CHAPTER 1

Psychology: The Study of Mental Processes and Behavior

At the intersection of biology and culture lies **psychology**, the scientific investigation of mental processes and behavior. All psychological processes occur through the interaction of cells in the nervous system, and all human action occurs in the context of cultural beliefs and values that render it meaningful. This chapter explores the biological and cultural boundaries and borders that frame human psychology and the theoretical perspectives that attempt to explain human psychology. It also examines three big picture questions.

BOUNDARIES AND BORDERS OF PSYCHOLOGY

Boundary with Biology

The biological boundary of psychology is the province of **biopsychology** (or **behavioral neuroscience**). Instead of studying thoughts, feelings, or fears, behavioral neuroscientists (some of whom are physicians or biologists rather than psychologists) investigate electrical and chemical processes in the nervous system that underlie these mental events.

The connection between brain and behavior became increasingly clear during the 19th century, when doctors began observing patients with severe head injuries.

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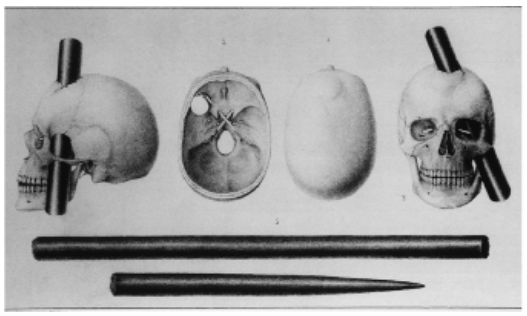

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Tamping iron that went through Phineas Gage's head and the trajectory the iron took.

One of the most famous cases was Phineas Gage, who worked as a foreman on a railroad construction site. After Gage accidentally set off an explosion on September 13, 1848, the tamping iron he had been using went straight through his head, crushing his jawbone and exiting at the top of his skull behind his eye. This tamping iron was no small piece of equipment, measuring 3 feet 7 inches long and weighing over 3 pounds. Although Gage survived the accident (and is believed to have never lost consciousness), the damage to his brain was so severe and the change in his personality so marked that people said he was no longer the same person. He became very irreverent and used profanity regularly. He was rude, uncivil, and incapable of resuming his work responsibilities.

Cases such as Phineas Gage led researchers to experiment by producing lesions surgically in different neural regions in animals to observe effects on behavior. This method is still in use today, for example, in research on emotion (Machado et al., 2009).

One of the major issues in behavioral neuroscience has been **localization of function,** the extent to which different parts of the brain control different aspects of functioning. Contemporary neuroscientists believe that the circuits for psychological events, such as emotions or thoughts, are distributed throughout the brain, with each part contributing to the total experience. Technological advances over the last two decades have allowed researchers to pinpoint lesions precisely and even to watch computerized portraits of the brain light up with activity as people perform psychological tasks. In large part as a result of technological advances, psychology has become increasingly biological, as behavioral neuroscience has extended into virtually all areas of psychology.

Boundary with Culture

To what extent do cultural differences create psychological differences? The first theorists to address this issue were anthropologists like Margaret Mead, who were interested in the relation between culture and personality (Bock, 2001; LeVine, 1982). They argued that individual psychology is fundamentally shaped by cultural values, ideals, and ways of thinking. In the middle of the 20th century, **psychological anthropologists** (see Shimizu & LeVine, 2001; Suarez-Orozco et al., 1994) began studying the way economic realities shape child-rearing practices, which in turn mold personality (Kardiner, 1945; Whiting & Child, 1953).

After the 1950s, interest in the relation between culture and psychological attributes waned for decades. Within psychology, however, a small group of researchers developed the field of **cross-cultural psychology** (Berry et al., 1992, 1997; Lonner & Malpass, 1994a,b; Shweder, 1999; Triandis, 1980, 1994). Only cross-cultural comparisons can distinguish between universal and culturally specific psychological processes.

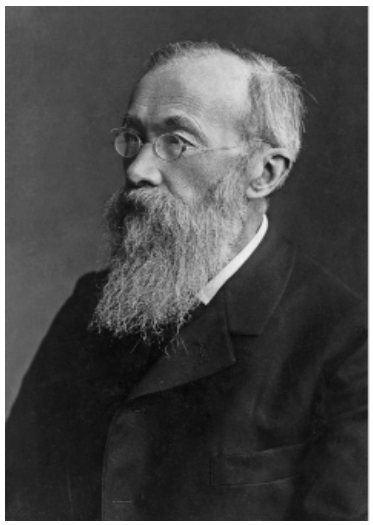
From Philosophy to Psychology

Questions about human nature were once the province of philosophy. At a time early in the 20th century when philosophers entered a period of self-doubt, wrestling with the limitations of what they could know about topics like morality, justice, and the nature of knowledge. At the same time, psychologists began applying the methods and technologies of natural science to psychological questions.

