CHAPTER

Introducing Psychology

PSYCHOLOGY JOURNAL

Think about your personal reasons for studying psychology. Write an entry in your journal of at least 100 words describing what you hope to gain from this experience.

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Chapter Overview

Visit the *Understanding Psychology*Web site at <u>psychology.glencoe.com</u>
and click on **Chapter 1—Chapter Overviews** to preview the chapter.



Why Study Psychology?

Reader's Guide

■ Main Idea

Through the study of psychology, people can discover psychological principles that have the potential to enrich the lives of humans.

■ Vocabulary

- physiological
- · cognitive
- psychology
- hypothesis
- theory
- · basic science
- · applied science
- · scientific method

■ Objectives

- Describe the range of topics that are covered in an introductory psychology course
- Cite the goals and scientific basis of psychology.

EXPLORING PSYCHOLOGY

Addicted to the Internet

It's 4 A.M. and "Steve" is engulfed in the green glare of his computer screen, one minute pretending he's a ruthless mafia lord masterminding a gambling empire, the next minute imagining he's an evil sorcerer or an alien life form.

Steve, a college student, is playing a Multiple User Dungeon (MUD) game—a fictional game modeled after Dungeons and Dragons that is played by sending online messages to other players. But as he continually logs on for hours, Steve finds himself sleeping through classes, forgetting his homework, and slipping into "Internet addiction"...

—from the APA Monitor, June 1996

behavior. Steve stays on his computer from midnight until morning, often ignoring physiological, or physical, needs such as sleep and hunger. He engages in this behavior because of cognitive, or private, unobservable mental, reasons. For example, Steve may go online because he likes the intellectual challenge of outwitting the other players. Or Steve's behavior may be motivated by emotions—he goes online to avoid the pressures of college life. There may also be subconscious, emotional, and behavioral reasons. For instance, does the Internet reinforce his behavior? Does this Internet use reflect a weak self-concept? Learning about psychology can help you gain a better understanding of your own behavior, knowledge about how psychologists study human and animal behavior, and practical applications for enriching your life.

physiological: having to do with an organism's physical processes

cognitive: having to do with an organism's thinking and understanding

GAINING INSIGHT INTO BEHAVIOR

Reading Check
What insights might you
gain from studying psychology?

Psychology can provide useful insight into behavior. For example, suppose a student is convinced that he is hopelessly shy and doomed forever to feel uncomfortable in groups. Then he learns through social psychology that different kinds of groups tend to have different effects on their members. He thinks about this. He notes that although he is miserable at parties, he feels fine at meetings of the school newspaper staff and in the group he works with in the biology laboratory. In technical terms, he is much more uncomfortable in unstructured social groups than in structured, task-oriented groups. Realizing that he is uncomfortable only in some groups brings him relief. He is not paralyzingly shy; he just does not like unstructured groups. He is not alone in his feelings—and thinking about his feelings helps him gain confidence in himself.

ACQUIRING PRACTICAL INFORMATION

Most of the chapters in this book include material that has a practical application in everyday life. You will learn concrete and detailed ways to carry out a number of useful procedures psychologists have developed.

For example, Chapter 9 describes a systematic way of dispensing rewards and punishments that psychologists call shaping. You will definitely find this useful if you ever have to train a puppy. (You give the puppy a treat after it obeys a command.) You may find yourself wondering how you are shaping the behavior of people around you. Perhaps you have two friends who are always happy to join you for a soda or a movie but who never bring any money along. You have loaned them money many times, and just as many times, they have failed to pay you back. You

Figure 1.1 Psychology and You

Studying psychology may help you gain a better understanding of human behavior. What is psychology?



know they can afford to pay their share, and you have repeatedly told them so. They are good friends, however, so you end up paying their way again and again. In doing so, you are rewarding or reinforcing an undesirable behavior pattern. Is that what you really want to do?

Chapter 10 includes a description of several mnemonic devices, or memory aids, that help you retain information. The poem beginning "Thirty days has September," which helps many people remember the number of days in

each month, is an example. With mnemonic devices, you usually associate each item on a list with something easier to remember, such as a picture, rhyme, or phrase. Although this may require time and effort, memory experts have shown that it is worth the trouble.

In reading about child development in Chapter 3, you may recall similar experiences you had in your own child-hood. Chapter 16, on disturbance and breakdown, may help you understand difficult periods in your own life and in the lives of those around you.

OVERVIEW OF PSYCHOLOGY

Psychology is the scientific study of behavior and mental processes. Such

study can involve both animal and human behaviors. When applied to humans, psychology covers everything that people think, feel, and do. Psychologists differ in how much importance they place on specific types of behavior. For example, some psychologists believe that you should study only behavior that you can see, observe, or measure directly. Steve's behavior of logging on and remaining on the Internet for hours at a time is an observable behavior. Some psychologists believe that our thoughts, feelings, and fantasies are also important, even though these processes are not directly observable. Steve may log on because he feels intimidated by others or by schoolwork, but psychologists cannot directly observe that these are the reasons that Steve is engaging in this behavior.

While psychologists may differ on which types of behavior are important, they do agree that the study of behavior must be systematic. The use of a systematic method of asking and answering questions about why people think, act, and feel as they do reduces the chances of coming to false conclusions. Consider the story of the blind men and the elephant. A long time ago, three very wise, but blind, men were out on a journey when they came across a sleeping elephant. Because they could not see the elephant, they did not know what was blocking their way, so they set about to discover what they could about the obstacle.

As it happened, each man put his hands on a different section of the elephant, examining it in great detail and with much thought. The first man, having felt the elephant's trunk, described a creature that was long, wormlike, and quite flexible. "No, no! You must be mistaken," said the second man, who was seated astride the elephant. "This creature is wide, very round, and does not move very much." The man who was holding one of the elephant's tusks added his description of a small, hard, pointed creature.



Your friend makes a simple comment about your hair or clothes, and you blow up, getting violently angry and feeling deeply hurt. Why? Emotions occur as the result of a physical stimulation paired with some social or personal event. If an emotional event occurs, but you do not have a physical reaction—such as a pounding heart or a tense stomach—you will not feel that emotion in the usual sense. Yet consider the following situation: You just drank two cans of caffeinated soda. Your heart is beating hard, and your stomach is tense. Then your friend makes a critical comment. When you hear the comment, you get angry—but you get angrier than usual because your body is already stimulated. If you are very tired, you may react mildly or not at all to an emotional event.

