and brains are a product of evolutionary forces, so too is our culture. Yet culture change occurs much more rapidly than genetic change. This is why there is a great deal of variation in the world's cultures but little meaningful genetic variation between cultural groups.

In this textbook, the evolutionary perspective will provide insight into how we, as a species, got to where we are with our biological structure and behavioral traits, and the sociocultural perspective will suggest how culture can either reinforce or attempt to change these evolutionary-based tendencies and patterns. This idea that new forms of behavior emerge through the interactions of people's biology and their culture and physical environment is referred to as **dynamic systems theory** (Hickman et al, 2011; Geert & Steenbeek, 2010). Essentially, this theory proposes that life is shaped by a set of vigorously active components or factors; therefore, a full understanding of living creatures, including humans, must take into account how those factors shape the life course of both individuals and entire species.

Dynamic systems theory The idea that new forms of behavior emerge through the interactions of people's biology and their culture and physical environment

All images from Shutterstock

According to dynamic systems theory, new forms of behavior emerge through the interactions of people's biology and their culture and physical environment.

1.3g Psychology's Subfields Tend to Have Either a Research or Application Emphasis.

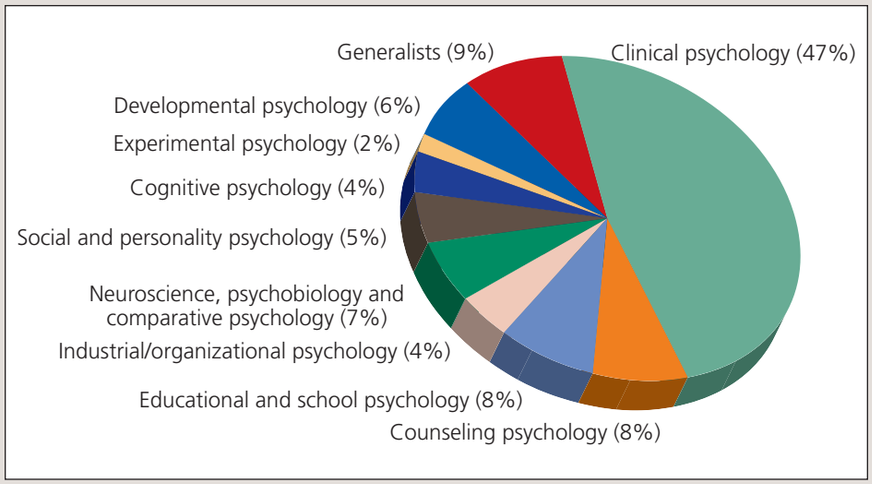
Now that you have learned something about the different schools of thought within psychology, you might be wondering who employs psychologists and what they do in these jobs. About one-fourth of all psychologists who received their PhDs during the past 10 years are employed at colleges, universities, or institutes where they teach and conduct research in their areas of specialization. The goals of these research psychologists are to acquire psychological knowledge through scientific methods and to teach this knowledge to students. Seven areas of specialization for research psychologists are as follows (see Figure 1-3):

1. *Neuroscience* (also called psychobiology, biopsychology, physiological psychology) studies behavior by examining physiological processes, especially those occurring in the brain. Neuroscientists/psychobiologists are increasingly investigating the genetic bases of thought and action.
2. *Developmental psychology* studies how people mature and change physically, cognitively, and socially throughout the life span, from conception to old age.
3. *Experimental psychology* studies basic psychological processes such as sensation, perception, learning, motivation, emotion, and states of consciousness. Keep in mind, however, that psychologists in every area of psychology use experiments.
4. *Comparative psychology* studies similarities and differences in the physiology, behavior, abilities, and genetic makeup of different species, including humans.
5. *Cognitive psychology* studies all aspects of thinking, including problem solving, decision making, memory, reasoning, mental imagery, and language.
6. *Personality psychology* studies the consistent and distinct ways in which people think, feel, and behave, including how these characteristics originated and developed.
7. *Social psychology* studies how people think about and influence one another in social settings, including how the social settings and the cultural beliefs of the individuals shape the interaction.

FIGURE 1-3

Recent PhDs in the Major Subfields in Psychology

Based on data from the 2004 Graduate Study in Psychology Collected by the American Psychological Association Research Office.