FROM PHILOSOPHICAL SPECULATION TO SCIENTIFIC INVESTIGATION Philosophical arguments have set the agenda for many issues confronting psychologists. Philosophers searched in their minds for answers to questions about the nature

of thought, feeling, and behavior, using logic and argumentation. By the late 19th century, an alternative approach had emerged: If we want to understand the mind and behavior, we should investigate it scientifically. Thus, in 1879, Wilhelm Wundt (1832–1920), often described as the father of psychology, founded the first psychological laboratory in Leipzig, Germany.

Wundt's Scientific Psychology Wundt hoped to use scientific methods to uncover the elementary units of human consciousness that combine to form more complex ideas. Foremost among the methods he and his students used was **introspection**. Wundt trained observers to verbally report everything that went through their minds when they were presented with a stimulus or task. He concluded that the basic elements of consciousness are sensations and feelings. These elements can combine into more meaningful perceptions, which can combine into still more complex ideas if one focuses attention on them and mentally manipulates them. Wundt never believed that experimentation was the *only* route to psychological knowledge, but he did consider it essential for studying the basic elements of mind.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Wilhelm Wundt

Structuralism and Functionalism Wundt's student Edward Titchener (1867–1927) advocated the use of introspection in experiments with the hope of devising a periodic table of the elements of human consciousness. Because of his interest in studying the structure of consciousness, his school of thought was known as **structuralism**. Unlike Wundt, Titchener believed that experimentation was the *only* appropriate method for a science of psychology and that concepts such as "attention" implied too much free will to be scientifically useful.

The other school of thought that dominated psychology in its earliest years was **functionalism**, which emphasized the role of psychological processes in helping individuals adapt to their environment. One of the founders of functionalism, Harvard psychologist William James (1842–1910), penned the first textbook in psychology in 1890. James believed that knowledge about human psychology could come from many sources, including not only introspection and experimentation but also the study of children, other animals, and people whose minds do *not* function adequately. James believed that consciousness exists because it serves a function, and the task of the psychologist is to understand that function.


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William James

OUTSTANDING WOMEN AND MINORITIES IN HISTORY Many psychologists asked about the history of psychology would be unable to recognize names such as Calkins, Prosser, and Washburn, who were women who made significant contributions to the women's rights movement and to psychology.

Mary Whiton Calkins (1863–1930) was refused admission to Harvard University's doctoral program in psychology because she was a woman. William James, however, allowed her into his graduate seminars. In 1902, she completed all of the requirements for the doctoral degree and outscored all of her male peers on the qualifying exams, but she was denied a degree from Harvard. Radcliffe College

Archives of the History of American Psychology, The Center for the History of Psychology, The University of Akron

Mary Whiton Calkins


Archives of the History of American Psychology, The Center for the History of Psychology, The University of Akron

Inez Prosser


Special Collections, Vassar College Libraries

Margaret Floy Washburn


Clark University Archives

Francis Cecil Summer

offered her a doctorate, which she refused in protest. In 1905, she was selected as the first woman president of the American Psychological Association. The following year she was listed as the 12th leading psychologist in the United States (O'Connell & Russo, 1980; Wentworth, 1999).

Margaret Floy Washburn (1871–1931) was the first American woman to receive a doctorate in psychology from Cornell University in 1894, after which she became a professor at Wells College. In 1921, she became president of the American Psychological Association. She was denied a position at a research institution but made contributions in comparative psychology (Goodman, 1980; O'Connell & Russo, 1980).

Inez Prosser (1897–1934) was the first African American women to receive a doctorate in psychology. She received the degree from the college of education at the University of Cincinnati in 1933. Unfortunately, she was killed in an automobile accident the next year (Benjamin et al., 2005; Guthrie, 1998).

Francis Cecil Summer (1895–1954) was the first African American to earn a PhD in psychology in 1920 from Clark University. He is often referred to as the father of Black psychology. Additionally, he was influential in establishing the psychology department at Harvard University (Guthrie, 2000).

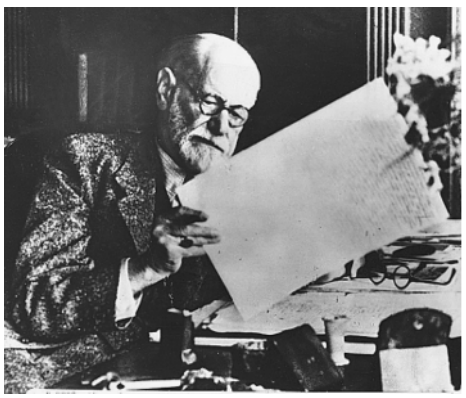
PERSPECTIVES IN PSYCHOLOGY

Thomas Kuhn (1970) observed that science does not progress primarily through the accumulation of facts. Rather, scientific progress depends as much or more on the development of better and better paradigms.

A **paradigm** has several components. First, it includes a set of theoretical assertions that provide a *model,* or abstract picture, of the object of study. Second, a paradigm includes a set of shared metaphors that compare the object under investigation to something else that is readily comprehended. Third, it includes a set of methods the scientific community agrees will produce valid and useful data. According to Kuhn, the social sciences and psychology differ from the older natural sciences in that they lack an accepted paradigm upon which most members of the scientific community agree. Instead, he proposed these young sciences are splintered into several schools of thought, or **perspectives**.