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psychology: the scientific study of behavior that is tested through scientific research

Figure 1.2 Test Your Intuitions

Test your intuitions about behavior by answering true or false to the statements below. Turn to page 12 to check your answers.

- The behavior purget lower animals—losects repriles and applituants, most rodents, and birds—is instinging and unaffected by learning.
- 2. For the first week of the arbaby sees nothing but shades of gray blue regardless of where he
- A child learns to talk more quickly if the adults around the child habitually repeat the word he or she is trying to say, using proper pronunciation.
- The best way to get a chronically noisy child to settle down and pay attention is to punish him or her.
- Slow learners remember more of what they learn than fast learners.
- Highly intelligent people, geniuses, tend to be physically trail and socially isolated.
- 7. On the average, you cannot predict from a person's grades at school and college whether he or she will do well in a career.
- 8. Most stereotypes are completely true.
- 9. In small amounts, alcohol is a stimulant.

- 10. The largest drug problem in the United States in terms of the number of people affected, is imanuama.
- 11. Psychiatry is a subdivision of psychology
- 12 Most developmentally handicapped people also have psychological disorders.
- A third or more of the people suffering from severe psychological disorders are potentially dangerous
- Electroshock therapy is an outmoded technique rarely used in today's mental hospitals.
- 15. The more severe the disorder, the more intensive the therapy required to cure it; for example, schizophrenics usually respond best to psychoanalysis.
- 16. Nearly all the psychological characteristics of men and women appear to be inborn; in all cultures, for example, women are more emotional and sexually less aggressive than men.
- 17. No reputable psychologist takes seriously such irrational phenomena as ESP, hypnosis, or the bizarre mental and physical achievements of Eastern yogis.

Each of these men was correct in his description of what he felt, but in order to understand the elephant fully, they needed to combine their accumulated knowledge. The study of human behavior is similar. We cannot rely on simplistic explanations. In order to understand our observations, we usually have to combine all of our thoughts.

We each like to think we understand people. We spend time observing others (and ourselves) and form conclusions about people from our daily interactions. Sometimes the conclusions we draw, however, are not accurate because we are not systematic in our efforts.

The Goals of Psychology

As psychologists go about their systematic and scientific study of humans and animals, they have several goals. Overall, psychologists seek to do four things—describe, explain, predict, and influence behavior.

Description The first goal for any scientist or psychologist is to describe or gather information about the behavior being studied and to present what is known. For example, we described Steve's behavior at college.

Explanation Psychologists are not content simply to state the facts. Rather, they also seek to explain why people (or animals) behave as they



Student Web Activity

Visit the Understanding Psychology Web site at psychology.glencoe.com and click on Chapter 1—Student Web Activities for an activity about the study of psychology.

do. Such explanations can be called psychological *principles*—generally valid ideas about behavior. Psychologists propose these explanations as hypotheses. A **hypothesis** is an educated guess about some phenomenon. It is a researcher's prediction about what the results of a study are expected to be. As research studies designed to test each hypothesis are completed, more complex explanations called theories are constructed. A **theory** is usually a complex explanation based on findings from a large number of experimental studies. Theories change as new data improves our understanding, and a good theory becomes the source of additional ideas for experiments. A number of theories taken together may validate or cause us to alter the principles that help explain and predict observed behavior.

Prediction The third goal of psychologists is to predict, as a result of accumulated knowledge, what organisms will do and, in the case of

humans, what they will think or feel in various situations. By studying descriptive and theoretical accounts of past behaviors, psychologists can predict future behaviors.

Influence Finally, some psychologists seek to influence behavior in helpful ways. These psychologists are conducting studies with a long-term goal of finding out more about human or animal behavior. They are doing basic science, or research. Other psychologists are more interested in discovering ways to use what we already know about people to benefit others. They view psychology as an applied science and are using psychological principles to solve more immediate problems.

Psychologists who study the ability of infants to perceive visual patterns are doing basic research. They may not be concerned with the implication their findings might have on the design of a crib. Psychologists studying rapid eye movement in sleep research are also involved in basic science. If they discover that one individual has a sleep disturbance, they will try to understand and explain the situation, but they may not try to correct it. That is a job for applied scientists, such as clinical psychologists, industrial/organizational psychologists, counseling psychologists, or engineering psychologists.

An example of a psychologist involved applying psychological principles rather han discovering them is a consultant to a

hypothesis: an assumption or prediction about behavior that is tested through scientific research

theory: a set of assumptions used to explain phenomena and offered for scientific study

basic science: the pursuit of knowledge about natural phenomena for its own sake

applied science: discovering ways to use scientific findings to accomplish practical goals

Figure 1.3 Gaining Perspective

Psychology involves gaining new perspectives on your own and others' behavior. Upon examination, René Magritte's painting *The Human Condition* becomes more and more complex. *How does your perspective of this painting change upon closer examination of it?*

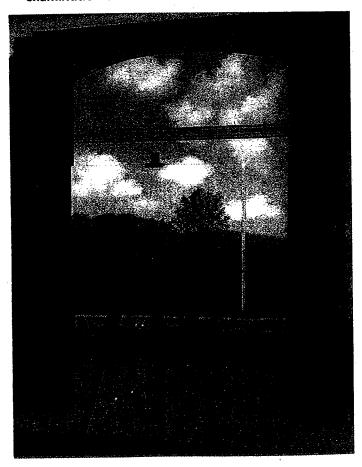
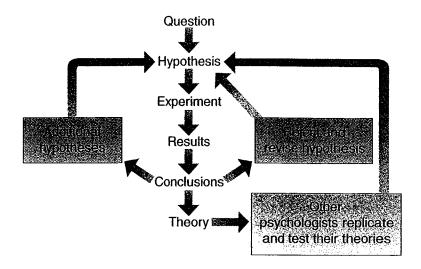


Figure 1.4 The Scientific Method

Scientists investigate a question they have by using the scientific method. What may occur after a psychologist reaches a conclusion?



Answers to Figure 1.2

All of the statements in Figure 1.2 are laise. As you read the different chapters in Understanding Psychology, you will learn more about the correct answers to these statements and the research that psychologists have conducted to demonstrate why these statements are false.