Applied psychologists
Psychologists who use existing psychological knowledge to solve and prevent problems

In addition to psychologists within these seven areas, a little over two-thirds of the psychologists who received their PhDs during the past 10 years have careers in specialty areas where they use existing psychological knowledge to solve and prevent problems (see Figure 1-3). These **applied psychologists** most often work in mental health centers, schools, industries, governmental agencies, or private practices; however, some also work at colleges and universities. Four major applied specialties are as follows:

1. *Clinical psychology* diagnoses and treats people with psychological disorders, such as depression, acute anxiety, and schizophrenia, as well as seeks to determine the causes for these disorders.
2. *Counseling psychology* diagnoses and treats people with personal problems that do not involve psychological disorders and includes marriage counseling, social skills training, and career planning.
3. *Industrial/organizational psychology* focuses on ways to select, motivate, and evaluate employees, as well as how to improve management structure and working conditions.
4. *Educational and school psychology* assesses and treats both students and the educational environment in order to facilitate children's learning and adjustment in school.

As a way of summarizing this chapter section on the contemporary perspectives and areas of specialization in psychology, consider the famous fable from India about the blind men who happened upon an elephant. None of the men had ever before encountered this sort of creature, so each reached out to explore a different part of the animal. The man who grabbed the tail exclaimed, "An elephant is like a rope!" The man who touched one of the elephant's ears shouted, "An elephant is as thin as a leaf!" "No!" marveled another, who was holding the trunk. "This animal is surely related to the snake!" "You are all mistaken," said the man who was grasping one leg. "An elephant is shaped like the trunk of a tree!" A heated argument ensued over whose description accurately captured the essence of the elephant. The mistake

these men made was that they tried to understand their subject by examining only one aspect of it.

In many respects, this is the problem we face on our journey of discovery in psychology. Each of the psychological perspectives previously discussed attempts to understand the thoughts and behavior of humans and other animals by focusing on a different psychological process. Like the blind men—who would have come to a more accurate understanding of the elephant if they had tried to reconcile their seemingly conflicting discoveries—we, too, can better understand our subject matter if we consider multiple perspectives. Alone, none provides an adequate understanding of the human condition, but together they give us an ever-clearer portrait of ourselves.

Journey of Discovery

Briefly describe the seven contemporary perspectives in psychology. Which of these perspectives appeals to you most, and which least? Why?

Section REVIEW

- Of the five early schools of psychology, only psychoanalysis and behaviorism have survived as contemporary perspectives.
- The humanistic perspective developed in opposition to psychoanalysis and behaviorism, and it emphasizes human beings' capacity for personal growth and their ability to consciously make choices.
- The cognitive perspective attempts to understand behavior by studying how the mind organizes perceptions, processes information, and interprets experiences.
- The neuroscience perspective attempts to understand behavior by examining physiological processes, especially those occurring in the brain.
- The evolutionary perspective assumes that all species have evolved in ways that maximize the chances of their genes being passed on to their offspring.
- The sociocultural perspective emphasizes social and cultural influences on behavior.
- Seven primary areas of specialization for research psychologists include the following: neuroscience, developmental psychology, experimental psychology, comparative psychology, cognitive psychology, personality psychology, and social psychology.
- Four primary areas of specialization for applied psychologists include the following: clinical psychology, counseling psychology, industrial/organizational psychology, and educational and school psychology.

PSYCHOLOGICAL applications

How Did Psychological Research Influence the U.S. Supreme Court's 1954 Decision to Desegregate Schools?

Library of Congress

Kenneth and Mamie Clark's doll studies provided the U.S. Supreme Court with evidence that racially segregated schooling instilled a sense of inferiority in Black children.

One possible consequence of living in a society where your race is considered inferior to other races is a feeling of inferiority that can be internalized and breed self-hate. This disturbing possibility motivated social psychologists Kenneth and Mamie Phipps Clark to use different-colored dolls to measure children's racial awareness and preferences (Clark & Clark, 1939, 1947). Their research, which began in the late 1930s, demonstrated that not only do children develop racial awareness by age 3, but they also become aware of the positive and negative attributes assigned to Blacks and Whites.

In interviews with African American children ranging in age from 3 to 7, the Clarks showed each child two dolls—one with light-colored skin and one with dark-colored skin—and then made the following requests:

> Give me the doll that you want to play with.
>
> Give me the doll that is a nice doll.
>
> Give me the doll that looks bad.
>
> Give me the doll that is a nice color.