In the following sections, we examine the psychodynamic, behaviorist, cognitive, and evolutionary perspectives, presented in chronological order. These four perspectives offer the same kind of broad, orienting approach as a scientific paradigm, and they share its three essential features. Focusing on these particular perspectives does not mean that other less comprehensive approaches have not contributed to psychological knowledge or that nothing can be studied without them. A researcher interested in a specific question, such as whether preschool programs for economically disadvantaged children will improve their functioning later in life (Reynolds et al., 1995), does not need to employ a broader outlook. But, perspectives generally guide psychological investigations.

Sigmund Freud poring over a manuscript in his home office in Vienna around 1930



Psychodynamic Perspective

Sigmund Freud (1856–1939), a Viennese physician, developed a theory of mental life and behavior and an approach to treating psychological disorders known as *psychoanalysis*. Since then, many psychologists have continued Freud's emphasis on **psychodynamics**. The **psychodynamic perspective** rests on three key premises. First, people's actions are determined by the way thoughts, feelings, and wishes are connected in their minds. Second, many of these mental events occur outside of conscious awareness. Third, these mental processes may conflict with one another, leading to compromises among competing motives.

Freud and many of his followers failed to take seriously the importance of using scientific methods to test and refine their hypotheses. As a result, many psychodynamic concepts that could have been useful to researchers, such as ideas about unconscious processes, remained outside the mainstream of psychology until

brought into the laboratory by contemporary researchers (Bradley & Westen, 2005; Westen, 1998; Westen et al., 2008; Wilson et al., 2000a).

ORIGINS OF THE PSYCHODYNAMIC APPROACH Freud originated his theory in response to patients whose symptoms were not based on physiological malfunctioning. At the time, scientific thinking had no way to explain patients who were preoccupied with irrational guilt after the death of a parent or were so paralyzed with fear that they could not leave their homes. Freud made a deceptively simple deduction, but one that changed the face of intellectual history: If the symptoms were not consciously created and maintained, and if they had no physical basis, their basis must be unconscious. Just as people have conscious motives or wishes, Freud argued, they also have powerful unconscious motives that underlie their conscious intentions.

METHODS AND DATA OF THE PSYCHODYNAMIC PERSPECTIVE Psychodynamic understanding seeks to *interpret meanings*—to infer underlying wishes, fears, and patterns of thought from an individual's conscious, verbalized thought and behavior. Accordingly, a psychodynamic clinician observes a patient's dreams, fantasies, posture, and subtle behavior toward him or her. The psychodynamic perspective thus relies substantially on the *case study* method, which entails in-depth observation of a small number of people.

Psychodynamic psychologists typically have relied primarily on clinical data to support their theories. Because clinical observations are open to many interpretations, many psychologists have been skeptical about psychodynamic ideas. However, a number of researchers who are both committed to the scientific method and interested in psychodynamic concepts have been subjecting them to experimental tests and trying to integrate them with the body of scientific knowledge in psychology (see Fisher & Greenberg, 1985, 1996; Shedler et al., 1993; Westen & Gabbard, 1999).

CRITICISMS OF PSYCHODYNAMIC THEORY The failure of psychodynamic theory to be scientifically grounded, its violation of the **falsifiability criterion**, and its reliance on retrospective accounts are just a few of the criticisms that have been leveled against it. Psychodynamic theorists argue, however, that the failure to focus on empirical methods is one of the redeeming features of the theory. Rather than investigating specific variables that reflect only a fraction of an individual's personality or behavior, psychodynamic theorists focus on the entire person (Westen, 1998) and the whole of human experience. In addition, by not relying on empirical methods whose focus is limited to "solvable problems," psychodynamic theorists study phenomena not amenable to more traditional experimental methods.

Behaviorist Perspective

The **behaviorist** (or **behavioral**) **perspective**, also called **behaviorism**, focuses on the way objects or events in the environment come to control behavior through learning. Thus, the behaviorist perspective focuses on the relation between *external* (environmental) events and observable behaviors. Indeed, John Watson (1878–1958), a pioneer of American behaviorism, considered mental events entirely outside the province of a scientific psychology, and B. F. Skinner (1904–1990), who developed behaviorism into a full-fledged perspective years later, stated, "There is no place in a scientific analysis of behavior for a mind or self" (1990, p. 1209).

ORIGINS OF THE BEHAVIORIST APPROACH Early in the 20th century, Ivan Pavlov (1849–1936), a Russian physiologist, was conducting experiments on the digestive system of dogs and found that the dogs began to salivate automatically whenever they heard a particular sound at mealtime, much as they would salivate if food were presented. The process that had shaped this new response was learning. Behaviorists argue that human and animal behaviors are largely acquired by learning.

ENVIRONMENT AND BEHAVIOR For behaviorists, psychology is the *science of behavior*, and the proper procedure for conducting psychological research should be the same as for other sciences—rigorous application of the scientific method. Scientists can

directly observe a rat running a maze, but no one can directly observe unconscious motives. According to behaviorists, psychologists cannot even study *conscious* thoughts in a scientific way because no one has access to them except the person having them.