Reading Check
Define the concepts
of principle and theory, and
differentiate between the two.

scientific method: a general approach to gathering information and answering questions so that errors and biases are minimized toy manufacturer. A toy manufacturer tries to develop toys that appeal to children. The manufacturer may apply, or use, psychological principles when designing those toys. Since the transfer of findings from basic to applied science can be tricky, the distinction between basic and applied science is important. The following example illustrates this.

Psychologists doing basic research have found that babies raised in institutions such as orphanages become seriously delayed in their physical, intellectual, and emotional development. Wayne Dennis (1960), among others, traces this to the fact that these babies have nothing to look at but a blank, white ceiling and white crib cushions, and are handled only when they need to be fed or changed. However, we have to be very careful not to apply this finding too broadly. Even though children who lack stimulation tend to develop poorly, it does not follow that providing infants with maximum stimulation will cause them to grow up emotionally sound and intellectually superior. Quite the contrary, most babies do best with a medium level of stimulation (White, 1969). Even more significantly, social interaction seems much more important than visual stimulation. Normal development is more likely to result from long-term interactions with a responsive caregiver (Rice, Cunningham, & Young, 1997). Basic science provides specific findings—what happens in one study conducted at one time and in one place.

THE SCIENTIFIC BASIS OF PSYCHOLOGY

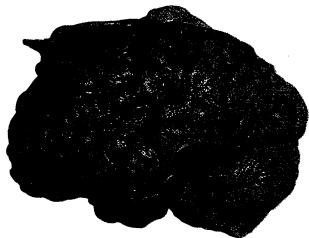
To ensure that data are collected accurately, psychologists rely on the scientific method (see Figure 1.4). In psychology, facts are based on data. The data are obtained from methods such as experiments, surveys, and

case studies. This means that psychologists reach their conclusions by identifying a specific problem or question, formulating a hypothesis, collecting data through observation and experimentation, and analyzing the data.

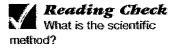
The scientific basis of psychology goes back many years. Today people are very sophisticated about scientific procedures, but that has not always been true. Wilhelm Wundt is credited with setting up the first psychology laboratory in Leipzig, Germany, in 1879. He proposed that psychological experience is composed of compounds, much like the compounds found in chemistry. Psychology, he claimed, has two kinds of elements—sensations and feelings. Wundt tried to test his statements by collecting scientific data. Although Wundt's methods proved cumbersome and unreliable, the importance of Wundt's work is the procedure

he followed, not the results he obtained. He called the procedure "introspection," and in psychology it led to what we now call the scientific method. Whereas in Wundt's introspection an individual observes, analyzes, and reports his or her own mental experiences, the scientific method developed as an objective method of observation and analysis.

Although psychologists use the scientific method to demonstrate and support many theories, many questions about behavior remain unanswered. Psychological theories are continually reviewed and revised. New theories and technological developments are constantly generating new questions and new psychological studies.



Preserved brain



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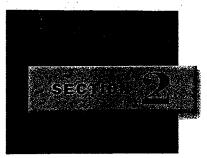
Assessment

- 1. Review the Vocabulary What is the difference between a hypothesis and a theory?
- **2. Visualize the Main Idea** In a graphic organizer similar to the one below, list and describe the goals of psychology.



- **3. Recall Information** Why do psychologists use the scientific method?
- 4. Think Critically How might a psychologist doing basic science and a psychologist practicing applied science differ in their approach to the issue of Internet addiction?
- 5. Application Activity

 Use the four goals of psychology to outline how a psychologist might approach the following question: Why are you sitting here in psychology class when there are other things you could be doing?



A Brief History of Psychology

Reader's Guide

■ Main Idea

Psychology involves sets of questions, theories, methods, and possible answers that have been passed on and changed from generation to generation.

■ Vocabulary

- structuralist
- introspection
- functionalist
- psychoanalyst
- behaviorist
- humanist
- · cognitivist
- psychobiologist

■ Objectives

- Explain important trends in the history of psychology.
- Identify various approaches to the study of psychology.

EXPLORING PSYCHOLOGY

The "Science" of Skull Bumps

S.S.... was sent to the State Prison for five years for assault and battery, with intent to kill, ... Before his mind became deranged, he exhibited great energy of passion and purpose, but they were all of a low character, their sole bearing being to prove his own superiority as an animal. ... The drawing shows a broad, low head, corresponding with such a character. The moral organs are exceedingly deficient, ... If the higher capacities and endowments of humanity were ever found coupled with such a head as this, it would be a phenomenon as inexplicable as that of seeing without the eye, or hearing without the ear.

—from "Mathew B. Brady and the Rationale of Crime: A Study in Daguerreotypes," — Library of Congress Quarterly Journal, Madeleine B. Stern

In the 1800s Marmaduke B. Sampson wrote the account above to explain why crime occurs. According to Sampson, the behavior of S.S. was the direct result of the shape of his head. Phrenology—the practice of examining bumps on a person's skull to determine that person's intellect and character traits—became an important practice in the United States in the mid-1800s. Although this pseudoscience may appear ridiculous to us, modern scientists credit phrenology for encouraging study into the role of the brain in human behavior. Phrenology may have inspired scientists to consider the brain, instead of the heart, as responsible for human behavior.

THE ORIGINS OF PSYCHOLOGY

Psychology has come a long way since the days of studying bumps on skulls. In the fifth and sixth centuries B.C., the Greeks began to study human behavior and decided that people's lives were dominated not so much by the gods as by their own minds: people were rational.

These early philosophers attempted to interpret the world they observed around them in terms of human perceptions—objects were hot or cold, wet or dry, hard or soft—and these qualities influenced people's experience of them. Although the Greek philosophers did not rely on systematic study, they did set the stage for the development of the sciences, including psychology, through their reliance on observation as a means of knowing their world.

In the mid-1500s, Nicolaus Copernicus (1473–1543) published the idea that Earth was not the center of the universe, as was previously thought, but revolved around the sun. Later, Galileo Galilei (1564–1642) used a telescope to confirm predictions about star position and movement based on Copernicus's work. The individuals of the Renaissance were beginning to refine the modern concept of experimentation through observation.

Seventeenth-century philosophers popularized the idea of *dualism*, the concept that the mind and body are separate and distinct. The French philosopher René Descartes (1596–1650) disagreed, however, proposing that a link existed between mind and body. He reasoned that the mind controlled the body's movements, sensations, and perceptions. His approach to understanding human behavior was based on the assumption that the mind and body influence each other to create a person's experiences. Exactly how this interaction takes place is still being studied today.