The Clarks found that about two-thirds of the Black children preferred the white-colored doll. They identified it as the "nice" doll, the doll with the "nice" color, and the doll they wanted to play with. For these children, the black-colored doll looked "bad." These preferences occurred even though the children clearly understood that they themselves were Black, and thus were members of the "bad" group (Clark, 1950). As Kenneth Clark later recalled:

> We were really disturbed by our findings, and we sat on them for a number of years. What was surprising was the degree to which the children suffered from self-rejection, with its truncating effect on their personalities and the earliness of the corrosive awareness of color. I don't think we had quite realized the extent of the cruelty of racism and how hard it hit … Some of these children, particularly in the North, were reduced to crying when presented with the dolls and asked to identify with them. They looked at me as if I were the devil for putting them in this predicament. Let me tell you, it was a traumatic experience for me as well. (Kluger, 1976, p. 400)

The sort of self-rejection that the Clarks found in the Black children was later cited by the U.S. Supreme Court as evidence that the cultural beliefs justifying racially separated educational facilities in the country were damaging to the self-esteem of Black children. On May 17, 1954, the justices concluded in their *Brown vs. Board* of Education decision that the societal laws enforcing school segregation were unconstitutional. The decision electrified the African American community with hope and promise for the future while it galvanized support and opposition among White Americans (Fine, 2004).

At the time of the monumental 1954 decision outlawing racial segregation in American schools, many psychologists were working in the civil rights movement to fight racial intolerance. However, some of the officials in the American Psychological Association who supported racial segregation tried to destroy the Clarks' scientific reputation (Ludy & Crouse, 2002). For example, former APA president Henry Garrett, who had taught the Clarks in graduate school, referred to Kenneth Clark as "none too bright … he was about a C student, but he'd rank pretty high for a Negro" (Kluger, 1976, p. 502). Garrett later wrote a pro-segregation pamphlet claiming that Black people were biologically "immature" in their brain development. In 1994, long after Garrett's racial views had been discredited, the American Psychological Association honored Kenneth Clark with its prestigious Award for Outstanding Lifetime Contribution to Psychology.

Fifty years after this historic civil rights victory and a year before his death, Clark reflected on the event and the hope that psychological science offers society:

> We worked with the lawyers on the *Brown* decision without regard to color. To me, that was a good example of how science and law cut across racial and ethnic lines. … One can teach children what's cruel and hostile and what's not. The stability of the human species and the stability of the society care whether we accept or reject the values of kindness. (Kersting, 2004a, pp. 58–59)

I like to say that on May 17, 1954, I became a citizen of this country.

—Roscoe Brown, Jr., African American educatory and social commentator

Key Terms

Applied psychologist 22
Behaviorism 9
Cognitive psychology 15
Collectivism 20
Culture 19
Determinism 4
Dynamic systems theory 21
Evolutionary psychology 17
Evolution 17
Free will 5
Functionalism 7
Gestalt psychology 9
Humanistic psychology 14
Individualism 20
Natural selection 17
Nature-nurture debate 16
Neuroscience perspective 16
Positive psychology 15
Psychiatry 4
Psychoanalysis 8
Psychology 4
Sociocultural perspective 19
Structuralism 6

Suggested Websites

American Psychological Association

http://www.apa.org

This official American Psychology Association (APA) site provides access to many APA-sponsored websites related to various psychological issues.

Association for Psychological Science

http://www.psychologicalscience.org

This official website of the Association for Psychological Science (APS) provides access to many psychology-related websites and APS journals.

Today in the History of Psychology

http://www.cwu.edu/~warren/today.html

This website contains a collection of dates and brief descriptions of over 3,100 events in the history of psychology. Type in any day of the year and find out what happened on that day.

Psychology Web Links by Topic

http://www.socialpsychology.org/psylinks.htm

This is the general psychology link on the Social Psychology Network, which has more than 5,000 links to psychology topics. The Psychology Subject Areas lists and provides important information on the various subdisciplines in psychology.