Behaviorists questioned the scientific value of introspection research because the observations on which it relied could not be independently verified. They proposed an alternative: study observable behaviors and environmental events and build a science around the way people and animals *behave*. Today, many behaviorists acknowledge the existence of mental events but do not believe these events play a *causal* role in human affairs.

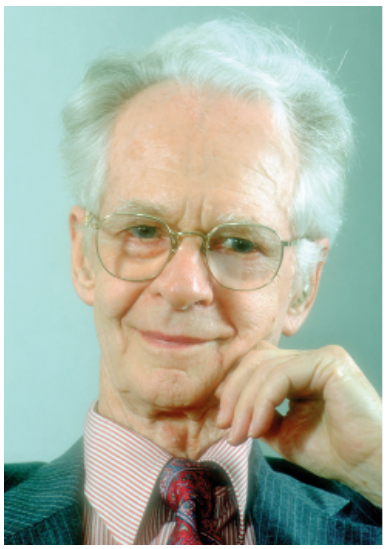
Probably the most systematic behaviorist approach was developed by B. F. Skinner, who observed that behavior can be controlled by environmental consequences that either increase (*reinforce*) or decrease (*punish*) their likelihood of occurring. Subtle alterations in these conditions, such as the timing of an aversive consequence, can have dramatic effects on behavior. Behaviorist researchers have discovered that this kind of learning by consequences can be used to control some very unlikely behaviors in humans. For example, by giving people feedback on their biological processes (*biofeedback*), psychologists can help them learn to control "behaviors" such as headaches, chronic pain, and blood pressure (Carmagnani & Carmagnani, 1999; Masters, 2006; Muller et al., 2009; Nakao et al., 1999; Nanke & Rief, 2004).

METAPHORS, METHODS, AND DATA OF BEHAVIORISM A primary metaphor of behaviorism is that humans and other animals are like machines. Just as pushing a button starts the coffeepot, presenting food triggered an automatic, or reflexive, response in Pavlov's dogs.

The primary method of behaviorism is experimental, which entails framing a hypothesis about the way certain environmental events will affect behavior and then creating a laboratory situation to test that hypothesis. Because they can measure data quantitatively, experimenters can test the accuracy of their predictions and apply them to practical questions.

Behaviorism was the dominant perspective in psychology from the 1920s to the 1960s. Pure behaviorism has lost favor as psychology has once again become concerned with the study of mental processes. Many psychologists have come to believe that thoughts *about* the environment are just as important in controlling behavior as the environment itself (Bandura, 1977a,b, 1999; Mischel, 1990; Mischel & Shoda, 1995; Rotter, 1966, 1990). Some contemporary behaviorists even define behavior broadly to include thoughts as private behaviors. Nevertheless, traditional behaviorist theory continues to have widespread applications, from helping people quit smoking or drinking to enhancing children's learning in school.

B. F. Skinner



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Cognitive Perspective

Today the study of **cognition**, or *thought*, dominates psychology just as the study of behavior dominated in the middle of the 20th century. The **cognitive perspective** focuses on the way people perceive, process, and retrieve information. Many cognitive psychologists use the metaphor of the computer to understand and model the way the mind works. From this perspective, thinking is **information processing**: The environment provides inputs, which are transformed, stored, and retrieved using various mental "programs," leading to specific response outputs.

To test hypotheses about memory, researchers need ways of measuring it. One way is simple: Ask a question like, "Do you remember seeing this object?" A second method is more indirect: See how quickly people can name an object they saw some time ago. The cognitive perspective is useful not only in examining memory but also in understanding processes such as decision making. As we will see, some of these processes are conscious or explicit, whereas others happen through the silent whirring of our neural "engines."

ORIGINS OF THE COGNITIVE APPROACH The philosophical roots of the cognitive perspective lie in a series of questions about where knowledge comes from that were first raised by ancient Greek philosophers and then were pondered by British and

European philosophers over the last four centuries (see Gardner, 1985). Descartes reflected on the remarkable truths of arithmetic and geometry and noted that the purest and most useful abstractions could never be observed by the senses. Rather, this kind of knowledge appeared to be generated by the mind itself. Other philosophers emphasized the role of experience in generating knowledge. Behaviorists roundly rejected Descartes' view of an active, reasoning mind that can arrive at knowledge independent of experience. Cognitive psychologists, however, are interested in many of the questions raised by Descartes and other **rationalist philosophers**.

METAPHORS, METHODS, AND DATA OF COGNITIVE PSYCHOLOGY As with behaviorism, the primary method of the cognitive perspective is experimental, but cognitive psychologists use experimental procedures to infer mental processes at work. Cognitive psychologists primarily study processes such as memory and decision making. Some cognitive psychologists, however, have attempted to use cognitive concepts and metaphors to explain a much wider range of phenomena (Cantor & Kihlstrom, 1987; Sorrentino & Higgins, 1996). Cognitive research on emotion, for example, documents that the way people think about events plays a substantial role in generating emotions (Caldwell & Burger, 2009; Ferguson, 2000; Lazarus, 1999a,b; Roseman et al., 1995).