As one psychologist has expressed it, "Modern science began to emerge by combining philosophers' reflections, logic, and mathematics with the observations and inventiveness of practical people" (Hilgard, 1987). By the nineteenth century, biologists had announced the discovery of cells as the building blocks of life. Later, chemists developed the periodic table of elements, and physicists made great progress in furthering our understanding of atomic forces. Many natural scientists were studying complex phenomena by reducing them to simpler parts. It was in this environment that the science of psychology was formed.

HISTORICAL APPROACHES

The history of psychology is a history of alternative perspectives. As the field of psychology evolved, various schools of thought arose to complete and offer new approaches to the science of behavior.

Structuralism

In 1879 in Leipzig, Germany, Wilhelm Wundt (1832–1920) started Laboratory of Psychology. Because of his efforts to pursue the study laboratory in a systematic and scientific manner, Wundt is genally acknowledged as establishing modern psychology as a separate,

Figure Phrenology

This 1893 advertisement endorsed the "science" of phrenology. How did phrenology contribute to psychology?

Heads and Faces tell the Story.



MEN AND WOMEN

Differ in character as they do in appearance and temperament! No two are alike. You can understand these SIGNS OF CHARACTER, and

IF YOU WANT SOMETHING

that will interest you more thoroughly than any book you ever read, send for a copy of

HEADS AND FACES; How to Study Them.

A new Mannon of Character Reading for the people, by Pool. Nelson Size, the Skandmer in the phreniogical office of Fourier & Wells Co., and H. S. Drayon, Al.D. The authors know with they are writing about, Prof. Sizer having devoted userly flifty pears reclamively to the reading of character, and the here lays down the rules compleyed by him in his professional work, showing that if it is not "RIATS" but diameters that are considered. Complexes 200 large pages, 250 portrain. 110,000 cold.

pages, 200 portraits: 110,000 sold.

We will send it carefully by mail, postpaid, on receipt of price, 40 cours, in paper, or \$1 in cloth bind

FOWLER & WELLS CO., Pubs. 23 E. 21st Street, New York. **structuralist:** a psychologist who studied the basic elements that make up conscious mental experiences

introspection: a method of self-observation in which participants report their thoughts and feelings formal field of study. Although he was trained in physiology—the study of how the body works—Wundt's real interest was in the study of the human mind. Wundt was a **structuralist**, which means that he was interested in the basic elements of human experience. In his laboratory, Wundt modeled his research on the mind after research in other natural sciences he had studied. He developed a method of self-observation called **introspection** to collect information about the mind. In carefully controlled situations, trained participants reported their thoughts, and Wundt tried to map out the basic structure of thought processes. Wundt's experiments were very important historically because he used a systematic procedure to study human behavior. This approach attracted many students who carried on the tradition of systematic research.

Functionalism

William James (1842–1910) taught the first class in psychology at Harvard University in 1875. James is often called the "father of psychology" in the United States. It took him 12 years to write the first

textbook of psychology, *The Principles of Psychology* (1890). James speculated that thinking, feeling, learning, and remembering—all activities of the mind—serve one major function: to help us survive as a species. Rather than focusing on the structure of the mind as Wundt did, James focused on the functions or actions of the conscious mind and the goals or purposes of behaviors. **Functionalists** study how animals and people adapt to their environments. Although James was not particularly interested in experimentation, his writings and theories are still influential. In Chapter 12 you will learn more about James's ideas on motivation and emotion.

Did You Knowi

Studying Scientists Some researchers study how scientists do science. Their findings point out misconceptions:

- Scientists are not always objective. They sometimes ignore data that does not support their theories rather than impartially examining all available evidence.
- Some scientists are not all that openminded. Critics accused Isaac Newton. Charles Darwin, and Albert Einstein of intolerance.
- The best scientists are not always the brightest. Studies demonstrate that no strong relationship exists between scientists' IQs and their contributions.

functionalist: a psychologist who studied the function (rather than the structure) of consciousness

Inheritable Traits

Sir Francis Galton (1822–1911), a nineteenthcentury English mathematician and scientist, wanted to understand how heredity influences a person's abilities, character, and behavior. (*Heredity* includes all the traits

and properties that are passed along biologically from parent to child.) Galton traced the ancestry of various eminent people and found that greatness runs in families. He therefore concluded that genius or eminence is a hereditary trait. This conclusion was like the blind men's ideas about the elephant. Galton did not consider the possibility that the tendency of genius to run in distinguished families might be a result of the exceptional environments and socioeconomic advantages that also tend to surround such families. He also raised the question: Wouldn't the world be a better place if we could get rid of the less desirable people? Galton encouraged "good" marriages to supply the world with talented offspring. Later, scientists all over the world recognized the flaws in Galton's theory. A person's heredity and environment interact to influence intelligence.

Figure 1.6 Sir Francis Galton

Galton declared that the "most fit" humans were those with high intelligence. He assumed that the wealthiest people were also the most intelligent. What factors did Galton fail to take into account in his studies?

The data Galton used were based on his study of biographies. Not content to limit his inquiry to indirect accounts, however, he went on to invent procedures for directly testing the abilities and characteristics of a wide range of people. These

tests were the primitive ancestors of the modern personality tests and intelligence tests.

Although Galton began his work shortly before psychology emerged as an independent discipline, his theories and techniques quickly became central aspects of the new science. In 1883 he published a book, *Inquiries into Human Faculty*, that is regarded as the first study of individual differences. Galton's writings raised the issue of whether behavior is determined by heredity or environment—a subject that remains a focus of controversy today.

Gestalt Psychology

A group of German psychologists, including Max Wertheimer (1880–1943), Wolfgang Köhler (1887–1967), and Kurt Koffka (1886–1941), disagreed with the principles of structuralism and behaviorism. They argued that perception is more than the sum of its parts—it involves a "whole pattern" or, in German, a Gestalt. For example, when people look at a chair, they recognize the chair as a whole rather than noticing its legs, its seat, and its other components. Another example includes the perception of apparent motion. When you see fixed lights flashing in sequence as on traffic lights and neon signs, you perceive motion rather than individual lights flashing on and off (see Figure 1.8). Gestalt psychologists studied how sensations are assembled into perceptual experiences. This approach became the forerunner for cog-

nitive approaches to the study of psychology.