Review Questions

1. Which of the following statements is true of psychology?
   a. It does not implement scientific methods.
   b. It is a small branch of psychiatry.
   c. Psychological phenomena can be predicted with 100 percent certainty.
   d. It is incompatible with free will.
   e. none of the above

2. In what year was the first institute for research in experimental psychology opened?
   a. 1879
   b. 1890
   c. 1921
   d. 1940
   e. 1960

3. Who is known as the "world's first psychologist?"
   a. Wilhelm Wundt
   b. Sigmund Freud
   c. William James
   d. Ivan Pavlov
   e. B. F. Skinner

4. Which of the following is true of William James?
   a. He wrote a classic book, titled *Principles of Psychology.*
   b. He wanted to understand how the mind affects what people do, rather than merely identifying its components.
   c. He did very little lab work; rather, he relied on his ideas and writings.
   d. His approach to psychology became known as functionalism.
   e. all of the above

5. William James, the first American psychologist, founded which of the following approaches to psychology?
   a. structuralism
   b. behaviorism
   c. functionalism
   d. psychodynamic theory
   e. Gestaltism

6. Which of the following was true of Sigmund Freud?
   a. He contended that our personality matures slowly, but surely, over the years.
   b. He emphasized the study of the conscious experience.
   c. He had no direct experience working with patients.
   d. He was technically not a psychologist but a psychiatrist.
   e. He is closely associated with behaviorism.

7. Which of the following founders of psychology believed that psychology should study observable behavior rather than hidden psychological processes?
   a. Sigmund Freud
   b. William James
   c. John Watson
   d. Wilhelm Wundt
   e. Max Wertheimer

8. Gestalt psychology produced which of the following?
   a. logical positivism
   b. laws of grouping
   c. psychoanalysis
   d. pragmatism
   e. introspection

9. Which of the following is true about Mary Calkins?
   a. William James described her dissertation defense as "brilliant."
   b. She was the first woman president of the American Psychological Association (1905).
   c. She did pioneering and influential research on short-term memory.
   d. She refused to accept a PhD from Radcliffe instead of Harvard.
   e. all of the above

10. Of the five early schools of psychology, which perspectives survived as contemporary perspectives?
    a. psychoanalysis
    b. behaviorism
    c. Gestalt psychology
    d. functionalism and structuralism
    e. *a* and *b*

11. Who were considered the architects of the perspective that emphasized people's innate capacity for personal growth and their ability to make choices?
    a. William James and Wilhelm Wundt
    b. Carl Rogers and Abraham Maslow
    c. Mary Calkins and Mamie Phipps Clark
    d. Sigmund Freud and B. F. Skinner
    e. none of the above

12. Which of the following is true of the cognitive perspective?
    a. It emphasized the essential goodness of people.
    b. It coincided with the development of the computer.
    c. It is the least scientifically based of the contemporary perspectives.
    d. It promoted the scientific study of love.
    e. none of the above

13. Which of the following is true of the neuroscience perspective?
    a. A good deal of its research is done on humans.
    b. It does not believe that research on animals can benefit humans.
    c. It is focused on the most precise microscopic levels of analysis.
    d. It is based on the writings of the biologist Charles Darwin.
    e. all of the above

14. Which of the following observations is least supportive of the evolutionary perspective?
    a. Animals in colder climates have thicker fur.
    b. Babies' skin is often soft to the touch.
    c. Giraffes have unusually long necks.
    d. Some animals have fur or skin that blends in with their environment.
    e. all of the above

15. Which of the following statements is true?
    a. A central element in many theories is that social and cultural factors can help explain human thought and behavior.
    b. The sociocultural and evolutionary perspectives are not compatible.
    c. Genetic change occurs more rapidly than cultural changes.
    d. There is a great deal of genetic variation among cultural groups.
    e. all of the above

16. Which of the following statements is true?
    a. Thirty percent of the world's population lives in cultures with a collectivist orientation.
    b. The cultural belief system of individualism is older than collectivism.
    c. From an evolutionary perspective, individualism is better than collectivism.
    d. all of the above
    e. none of the above

17. Which of the following is an applied specialty?
    a. clinical psychology
    b. counseling psychology
    c. industrial psychology
    d. school psychology
    e. all of the above

18. Which of the following did Kenneth and Mamie Phipps Clark find in their 1940s research on racial awareness among Black schoolchildren in the racially segregated South?
    a. African American children scored higher on standardized intelligence tests.
    b. Children tended to rate dolls of their own color as "nicer."
    c. All children preferred to play with other children, rather than dolls, regardless of color.
    d. The majority of African American children rated dolls that had dark-colored skin as looking "bad."
    e. none of the above