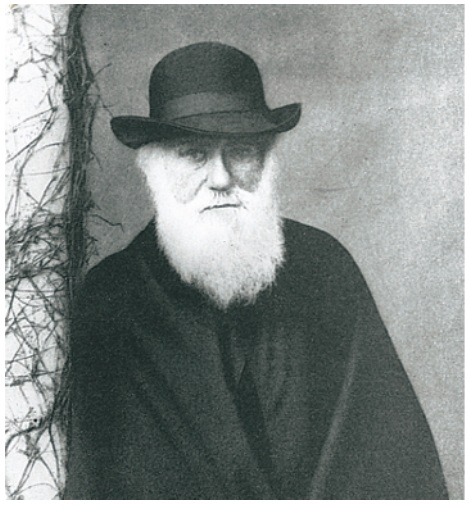
Evolutionary Perspective

The degree to which inborn processes determine human behavior is a classic issue in psychology, called the **nature–nurture controversy**. Advocates of the "nurture" position maintain that behavior is primarily learned, not biologically ordained. Other psychologists point to the similarities in behavior between humans and other animals and argue that some behavioral similarities are so striking that they must reflect shared tendencies rooted in biology. As we will see, however, many, if not most, psychological processes reflect an *interaction* of nature and nurture.

The **evolutionary perspective** argues that many behavioral tendencies in humans evolved because they helped our ancestors survive and rear healthy offspring. Like the functionalists at the turn of the 20th century, evolutionary psychologists believe that at some time most enduring human attributes served a function for humans as biological organisms (Buss, 1991, 2000). They argue that this is true for physical traits and for cognitive and emotional tendencies. The implication for psychological theory is that understanding human mental processes and behaviors requires insight into their evolution.

ORIGINS OF THE EVOLUTIONARY PERSPECTIVE The evolutionary perspective is rooted in the writings of Charles Darwin (1872). Darwin did not originate the concept of evolution, but he was the first to propose **natural selection**. Darwin argued that natural forces select **adaptive traits** in organisms that help them adjust to and survive in their environment and that are likely to be passed on to their offspring. Selection of organisms occurs "naturally" because organisms that are not endowed with adaptive features are less likely to survive and reproduce.

Charles Darwin



Evolutionary adaptations have been observed in rock pocket mice. Normally sandy in color, these mice typically dwell in light-colored outcrops (Yoon, 2003). Lava flows in some areas, however, changed a landscape that was once beige into dark-colored rock. Rock pocket mice in these lava-covered areas are black. This mutation allowed the mice to survive in their "darker" environment.

Because adaptation is always relative to a specific niche, evolution is not synonymous with progress. A trait or behavior that is highly adaptive can become maladaptive in the face of even a seemingly small change in the environment. People have used Darwinian ideas to justify racial and class prejudices (i.e., "people on welfare must be naturally unfit"), but sophisticated evolutionary arguments contradict the idea that adaptation or fitness can ever be absolute.

ETHOLOGY, SOCIOBIOLOGY, AND EVOLUTIONARY PSYCHOLOGY If Darwin's theory of natural selection can be applied to characteristics such as the color of

a mouse, can it also apply to behaviors? It stands to reason that certain behaviors evolved because they helped members of the species survive. In the middle of the 20th century, the field of **ethology** (Hinde, 1982) began to apply this sort of evolutionary approach to understanding animal behavior.

If scientists can explain animal behaviors by their adaptive advantages, can they apply the same logic to human behavior? Harvard biologist E. O. Wilson (1975) named a new field **sociobiology**. Sociobiologists and **evolutionary psychologists** propose that genetic transmission is not limited to physical traits such as height. Parents also pass on to their children behavioral and mental tendencies. Some of these are universal, such as the need to eat and sleep. Others differ from individual to individual. Attention to the evolutionary origins of many behaviors is increasing (Archer, 2001). Research in **behavioral genetics** suggests that heredity is a surprisingly strong determinant of many personality traits and intellectual skills.

Perhaps the fundamental concept in all contemporary evolutionary theories is that evolution selects traits that maximize organisms' **reproductive success**. Over many generations, organisms with greater reproductive success will have more descendants because they will survive and reproduce more than other organisms, including other members of their own species. Central to evolutionary psychology is the notion that the human brain has evolved modules through natural selection to solve certain problems associated with survival and reproduction (Tooby & Cosmides, 1992).

Evolutionary theorists have expanded the concept of reproductive success to encompass **inclusive fitness**, which refers not only to an individual's own reproductive success but also to the reproductive success of genetically related individuals (Anderson, 2005; Daly & Wilson, 1988; Hamilton, 1964). According to the theory of inclusive fitness, natural selection favors animals whose concern for kin is proportional to their degree of biological relatedness.