CONTEMPORARY APPROACHES

Many ideas taken from the historical approaches to psychology are reflected in contemporary approaches to the study



"HAVE A COUPLE OF DREAMS, AND CALL ME IN THE MORNING."

Figure 1.7. Dream Analysis

Freud believed that dreams can represent past, present, or future concerns or fears. Most contemporary psychologists, though, disagree with the symbols Freud found in dreams. How do you think the psychologist in the cartoon plans to help his patient?

Figure 1.8 **Gestalt Psychology**

Artist Giuseppe Arcimboldo (c.1530–1593) played with perceptual images in his painting *Autumn*.



An electric sign in which the bulbs go on and off in turn, with the appropriate timing, gives the impression of motion. How do these two images represent the ideas of Gestalt psychology?



of psychology. The most important approaches to the study of psychology today are the psychoanalytic, behavioral, humanistic, cognitive, biological, and sociocultural approaches.

Psychoanalytic Psychology

While the first psychologists were interested in understanding the conscious mind, Sigmund Freud (1856–1939), a physician who practiced in Vienna until 1938, was more interested in the unconscious mind. He believed that our conscious experiences are only the tip of the iceberg, that beneath the surface are primitive biological urges that are in conflict with the requirements of society and morality. According to Freud, these unconscious motivations and conflicts are responsible for most human behavior. He thought that they were responsible for many medically unexplainable physical symptoms that troubled his patients.

Freud used a new method for indirectly studying unconscious processes. In this technique, known as *free association*, a patient said everything that came to mind—no matter how absurd or irrelevant it seemed—without attempting to produce logical or meaningful statements. The person was instructed not to edit or censor the thoughts.

Freud's role, that of **psychoanalyst**, was to be objective; he merely sat and listened and then interpreted the associations. Free association, Freud believed, revealed the operation of unconscious processes. Freud also believed that dreams are expressions of the most primitive unconscious urges. To learn more about these urges, he used *dream analysis*—basically an extension of free association—in which he applied the same technique to a patient's dreams (Freud, 1940) (see Figure 1.7).

While working out his ideas, Freud took careful, extensive notes on all his patients and treatment sessions. He used these records, or case studies, to develop and illustrate a comprehensive theory of personality (Ewen, 1993). Freud's theory of personality will be discussed in Chapter 14.

In many areas of psychology today, Freud's view of unconscious motivation remains a powerful and controversial influence. Modern psychologists may support, alter, or attempt to disprove it, but most

have a strong opinion about it. The technique of free association is still used by psychoanalysts, and the method of intensive case study is still a major tool for investigating behavior. (A case study is an analysis of the thoughts, feelings, beliefs, experiences, behaviors, or problems of an individual.)

Behavioral Psychology

The pioneering work of Russian physiologist Ivan Pavlov (1849-1936) charted another course for psychological investigation. In a nowfamous experiment, Pavlov rang a tuning fork each time he gave a dog some meat powder. The dog would normally salivate when the powder reached its mouth. After Pavlov repeated the procedure several times, the dog would salivate when it heard the ring of the tuning fork, even if no food appeared. It had been conditioned to associate the sound with the food.

psychoanalyst: a psychologist who studies how unconscious motives and conflicts determine human behavior



Profiles In Psychology

Mary Whiton Calkins

1863-1930

"What we most need to know about any man is surely this: whether be is good or bad."

Ary Whiton Calkins, a female pioneer in psychology, contributed greatly to the field of psychology despite numerous obstacles. In the 1800s, North American universities barred women from Ph.D. programs. Despite this, Harvard's William James admitted Calkins into his graduate seminar. When Calkins joined the seminar, all the other students dropped it in protest, so James tutored her alone.

Calkins taught and studied, petitioning Harvard to admit her as a Ph.D. candidate. Harvard refused and, instead, held an informal examination for Calkins. Calkins completed the requirements for the doctoral degree and outperformed all her male counterparts on the examination. When Radcliffe University offered her the doctoral degree, she refused to accept the compromise.

Calkins served as a full professor of psychology at Wellesley College and became the first female president of both the American Psychological Association (APA) and the American Philosophical Association.

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Amayas:

Basine each peravior volcinave neite visits with caused vour behavior. For example the worker up at 7.00 A.M. because spicol stants at 8.00 A.M. and thate being late. Late breakfast because twas hungry.

2. Using the behaviorst approach, describe how rewards and punishments affected each of the behaviors on your list.

See the Skills Handbook, page 622, for an explanation of designing an experiment.

behaviorist: a psychologist who analyzes how organisms learn or modify their behavior based on their response to events in the environment

humanist: a psychologist who believes that each person has freedom in directing his or her future and achieving personal growth

cognitivist: a psychologist who studies how we process, store, retrieve, and use information and how cognitive processes influence our behavior

The conditioned reflex was a response (salivation) provoked by a stimulus (the tuning fork) other than the one that first produced it (food) (see Chapter 9 for a complete explanation). The concept was used by psychologists as a new tool, as a means of exploring the development of behavior. Using this tool, they could begin to account for behavior as the product of prior experience. This enabled them to explain how certain acts and certain differences among individuals were the result of learning.

Psychologists who stressed investigating observable behavior became known as **behaviorists**. Their position, as formulated by psychologist John B. Watson (1878–1958), was that psychology should concern itself only with the *observable* facts of behavior. Watson further maintained that all behavior, even apparently instinctive behavior, is the result of conditioning and occurs because the appropriate stimulus is present in the environment.

Although it was Watson who defined and solidified the behaviorist position, it was B.F. Skinner (1904–1990) who introduced the concept of reinforcement. (Reinforcement is a response to a behavior that increases the likelihood the behavior will be repeated.) Skinner attempted to show how his laboratory techniques might be applied to society as a whole. In his classic novel Walden Two (1948), he portrayed his idea of Utopia—a small town in which conditioning, through rewarding those who display behavior that is considered desirable, rules every conceivable facet of life.

Humanistic Psychology

Humanistic psychology developed as a reaction to behavioral psychology. In the 1960s, **humanists** such as Abraham Maslow, Carl Rogers, and Rollo May described human nature as evolving and self-directed. It differs from behaviorism and psychoanalysis in that it does not view humans as being controlled by events in the environment or by unconscious forces. Instead, the environment and other outside forces simply serve as a background to our own internal growth. The humanistic approach emphasizes how each person is unique and has a self-concept and potential to develop fully. This potential for personal growth and development can lead to a more satisfying life.