METAPHORS, METHODS, AND DATA OF THE EVOLUTIONARY PERSPECTIVE The major metaphor underlying the evolutionary perspective is borrowed from philosopher Thomas Hobbes (1588–1679), who said that, wittingly or unwittingly, we are all runners in a race, competing for survival, sexual access to partners, and resources for our kin and ourselves.

Evolutionary methods are frequently deductive; that is, they begin with an observation of something that already exists in nature and try to explain it with logical arguments. This method is very different from experimentation, and many psychologists have challenged the deductive methods of evolutionary psychologists. The psychologists argue that predicting behavior in the laboratory is superior to explaining what has already happened.

One of the most distinctive features of evolutionary psychology in recent years has been its application of experimental and other procedures that involve *prediction* of behavior in the laboratory, rather than after-the-fact explanation (Buss et al., 1992). For example, two studies used evolutionary theory to predict the extent to which grandparents will invest in their grandchildren (DeKay, 1998; Euler & Weitzel, 1996).

Commentary: Making Sense of Psychological Perspectives

What psychologists study, how they study it, and what they observe reflect not only the reality "out there" but also the conceptual lenses they wear. In many cases adherents of one perspective know very little about other perspectives. In fact, the different perspectives often contribute in unique ways to our understanding of phenomena, depending on the object being studied.

CONTRIBUTIONS OF THE BEHAVIORIST PERSPECTIVE Among the behaviorist perspective's contributions are two that we cannot overestimate. The first is its focus on learning and its postulation of a *mechanism* for many kinds of learning: reward and punishment. Behaviorists offer a fundamental insight into the psychology of humans and other animals: *Behavior follows its consequences.* Behaviorists were the first to

develop a scientifically based set of principles that describe the way environmental events shape behavior. The second major contribution of the behaviorist approach is its emphasis on **empiricism**—the belief that the path to scientific knowledge is systematic observation and, ideally, experimental observation.

CONTRIBUTIONS OF THE COGNITIVE PERSPECTIVE The cognitive perspective has transformed our understanding of thought and memory in a way that 2500 years of philosophical speculation could not. Much of what is distinctive about *Homo sapiens* is our extraordinary capacity for thought and memory. Like the behaviorist perspective, the contributions of the cognitive perspective reflect its commitment to empiricism and experimental methods.

CONTRIBUTIONS OF THE EVOLUTIONARY PERSPECTIVE The evolutionary perspective asks a basic question that directs our attention to phenomena we might easily take for granted: *Why* do we think, feel, or behave the way we do as opposed to some other way? In each case, the evolutionary perspective suggests a single and deceptively simple principle: We think, feel, and behave in these ways because they helped our ancestors adapt to their environments and hence to survive and reproduce.

CONTRIBUTIONS OF THE PSYCHODYNAMIC PERSPECTIVE Recent research has begun to support some basic psychodynamic hypotheses about the emotional sides of human psychology, such as the view that our attitudes toward ourselves and others are often contradictory and ambivalent and that what we feel and believe consciously and unconsciously often differ substantially (e.g., Cacioppo et al., 1997; Wilson et al., 2000a). The most important legacy of the psychodynamic perspective is its emphasis on unconscious processes. As we have seen, the existence of unconscious processes is now widely accepted (Bargh, 1997; Schacter, 1999; Westen, 1998).

KEYWORDS/GLOSSARY

KEYWORDS/GLOSSARY FOR BOUNDARIES AND BORDERS OF PSYCHOLOGY

PSYCHOLOGY the scientific investigation of mental processes and behavior

BIOPSYCHOLOGY the field that examines the physical basis of psychological phenomena such as motivation, emotion, and stress; also called **behavioral neuroscience**

LOCALIZATION OF FUNCTION the extent to which different parts of the brain control different aspects of functioning

PSYCHOLOGICAL ANTHROPOLOGISTS people who study psychological phenomena in other cultures by observing the way the natives behave in their daily lives

CROSS-CULTURAL PSYCHOLOGY the field that attempts to test psychological hypotheses in different cultures

INTROSPECTION the method used by Wilhelm Wundt and other structuralists in which trained subjects verbally reported everything that went through their minds when presented with a stimulus or task; more generally, refers to the process of looking inward at one's own mental contents or process

STRUCTURALISM an early school of thought in psychology developed by Edward Titchener, which attempted to use introspection as a method for uncovering the basic elements of consciousness and the way they combine with each other into ideas

FUNCTIONALISM an early school of thought in psychology influenced by Darwinian theory that looked at explanations of psychological processes in terms of their role, or function, in helping the individual adapt to the environment

KEYWORDS/GLOSSARY FOR PERSPECTIVES IN PSYCHOLOGY

PARADIGM a broad system of theoretical assumptions employed by a scientific community to make sense out of a domain of experience

PERSPECTIVES broad ways of understanding psychological phenomena, including theoretical propositions, shared metaphors, and accepted methods of observation

PSYCHODYNAMICS a view, analogous to dynamics among physical forces, according to which psychological forces such as wishes, fears, and intentions have a direction and an intensity

PSYCHODYNAMIC PERSPECTIVE the perspective initiated by Sigmund Freud that focuses on the dynamic interplay of mental forces

FALSIFIABILITY CRITERION the ability of a theory to be proven wrong as a means of advancing science

BEHAVIORIST or **BEHAVIORAL PERSPECTIVE** the perspective pioneered by John Watson and B. F. Skinner that focuses on the relation between observable behaviors and environmental events or stimuli; also called **behaviorism**

COGNITION thought and memory

COGNITIVE PERSPECTIVE a psychological perspective that focuses on the way people perceive, process, and retrieve information

INFORMATION PROCESSING the transformation, storage, and retrieval of environmental inputs through thought and memory

RATIONALIST PHILOSOPHERS philosophers who emphasize the role of reason in creating knowledge

NATURE–NURTURE CONTROVERSY the question of the degree to which inborn biological processes or environmental events determine human behavior

EVOLUTIONARY PERSPECTIVE the viewpoint, built on Darwin's principle of natural selection, which argues that human behavioral proclivities must be understood in the context of their evolutionary and adaptive significance

NATURAL SELECTION a theory proposed by Darwin which states that natural forces select traits in organisms that help them adapt to their environment

ADAPTIVE TRAITS a term applied to traits that help organisms adjust to their environment

ETHOLOGY the field that studies animal behavior from a biological and evolutionary perspective

SOCIOBIOLOGY a field that explores possible evolutionary and biological bases of human social behavior

EVOLUTIONARY PSYCHOLOGISTS psychologists who apply evolutionary thinking to a wide range of psychological phenomena

BEHAVIORAL GENETICS a field that examines the genetic and environmental bases of differences among individuals in psychological traits

REPRODUCTIVE SUCCESS the capacity to survive and reproduce offspring

INCLUSIVE FITNESS the notion that natural selection favors organisms that survive, reproduce, and foster the survival and reproduction of their kin

KEYWORDS/GLOSSARY FOR COMMENTARY: MAKING SENSE OF PSYCHOLOGICAL PERSPECTIVES

EMPIRICISM the belief that the path to scientific knowledge is systematic observation and, ideally, experimental observation

LECTURE NOTES

INTRODUCTION

Psychology is the scientific investigation of mental processes and behavior.

BOUNDARIES AND BORDERS OF PSYCHOLOGY

Biopsychology (or **behavioral neuroscience**) examines the physical basis of psychological phenomena such as motivation, emotion, and stress. Although different neural regions perform different functions, the neural circuits that underlie psychological events are distributed throughout the brain and cannot be found in one location.

Cross-cultural psychology tests psychological hypotheses in different cultures. Biology and culture form the boundaries, or constraints, within which psychological processes operate

The field of psychology began in the late 19th century as experimental psychologists attempted to answer questions about the mind as philosophers had done previously. Most experimental psychologists believed in using the scientific method to discover how the mind works.

YOUR NOTES

HOW DO PEOPLE INTERESTED IN BIOPSYCHOLOGY DIFFER FROM OTHER PSYCHOLOGISTS?

WHAT WERE THE LESSONS LEARNED FROM THE PHINEAS GAGE STORY?

WHAT DOES LOCALIZATION OF FUNCTION MEAN? HOW IS THIS CONCEPT IMPORTANT IN THE HISTORY OF PSYCHOLOGY?

CONSIDERING THE ROLE OF CULTURE IN PSYCHOLOGICAL DIFFERENCES LEADS TO WHAT SORTS OF QUESTIONS?

NOTES ON WILHELM WUNDT:

INTROSPECTION IS:

WUNDT'S THOUGHTS ABOUT EXPERIMENTATION WERE:

Among the earliest schools of thought in psychology were structuralism and functionalism. **Structuralism**, developed by Edward Titchener, attempted to use introspection to uncover the basic elements of consciousness and the way they combine with one another into ideas (i.e., the *structure* of consciousness).

Functionalism looked for explanations of psychological processes in their role, or *function*, in helping individuals adapt to the environment.

YOUR NOTES

NOTES ON TITCHENER AND STRUCTURALISM:

WHAT WERE STRUCTURALISTS INTERESTED IN?

HOW WAS THIS APPROACH SIMILAR TO AND DIFFERENT FROM WUNDT'S?

WHO WAS WILLIAM JAMES?

HOW WERE FUNCTIONALISTS SIMILAR TO AND DIFFERENT FROM STRUCTURALISTS?

WHO WERE SOME IMPORTANT WOMEN AND MINORITIES IN THE EARLY HISTORY OF PSYCHOLOGY?

OTHER NOTES AND INFORMATION FROM CLASS:

PERSPECTIVES IN PSYCHOLOGY

A **paradigm** is a broad system of theoretical assumptions employed by a scientific community to make sense of a domain of experience. According to Thomas Kuhn, psychology lacks a unified paradigm but has a number of schools of thought, or **perspectives**, which are broad ways of understanding psychological phenomena. A psychological perspective, like a paradigm, includes theoretical propositions, shared metaphors, and accepted methods of observation.