Cognitive Psychology

Since 1950, cognitive psychology has benefited from the contributions of people such as Jean Piaget, Noam Chomsky, and Leon Festinger. **Cognitivists** focus on how we process, store, and use information and how

this information influences our thinking, language, problem solving, and creativity. They believe that behavior is more than a simple response to a stimulus. Behavior is influenced by a variety of mental processes, including perceptions, memories, and expectations.

Reading Check
How do cognitive
psychologists differ from
behaviorists?

Biological Psychology

This viewpoint emphasizes the impact of biology on our behavior. Psychobiologists study how the brain, the nervous system, hormones, and genetics influence our behavior. PET scans and CAT scans (explained in Chapter 6) are the newest tools used by psychobiologists. Psychobiologists have found that genetic factors influence a wide range of human behaviors. Psychobiologists have discovered that 98 percent of the twins of an identical twin who develops childhood autism will also develop it. Yet fraternal twins share autism no more frequently than any siblings, suggesting that autism is heritable and is likely caused by several genes (Folstein & Piven, 1991; Bailey et al, 1995). In many ways, our behavior is the result of our physiological makeup.

psychobiologist:

a psychologist who studies how physical and chemical changes in our bodies influence our behavior

Sociocultural Psychology

The newest approach to psychology involves studying the influence of cultural and ethnic similarities and differences on behavior and social functioning.

Figure 1.9 Contemporary Approaches to Psychology

Modern psychologists use many different approaches to study the same behavior. Each viewpoint offers additional information to understanding behavior and reflects a different view of human nature. What other questions might a cognitivist study?

Approach	What influences our behavior?	Sample research question
Psychoanalytic Psychology	Unconscious motivations influence our behavior.	How have negative childhood experiences affected the way I handle stressful situations?
Behavioral Psychology	Events in the environment (rewards and punishments) influence our behavior.	Can good study habits be learned?
Humanistic Psychology	Individual or self-directed choices influence our behavior.	Do I believe I can prepare for and pass the test?
Cognitive Psychology	How we process, store, and retrieve information influences our behavior.	How does caffeine affect memory?
Biological Psychology	Biological factors influence our behavior.	Do genes affect your intelligence and personality?
Sociocultural Psychology	Ethnicity, gender, culture, and socioeconomic status influence our behavior.	How do people of different genders and ethnicities interact with one another?

For example, a sociocultural psychologist considers how our knowledge and ways of thinking, feeling, and behaving are dependent on the culture to which we belong. Think about all the perspectives and behaviors you share with other people of your culture. Psychologist Leonard Doob (1990) illustrated the cultural implications of a simple, reflexive behavior—a sneeze. Doob asks, "Will [the person who senses the urge to sneeze] try to inhibit this reflex action? What will he say, what will bystanders say, when he does sneeze? What will they think of him if he fails to turn away and sneezes in their faces? Do they and he consider sneezing an omen and, if so, is it a good or bad omen?" To answer such questions, we would have to understand the cultural context in which the sneeze occurred, as well as the cultural beliefs associated with the sneeze.

Sociocultural psychologists also study the impact and integration of the millions of immigrants who come to the United States each year. The character of the U.S. population is rapidly changing. By the year 2010, Americans of Hispanic origin will make up almost 15 percent of the population, while those of African American and Asian or Pacific Islander descent will make up over 18 percent (U.S. Census Bureau, 1998). Psychologists study the attitudes, values, beliefs, and social norms and roles of these different ethnic groups. They also study methods to reduce intolerance and discrimination.

The sociocultural approach is also concerned with issues such as gender and socioeconomic status and is based on the idea that these factors impact human behavior and mental processes. For instance, how might you be different if you had been born female instead of male, or male instead of female? Would you be different if you had been born in poverty, or into an extremely wealthy family?



Assessment

- 1. Review the Vocabulary Using your own words, describe the structuralist, functionalist, behaviorist, and humanist approaches to the study of psychology.
- 2. Visualize the Main Idea Use a graphic organizer similar to the one below to list the different historical approaches to the study of psychology.



- **3. Recall Information** Identify some issues that sociocultural psychologists might research.
- **4. Think Critically** With which approach to psychology do you most agree? Why?
- question: Why do you sometimes daydream in your classes? Compare how the various approaches to the study of psychology would address this question differently. Describe the differences and similarities.

Case Studies

The Four Humors

Period of Study: Around A.D. 150

Introduction: Hippocrates (460–375 B.C.), often referred to as the "father of medicine," became one of the first people to claim that illness had natural, not supernatural, causes. Hippocrates associated the four elements—earth, air, fire, and water—with four humors in the body. He associated earth with phlegm (mucus), air with blood, fire with yellow bile, and water with black bile. Humans with balanced humors were healthy; an imbalance among the humors resulted in sickness. Galen (A.D. 130–200) extended Hippocrates' theory to include characteristics of human personalities.

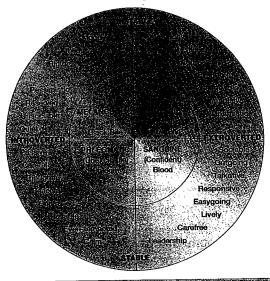
Hypothesis: Galen identified four personality characteristics called *melancholic*, *sanguine*, *choleric*, and *phlegmatic*. Galen associated these four characteristics with the four humors of the body. Each humor was thought to give off vapors that rose to the brain. An individual's personality could be explained by the state of that person's humors.

Method: If a person had excess phlegm, that person was probably dull, pale, and cowardly. Cheerful and generous personalities resulted from the dominance of blood. Laziness and gloominess were associated with cold and dryness (black bile). If a person had too much choler (yellow bile) in his system, he was probably a violent or vengeful person. The perfect personality resulted when none of the four humors dominated.

At that time, treatment of a psychological disorder involved restoring a balance among the humors. Doctors often gave patients poisonous herbs to eat. This caused vomiting, a sign that the imbalanced humor was leaving the patient's body. Balancing the diet could also balance the humors.

Results: The theories of Hippocrates and Galen proved unfounded, and their prescribed treatments for various disorders

A Personality Wheel





did not prove reliable. The relationship between your physical makeup and your personality is not yet firmly established. Your mental state can make the symptoms of some diseases more distressing, or factors such as stress can make you more liable to getting sick. However, the dominance of, say, black bile in your system does not lead to depression. Galen's notion, though, that a healthy personality is a balanced one may indeed be sound.

Analyzing the Case Study

- According to Galen's hypothesis, how are a person's physical and mental states related?
- 2. How did Galen treat psychological disorders?
- **3. Critical Thinking** How can Galen's original theory be used today as a prescription for a healthy personality?



Psychology as a Profession

Reader's Guide

■ Main Idea

Psychologists are trained to observe, analyze, and evaluate behavior patterns, to develop theories of behavior, and to apply what they have learned to influence behavior.

■ Vocabulary

- psychologist
- clinical psychologist
- · counseling psychologist
- psychiatry
- developmental psychologist
- · educational psychologist
- · community psychologist
- · industrial/organizational psychologist
- · experimental psychologist

■ Objectives

- · Explain the work of a psychologist.
- Summarize the careers and specialized fields in psychology.

EXPLORING PSYCHOLOGY

The Thoughts of a Patient

Everything seems to be contradictory. I don't seem to know what else to tell you, but that I am tearful and sad—and no kick out of Christmas. And I used to get such a boot out of it.... It's an awful feeling....I don't get a bit of a kick out of anything. Everything seems to get so sort of full of despair. . . . I feel so sort of what I call "empty"—nothing in back of you like when you're feeling yourself. . . . You go to bed and you dread each day when you feel low like that. . . . And I try to keep saying to myself, like you say, that I haven't been that bad that I should have to punish myself. Yet my thinking doesn't get cheerful. When it doesn't get cheerful it makes you wonder will it all end in suicide sometime....

—from *The Encyclopedia of Behavior* by Robert M. Goldenson, 1970

he thoughts above are the reflections of a patient. The patient is suffering from depression—an emotional state of dejection and sadness, ranging from mild discouragement to feelings of utter hopelessness and despair. Some psychologists conduct research to collect information and form theories about disorders such as depression. Other psychologists apply that information in the form of therapy to help people cope with depression. What else do people in the field of psychology do? Let's start by defining a psychologist.

WHAT IS A PSYCHOLOGIST?

Psychologists are people who have been trained to observe, analyze and evaluate behavior. They usually have a doctorate degree in psychology. There are many different fields of psychology. The principal ones are described in this section.

People often confuse the terms psychologist and psychiatrist. These are different professions. Psychiatry is a specialty of medicine. After a student completes medical school, he or she continues training in psychiatric medicine and learns to treat people with disturbed behavior. A psychiatrist is a medical doctor who can prescribe medication or operate on patients. Sometimes a psychiatrist works with a psychologist in testing, evaluating, and treating patients.

As the field of psychology expanded, it divided into a number of subfields. Clinical and counseling psychology are the most popular. Clinical psychologists help people deal with their personal problems. They work mainly in private offices, mental hospitals, prisons, and clinics. Some specialize in giving and interpreting personality tests designed to determine whether a person needs treatment and, if so, what kind. (About one-half of all psychologists specialize in clinical psychology.) Counseling psychologists usually work in schools or industrial firms, advising and assisting people with the problems of everyday life. They help people adjust to the challenges of life. In most

states a doctorate is required to be a clinical or counseling psychologist.

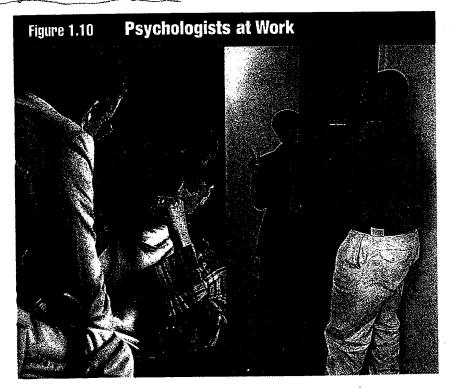
School psychologists, educated in principles of human development, clinical psychology, and education, help young people with emotional or learning problems. A large number of specialists study personality, social psychology, or developmental psychology. These psychologists are usually involved in basic rather than applied science. Psychologists who study personality investigate its development, study personality traits, or may create personality tests. Social psychologists study groups and how they influence individual behavior. Some are particularly interested in public opinion and devote much of their time to conducting polls and surveys.

psychologist: a scientist who studies the mind and behavior of humans and animals

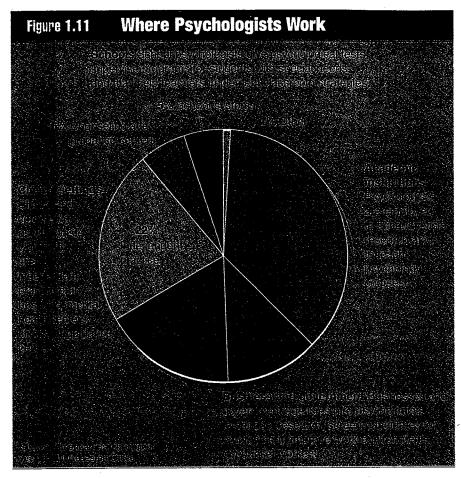
psychiatry: a branch of medicine that deals with mental, emotional, or behavioral disorders

clinical psychologist: a psychologist who diagnoses and treats people with emotional disturbances

counseling psychologist: a psychologist who usually helps people deal with problems of living



All psychologists, no matter what their area of expertise, are interested in theories about behavior and mental processes. Can you name the type of psychologist at work in each photo?



Most psychologists in the United States are engaged in clinical psychology. Why do businesses and government agencies hire psychologists?

developmental psychologist: a psychologist who studies the emotional, cognitive, biological, personal, and social changes that occur as an individual matures

educational psychologist: a psychologist who is concerned with helping students learn

community psychologist: a psychologist who may work in a mental health or social welfare agency

industrial/organizational psychologist: a psychologist who uses psychological concepts to make the workplace a more satisfying environment for employees and managers

Developmental psychologists study physical, emotional, cognitive, and social changes that occur throughout life. Specialists in this field study children, the elderly, and even the process of dying.

Educational psychologists deal with topics related to teaching children and young adults, such as intelligence, memory, problem solving, and motivation. Specialists in this field evaluate teaching methods, devise tests, and develop new instructional devices. A community psychologist may work in a mental health or social welfare agency operated by the state or local government or by a private organization. A community psychologist may help design, run, or evaluate a mental health clinic. Industrial/organizational psychologists are employed by business firms and government agencies. Industrial psychologists study and develop methods to boost production, improve working conditions, place applicants in jobs for which they are best suited, train people, and reduce accidents. Organizational psychologists study the behavior of people in organizations such as business firms.

Environmental psychologists work in business settings or within the government to study the effects of the environment on people. They may look at the effects of natural disasters, overcrowding, and pollution on the population in general as well as individuals and families. Psychobiologists study the effect of drugs or try to explain behavior in terms of biological factors, such as electrical and chemical activities in the nervous system. Forensic psychologists work in legal, court, and correctional systems. They assist police by developing personality profiles of criminal offenders or help lawenforcement officers understand problems like abuse. Health psychologists study the interaction between physical and psychological health factors. They may investigate how stress or depression leads to physical ailments.

Divisions of the APA Figure 1.12

The divisions of the American Psychological Association (APA) represent the many areas in which a psychologist may specialize. Under which divisions might the work of a clinical psychologist fall?

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Organizational Psychology	33 Mental Retardation and Developmental Disabilities	51. Society for the Psychological was Study of Men and Massulinity.	
15. Educational Psychology	34. Population and Environmental	52 International Psychology	
16. School Psychology	Psychology	53. Society of Clinical Child and	
17. Gounseling Psychology	35. Society for the Psychology of :- Women	Adglescent Psychology	
18. Psychologists in Public Service 36. Psychology of Religion		54. Society of Pediatric Psychology	
19. Military Psychology	37. Child, Youth, and Family	55. American Society for the Advancement of	
20. Adult Development and Aging Source: American Psychological Association	Services	Pharmacotherapy	

experimental psychologist: a psychologist who studies sensation, perception, learning, motivation, and emotion in carefully controlled laboratory conditions

Reading Check
How does developmental psychology differ from educational psychology?

Finally, some psychologists are **experimental psychologists**. These psychologists perform research to understand how humans (and animals) operate physically and psychologically. Experimental psychologists do everything from testing how electrical stimulation of a certain area of a rat's brain affects its behavior, through studying how disturbed people think, to observing how different socioeconomic groups vote in elections. Experimental psychologists supply information and research used in psychology.

The American Psychological Association (APA), founded in 1892, is a scientific and professional society of psychologists and educators. It is the major psychological association in the United States and is the world's largest association of psychologists. The APA is made of 53 divisions, each representing a specific area, type of work or research setting, or activity (see Figure 1.12). Some divisions are research-oriented, while others are advocacy groups. Together they are a cross section of the diverse nature of psychology. The APA works to advance the science and profession of psychology and to promote human welfare.

What psychologists think about, what experiments they have done, and what this knowledge means form the subject of *Understanding Psychology*. Psychology is dedicated to answering some of the most interesting questions of everyday life: What happens during sleep? How can bad habits be broken? Is there a way to measure intelligence? Why do crowds sometimes turn into mobs? Do dreams mean anything? How does punishment affect a child? Can memory be improved? What causes psychological breakdowns? In trying to answer such questions, psychologists tie together what they have discovered about human behavior, thoughts, and feelings in order to look at the total human being. The picture is far from complete, but some of what is known will be found in the chapters that follow.

Assessment

- 1. Review the Vocabulary Describe the work of a clinical psychologist, a counseling psychologist, a developmental psychologist, and a community psychologist.
- 2. Visualize the Main Idea Use a graphic organizer similar to the one below to name several specialty fields of psychology.



- 3. Recall Information How might the work of environmental psychologists differ from that of industrial/organizational psychologists?
- 4. Think Critically If you decided to continue in the field of psychology, what type of psychologist would you want to be? Why?
- answers some basic questions concerned with psychology as a profession, for example: What is psychology? What is the difference between psychiatry and clinical psychology? What kinds of jobs can I get with a psychology degree?

Summary and Vocabulary

Psychologists study human behavior to attempt to explain and predict why people behave and feel as they do.

Section 1 Why Study Psychology?

Main Idea: Through the study of psychology, people can discover psychological principles that have the potential to enrich the lives of humans.

- Psychology is the scientific study of behavior and mental processes.
- The goals of psychology are description, explanation, prediction, and influence.
- Psychologists rely on the scientific method when researching an issue.
- Psychology can provide insight into behavior and has practical applications in everyday life.

Section 2 A Brief History of Psychology

Main Idea: Psychology involves sets of questions, theories, methods, and possible answers that have been passed on and changed from generation to generation.

- Historical approaches to psychology include structuralism, functionalism, inheritable traits, and Gestalt psychology.
- Psychoanalytic psychology involves interpretation of unconscious thoughts.
- Behaviorists investigate observable behavior.
- Humanists believe that human behavior is selfdirected.
- Cognitive psychologists focus on mental processes and rationally motivated behavior.
- Psychobiologists are interested in the physiological basis of behavior in humans and animals.
- Sociocultural psychology is a modern influential movement that views human behavior from a political and cross-cultural point of view.

Psychology as a Profession

Main Idea:

Psychologists are trained to observe, analyze, and evaluate behavior patterns, to develop theories of behavior, and to apply what they have learned to influence behavior.

- Psychiatrists and clinical psychologists both treat people with psychological disorders. Psychiatrists are medical doctors, whereas clinical psychologists are trained in psychology.
- There are many specialty fields in psychology, including clinical, developmental, industrial/organizational, experimental, and community psychology.

Chapter Vocabulary

physiological (p. 7)

cognitive (p. 7)

psychology (p. 9) hypothesis (p. 11)

theory (p. 11)

basic science (p. 11)

applied science (p. 11)

scientific method (p. 12)

structuralist (p. 16)

introspection (p. 16)

functionalist (p. 16)

psychoanalyst (p. 19)

behaviorist (p. 20)

humanist (p. 20)

cognitivist (p. 20)

psychobiologist (p. 21)

psychologist (p. 25)

clinical psychologist (p. 25)

counseling psychologist (p. 25)

psychiatry (p. 25)

developmental psychologist (p. 26)

educational psychologist

(p. 26) community psychologist (p. 26)

industrial/organizational psychologist (p. 26)

experimental psychologist (p. 28)