The **psychodynamic perspective** originated with Sigmund Freud and proposes that: people's actions reflect the way thoughts, feelings, and wishes are associated in their minds; many of these processes are unconscious; and mental processes can conflict with one another, leading to compromises among competing motives. Although their primary method has been the analysis of case studies, reflecting the goal of interpreting the meanings hypothesized to underlie people's actions, psychodynamic psychologists are increasingly making use of experimental methods to try to integrate psychodynamic thinking with scientific psychology. This growing use of experimental methods should alleviate some of the criticism that has traditionally been leveled against psychodynamic theorists for being nonempirical, for violating the **falsifiability criterion**, and for using unreliable measures and approaches.

YOUR NOTES

DEFINE PARADIGM:

SOME EXAMPLES OF PARADIGMS FROM OTHER FIELDS:

DEFINE PERSPECTIVE:

WHAT ARE THE SIMILARITIES BETWEEN A PARADIGM AND A PERSPECTIVE?

ORIGINS OF THIS PERSPECTIVE:

FAMOUS THEORISTS:

METAPHORS/METHODS/DATA USED IN THIS PERSPECTIVE:

The **behaviorist perspective** focuses on the relation between environmental events and the responses of the organism. B. F. Skinner proposed that all behavior ultimately can be understood as learned responses and that behaviors are selected on the basis of their consequences. A primary metaphor underlying behaviorism is the machine. The primary method of behaviorists is laboratory experimentation.

YOUR NOTES

CRITICISMS OF THIS PERSPECTIVE:

IMPORTANT TERMS:

- **FALSIFIABILITY CRITERION**
-
-
-
-

OTHER NOTES AND INFORMATION FROM CLASS ON THIS PERSPECTIVE:

ORIGINS OF THIS PERSPECTIVE:

FAMOUS THEORISTS:

METAPHORS/METHODS/DATA USED IN THIS PERSPECTIVE:

CRITICISMS OF THIS PERSPECTIVE:

The **cognitive perspective** focuses on the way people process, store, and retrieve information. **Information processing** refers to taking input from the environment and transforming it into meaningful output. A metaphor underlying the cognitive perspective is the mind as computer. In recent years, however, many cognitive psychologists have used the brain itself as a metaphor for the way mental processes operate. The primary method of the cognitive perspective is experimental.

YOUR NOTES

IMPORTANT TERMS:

-
-
-
-
-

OTHER NOTES AND INFORMATION FROM CLASS ON THIS PERSPECTIVE:

ORIGINS OF THIS PERSPECTIVE:

FAMOUS THEORISTS:

METAPHORS/METHODS/DATA USED IN THIS PERSPECTIVE:

IMPORTANT TERMS:

- INFORMATION PROCESSING
-
-
-
-

CRITICISMS OF THIS PERSPECTIVE:

OTHER NOTES AND INFORMATION FROM CLASS ON THIS PERSPECTIVE:

The **evolutionary perspective** argues that many human behavioral proclivities exist because they helped our ancestors survive and produce offspring that likely would survive. **Natural selection** is the mechanism by which natural forces select traits in organisms that are adaptive in their environmental niche. The basic notion of evolutionary theory is that evolution selects organisms that maximize their **reproductive success**, defined as the capacity to survive and reproduce and maximize the reproductive success of genetically related individuals. The primary methods are deductive and comparative, although evolutionary psychologists are increasingly relying on experimental methods.

YOUR NOTES

ORIGINS OF THIS PERSPECTIVE:

FAMOUS THEORISTS:

METAPHORS/METHODS/DATA USED IN THIS PERSPECTIVE:

CRITICISMS OF THIS PERSPECTIVE:

IMPORTANT TERMS:

- NATURE–NURTURE CONTROVERSY
- ADAPTIVE TRAITS
- ETHOLOGY
- REPRODUCTIVE SUCCESS
- INCLUSIVE FITNESS
-
-
-
-

OTHER NOTES AND INFORMATION FROM CLASS ON THIS PERSPECTIVE:

Although the different perspectives offer radically different ways of approaching psychology, each has made distinctive contributions. These perspectives often have developed in mutual isolation, but efforts to integrate aspects of them are likely to continue to be fruitful.

YOUR NOTES

DISTINCTIVE CONTRIBUTIONS OF THE DIFFERENT PERSPECTIVES –

PSYCHODYNAMIC:

BEHAVIORIST:

COGNITIVE:

EVOLUTIONARY:

FOOD FOR THOUGHT

Do you think that psychology is a science like biology, chemistry, and physics? Why or why not?

What connections do you note between the four perspectives discussed in the chapter (e.g., psychodynamic, behaviorism, etc.) and the schools of thought that preceded them (e.g., structuralism, functionalism)?

How many of the outstanding women and minorities discussed in this chapter were you familiar with? If very few, why do you think that is the case?

Why do you think Freud's theory is still discussed in your classes and still included in psychology textbooks?

On which side of the nature/nurture debate do you fall? Or do you adopt an interactionist perspective? Defend your position.

YOUR NOTES

OTHER NOTES/INFORMATION FROM CLASS ON THIS CHAPTER: