Chapter 1
Introduction to Psychology

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MODULE 1: PSYCHOLOGISTS AT WORK

Learning Objectives

1–1 What is the science of psychology?

1–2 What are the major specialties in the field of psychology?

1–3 Where do psychologists work?

Psychology is the scientific study of behavior and mental processes. The phrase “behavior and mental processes” encompasses not just what people do but also their thoughts, emotions, perceptions, reasoning processes, memories, and even the biological activities that maintain bodily functioning.

THE SUBFIELDS OF PSYCHOLOGY: PSYCHOLOGY’S FAMILY TREE

The subfields of psychology can be likened to an extended family who, although may not interact on a day-to-day basis, are related to one another, because they share a common goal: understanding behavior.

What Are the Biological Foundations of Behavior?

In the most fundamental sense, people are biological organisms. Behavioral neuroscience is the subfield of psychology that mainly examines how the brain and the nervous system—but other biological processes as well—determine behavior.

How Do People Sense, Perceive, Learn, and Think about the World?

Experimental psychology is the branch of psychology that studies the processes of sensing, perceiving, learning, and thinking about the world. Several subspecialties of experimental psychology have become specialties in their own right. One is cognitive psychology, which focuses on higher mental processes, including thinking, memory, reasoning, problem solving, judging, decision making, and language.

What Are the Sources of Change and Stability in Behavior Across the Life Span?

Developmental psychology studies how people grow and change from the moment of conception through death. Personality psychology focuses on the consistency in people’s behavior over time and the traits that differentiate one person from another.

How Do Psychological Factors Affect Physical and Mental Health?

Health psychology explores the relationship between psychological factors and physical ailments or disease. Clinical psychology deals with the study, diagnosis, and treatment of psychological disorders. Like clinical psychologists, counseling psychologists deal with people’s psychological problems, but the
problems they deal with are more specific. Counseling psychology focuses primarily on educational, social, and career adjustment problems.

**How Do Our Social Networks Affect Behavior?**

Social psychology is the study of how people’s thoughts, feelings, and actions are affected by others. Social psychologists concentrate on such diverse topics as human aggression, liking and loving, persuasion, and conformity. Cross-cultural psychology investigates the similarities and differences in psychological functioning in and across various cultures and ethnic groups.

**Expanding Psychology’s Frontiers**

The boundaries of the science of psychology are constantly growing. Three new additions to the field of psychology are: evolutionary psychology, behavioral genetics, and clinical neuropsychology.

**Evolutionary Psychology**

Evolutionary psychology considers how behavior is influenced by our genetic inheritance from our ancestors. The evolutionary approach suggests that the chemical coding of information in our cells not only determines traits such as hair color and race but also holds the key to understanding a broad variety of behaviors that helped our ancestors survive and reproduce.

**Behavioral Genetics**

Behavioral genetics is another rapidly growing area in psychology. It focuses on the biological mechanisms, such as genes and chromosomes, that enable inherited behavior to unfold. Behavioral genetics seeks to understand how we might inherit certain behavioral traits and how the environment influences whether we actually display such traits.

**Clinical Neuropsychology**

Clinical neuropsychology unites the areas of neuroscience and clinical psychology: It focuses on the origin of psychological disorders in biological factors.

**WORKING AT PSYCHOLOGY**

Psychologists are employed in a variety of settings. Many doctoral-level psychologists are employed by institutions of higher learning or are self-employed, usually working as private practitioners treating clients. Other work sites include hospitals, clinics, mental health centers, counseling centers, government human-services organizations, businesses, schools, and even prisons. Psychologists are employed in the military, working with soldiers, veterans, and their families, and they work for the federal government Department of Homeland Security, fighting terrorism. Most psychologists, though, work in academic settings, allowing them to combine the three major roles played by psychologists in society: teacher, scientist, and clinical practitioner.
PSYCHOLOGISTS: A PORTRAIT

There are close to 300,000 psychologists working today in the United States, but they are outnumbered by psychologists in other countries. In the United States, women outnumber men in the field, a big change from earlier years when women faced bias and were actively discouraged from becoming psychologists. The vast majority of psychologists in the United States are white, limiting the diversity of the field. Although the number of minority individuals entering the field is higher than a decade ago, the numbers have not kept up with the dramatic growth of the minority population at large.

The underrepresentation of racial and ethnic minorities among psychologists is significant for several reasons. First, the field of psychology is diminished by a lack of the diverse perspectives and talents that minority-group members can provide. Furthermore, minority-group psychologists serve as role models for members of minority communities, and their underrepresentation in the profession might deter other minority-group members from entering the field. Finally, because members of minority groups often prefer to receive psychological therapy from treatment providers of their own race or ethnic group, the rarity of minority psychologists can discourage some members of minority groups from seeking treatment.

THE EDUCATION OF A PSYCHOLOGIST

Most psychologists have a doctorate, either a PhD (doctor of philosophy) or, less frequently, a PsyD (doctor of psychology). The PhD is a research degree that requires a dissertation based on an original investigation. The PsyD is obtained by psychologists who wish to focus on the treatment of psychological disorders. About a third of people working in the field of psychology have a master’s degree as their highest degree, which they earn after two or three years of graduate work. These psychologists teach, provide therapy, conduct research, or work in specialized programs dealing with drug abuse or crisis intervention. Some work in universities, government, and business, collecting and analyzing data.

CAREERS FOR PSYCHOLOGY MAJORS

An undergraduate major in psychology provides excellent preparation for a variety of occupations. Because undergraduates who specialize in psychology develop good analytical skills, are trained to think critically, and are able to synthesize and evaluate information well, employers in business, industry, and the government value their preparation. The most common areas of employment for psychology majors are in the social services, including working as an administrator, serving as a counselor, and providing direct care.

STUDENT ASSIGNMENTS

THE SCIENCE OF PSYCHOLOGY
Have students answer these questions about the science of psychology:

1. Do you agree that psychology is a science? Why or why not?

2. What does it mean to be able to “predict” behavior? Is it ever possible to know in advance how another person will behave?

3. What makes psychology unique among the social sciences?

PSYCHOLOGY’S FAMILY TREE

Have students complete Handout 1–1, Psychology’s Family Tree.

LECTURE IDEAS

THE SCIENCE OF PSYCHOLOGY

Emphasize that psychologists attempt to describe, predict, and explain behavior. Many psychologists see their role as that of helping others change and improve their lives. All psychologists use scientific methods to find answers to questions about the causes of behavior.

To answer the question “What is psychology?” download and show as a slide an image from the APA Web site showing topics of current interest.

RESEARCH QUESTIONS AND ISSUES IN AREAS OF PSYCHOLOGY

For each of the subdivisions of psychology, describe one research question or issue that is addressed by psychologists working in that area, focusing on areas that may be of interest to students. These can be found by going to the APA Web site, PsycINFO, or by looking at a recent issue of the APS Observer or APA Monitor. It is best for these ideas to be recent and of potential student interest. Below are some examples:

<table>
<thead>
<tr>
<th>Field</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral neuroscience</td>
<td>What are the genetic contributors to depression?</td>
</tr>
<tr>
<td>Clinical psychology</td>
<td>What are the best treatment methods for people who suffer from extreme anxiety?</td>
</tr>
<tr>
<td>Clinical neuropsychology</td>
<td>How does brain damage affect an individual’s ability to speak?</td>
</tr>
<tr>
<td>Cognitive psychology</td>
<td>Why are some people good at reading maps?</td>
</tr>
<tr>
<td>Counseling psychology</td>
<td>How can psychologists help college students make career choices?</td>
</tr>
</tbody>
</table>
Cross-cultural psychology  How can we improve the communication between people from Eastern and Western cultures?

Developmental psychology  What happens to short-term memory as people get older?

Educational psychology  What qualities make for effective teachers?

Evolutionary psychology  What are the origins of human jealousy?

Experimental psychology  What factors influence the size of bets a gambler makes?

Forensic psychology  How can we predict whether a person will commit a dangerous crime?

Health psychology  How can people be encouraged to develop healthier diets?

Industrial/organizational psychology  What factors make a good manager?

Personality psychology  Do lonely people have low self-esteem?

Psychology of women  Are women less likely than men to be hired as executives?

School psychology  What tests are best at identifying children with learning disorders?

WHERE PSYCHOLOGISTS WORK

Go to the APA Workforce Studies Web site for the latest data on employment in psychology. The 2007 data are available here but the Web site is updated each year:

Students are interested in learning where psychologists work. Students would most likely guess that the majority of psychologists are engaged in private practice, but challenge them to think about the roles that psychologists serve in other settings, such as research, schools, businesses, and hospitals.

Many students have been told that they cannot expect to find a job unless they go on to graduate school and earn a master’s or doctorate degree. Yet, your experience may be very different in that your students may have earned entry-level positions with only a bachelor’s degree. If this is the case, students would be pleased to know that there are jobs for which they can qualify with a bachelor’s degree in their majors. You also may wish to discuss the factors accounting for the success of these students in qualifying for these jobs, such as having participated in practicals, internships, or research. If your department has a Psi Chi chapter, find out if they would be willing to organize an alumni panel to talk about their experiences in graduate school and their careers.
CURRENT ISSUES FACING PSYCHOLOGISTS

Describe current issues facing psychologists with regard to insurance, health maintenance organizations, and prescription privileges. Ask whether students believe that psychologists should be allowed to prescribe medication or whether this role is best left to psychiatrists (and why).

MEDIA PRESENTATION IDEAS

POPULAR MOVIE OR TELEVISION SHOW: PORTRAYAL OF PSYCHOLOGISTS IN THE MEDIA

There are numerous movies and television shows portraying psychologists. Choose one that is relatively recent and likely to be of interest to your students. You also might consider showing an episode from Dr. Phil’s television show as a stimulus to discussion of the topic. Possible discussion questions would include: (1) Do you believe that the psychologist is portrayed in a realistic light? Why or why not? (2) How would each psychological perspective explain the main character’s symptoms or issues? (3) What is the impression of psychotherapy that is conveyed in this scene?

EDUCATIONAL AND PUBLIC INFORMATION MATERIALS

Obtain educational and public information materials from APA including a video on careers in psychology:

http://www.apa.org/videos/4313060.html

Other educational videos illustrating the work of psychologists can be obtained from the Discovery Health Channel, the History Channel, and PBS.

POPULAR MOVIE OR TELEVISION SHOW: PSYCHOLOGISTS AT WORK

Show a movie or television show that illustrates the work of a psychologist from one or more of the disciplines. Most movies that depict psychologists show clinical psychologists, but there are some that go beyond to the broader range. For example, Law & Order and Law & Order: SVU and the show Criminal Minds typically have forensic psychologists who determine competency or are involved in other aspects of solving crimes with psychology. Other examples can come from television news programs featuring the results of researchers in particular areas such as child development or behavioral neuroscience. Look out for possible programs to use via Public Broadcasting System (PBS), Discovery Channel (including Discovery Health), the History Channel, and the network news magazines, such as Dateline NBC, 20/20, Prime Time, and 60 Minutes. One-time use of these for educational purposes does not violate copyright law. The APA Web site often features psychological research including media links.
Chapter 1 Introduction to Psychology

The *Psych Today* blog also contains frequent updates on a wide range of topics from academic, applied, and media psychologists: http://www.psychologytoday.com/, http://www.psychologytoday.com/blog/fulfillment-any-age

**POPULAR MOVIE OR TELEVISION SHOW: THE WORKPLACES OF PSYCHOLOGISTS**

As noted above, popular television shows, movies, and documentaries can serve as the basis for illustrating the workplaces in which psychologists can be found. If you are not sure which would currently be of most interest to your students, ask your teaching assistant or check with senior psychology majors in your department.

**MODULE 2: A SCIENCE EVOLVES: THE PAST, THE PRESENT, AND THE FUTURE**

**Learning Objectives**

2–1 What are the origins of psychology?

2–2 What are the major approaches in contemporary psychology?

2–3 What are psychology’s key issues and controversies?

2–4 What is the future of psychology likely to hold?

**THE ROOTS OF PSYCHOLOGY**

The formal beginning of psychology as a scientific discipline is generally considered to be in the late 19th century, when Wilhelm Wundt established the first experimental laboratory devoted to psychological phenomena in Leipzig, Germany. Wundt considered psychology to be the study of conscious experience. His perspective, which came to be known as **structuralism**, focused on uncovering the fundamental mental components of perception, consciousness, thinking, emotions, and other kinds of mental states and activities. To determine how basic sensory processes shape our understanding of the world, Wundt and other structuralists used a procedure called **introspection**, in which they presented people with a stimulus—such as a bright green object or a sentence printed on a card—and asked them to describe, in their own words and in as much detail as they could, what they were experiencing. Wundt argued that by analyzing people’s reports, psychologists could come to a better understanding of the structure of the mind. Over time, psychologists challenged Wundt’s approach. Introspection was not a truly scientific technique, because there were few ways an outside observer could confirm the accuracy of others’ introspections. The perspective that replaced structuralism is known as functionalism. **Functionalism** concentrated on what the mind does and how behavior functions. Functionalists, whose perspective became prominent in the early 1900s, asked what role behavior plays in allowing people to adapt to their environments. Another important reaction to structuralism was the development of **gestalt psychology** that emphasizes how perception is organized. Instead of considering the individual parts
that make up thinking, gestalt psychologists took the opposite tack, studying how people consider individual elements together as units or wholes.

Women in Psychology: Founding Mothers

Margaret Floy Washburn (1871–1939) was the first woman to receive a doctorate in psychology, and she did important work on animal behavior. Leta Stetter Hollingworth (1886–1939) was one of the first psychologists to focus on child development and on women’s issues. She collected data to refute the view, popular in the early 1900s, that women’s abilities periodically declined during parts of the menstrual cycle. Mary Calkins (1863–1930), who studied memory in the early part of the 20th century, became the first female president of the American Psychological Association. Karen Horney (1885–1952) focused on the social and cultural factors behind personality, and June Etta Downey (1875–1932) spearheaded the study of personality traits and became the first woman to head a psychology department at a state university. Anna Freud (1895–1982), the daughter of Sigmund Freud, also made notable contributions to the treatment of abnormal behavior, and Mamie Phipps Clark (1917–1983) carried out pioneering work on how children of color grew to recognize racial differences.

Today’s Perspectives

The men and women who laid the foundations of psychology shared a common goal: to explain and understand behavior using scientific methods. Seeking to achieve the same goal, the tens of thousands of psychologists who followed those early pioneers embraced—and often rejected—a variety of broad perspectives. Today, the field of psychology includes five major perspectives. These broad perspectives emphasize different aspects of behavior and mental processes.

The Neuroscience Perspective: Blood, Sweat, and Fears

The neuroscience perspective considers how people and nonhumans function biologically: how individual nerve cells are joined together, how the inheritance of certain characteristics from parents and other ancestors influences behavior, how the functioning of the body affects hopes and fears, which behaviors are instinctual, and so forth.

The Psychodynamic Perspective: Understanding the Inner Person

Proponents of the psychodynamic perspective argue that behavior is motivated by inner forces and conflicts about which we have little awareness or control. They view dreams and slips of the tongue as indications of what a person is truly feeling within a seething cauldron of unconscious psychic activity. The origins of the psychodynamic view are linked to one person: Sigmund Freud, an Austrian physician in the early 1900s, whose ideas about unconscious determinants of behavior had a revolutionary effect on 20th-century thinking, not just in psychology but in related fields as well.
The Behavioral Perspective: Observing the Outer Person

The behavioral perspective grew out of a rejection of psychology’s early emphasis on the inner workings of the mind. Instead, behaviorists suggested that the field should focus on observable behavior that can be measured objectively. John B. Watson was the first major American psychologist to advocate this approach. The behavioral perspective was championed by B. F. Skinner, a pioneer in the field. Much of our understanding of how people learn new behaviors is based on the behavioral perspective.

The Cognitive Perspective: Identifying the Roots of Understanding

Evolving in part from structuralism and in part as a reaction to behaviorism, which focused so heavily on observable behavior and the environment, the cognitive perspective focuses on how people think, understand, and know about the world. The emphasis is on learning how people comprehend and represent the outside world within themselves and how our ways of thinking about the world influence our behavior. Many psychologists who adhere to the cognitive perspective compare human thinking to the workings of a computer. In their view, thinking is information processing.

The Humanistic Perspective: The Unique Qualities of the Human Species

The humanistic perspective suggests that all individuals naturally strive to grow, develop, and be in control of their lives and behavior. Humanistic psychologists maintain that each of us has the capacity to seek and reach fulfillment. According to Carl Rogers and Abraham Maslow, who were central figures in the development of the humanistic perspective, people strive to reach their full potential if they are given the opportunity. The emphasis of the humanistic perspective is on free will, the ability to freely make decisions about one’s own behavior and life. The notion of free will stands in contrast to determinism, which sees behavior as caused, or determined, by things beyond a person’s control.

LECTURE IDEAS

HISTORY OF PSYCHOLOGY (SEE BIOGRAPHIES BELOW FOR ADDITIONAL INFORMATION)

500,000 B.C.: Trephining to allow the escape of evil spirits. Emphasize that this method is still used in some areas around the world, particularly in agricultural, developing societies.

430 B.C.: Hippocrates argues for four temperaments of personality. Current theories of personality propose that there are five basic temperaments; these are still very similar to those proposed by Hippocrates, and even though personality is not controlled by bodily “fluids,” hormones and neurotransmitters are now known to have important influences on behavior.

1689: John Locke introduces idea of tabula rasa. Are we born as a “blank slate”? Does our behavior reflect entirely our upbringing (related to the nature-nurture issue discussed below)? John Locke was an important early advocate of the behaviorist perspective.
**1807:** **Franz Josef Gall proposes phrenology.** The idea that bumps on the skull reflect personality was a fascinating, although inaccurate, attempt to explain variations in human behavior. Some students may have seen the “Phrenology Head” by L. N. Fowler, a white china head with markings corresponding to the main areas of personality and intelligence. Illustrate this discussion with a picture of one (many are available on the Web). My joke about this is that in the days of phrenology, you could get your hair done and receive psychotherapy at the same time!

**1879:** **Wilhelm Wundt inaugurates first psychology laboratory in Leipzig, Germany.** This is a major event to highlight, as it is the beginnings of psychology as a formal science. Contrast structuralism with functionalism. See below for an activity involving introspection.

**1895:** **Functionalism model formulated.** Emphasize this as the development of a model that challenged structuralism. Talk about the importance of William James in American psychology. See below for how to contrast structuralism with functionalism.

**1920:** **Gestalt psychology most influential.** This perspective also contrasts with structuralism and functionalism. The text emphasizes these three perspectives.

Also point to the development of psychoanalysis, behaviorism, humanistic, and cognitive perspectives, but these can be discussed as separate perspectives in psychology (see below).

**1905:** **Mary Calkins works on memory.** Calkins also was the first woman president of the American Psychological Association. She invented the paired-associate technique. Having been refused a PhD from Harvard (she was offered one from Radcliffe, which she declined), she became an ardent spokeswoman for women’s rights, including the right to vote.

**1928:** **Leta Stetter Hollingworth publishes work on adolescence.** In addition to making contributions to the psychology of women in the early part of the 20th century, Hollingworth was known for her work on gifted children, children with “mental defects,” and adolescents. Her text on adolescence replaced that of G. Stanley Hall and became the leading work in the field until the late 1940s.

**HELPFUL HINTS FOR STUDENTS:**

Here are a few ways to help students remember names associated with historical achievements:

“F” (for functionalism) comes before “S” (for structuralism), just as “J” (for James) comes before “W” (for Wundt).

For Gestalt psychology, the “whole is more than the sum of its parts” and the letters “al” (for “all”) are in the term’s name.

**BIOGRAPHY OF WILLIAM JAMES (FROM PETTIJOHN’S “CONNECTEXT”)**
William James was born in New York City in 1842. He was the son of wealthy parents, whose enthusiasm for their children’s education sent young James traveling throughout Europe. His formative years were spent in the best schools of France, Germany, Switzerland, and the United States. He vacillated from one interest to another, studying painting, chemistry, biology, and medicine. In 1869, he received a medical degree from Harvard University. Finally, at the age of 30, he accepted the teaching position at Harvard that launched his outstanding career in psychology. In 1875, James established one of the first psychology demonstration teaching laboratories in the world at Harvard. Three years later, at the age of 36, he married a Boston schoolteacher and began writing his most famous work, *The Principles of Psychology*, which, to his publisher’s dismay, took him almost 12 years to complete. James enjoyed great popularity as a lecturer at Harvard and was remembered by students as a vivacious personality whose extravagant sense of humor and picturesque language set him apart from the typical professor. His interests were tremendously varied: he wrote about topics such as habit, consciousness, personality, emotion, and religion. James continued to write, lecture, and travel until his death in 1910 at his country home in New Hampshire.

**NOTE:** Students would also be interested in knowing that he was the brother of the novelist Henry James.

**INTROSPECTION EXERCISE (CAN ALSO BE MADE INTO A STUDENT ASSIGNMENT):**

**Read this to the class:**

Wilhelm Wundt founded the first formal psychology laboratory in Leipzig, Germany, in 1879, the date now considered to be the beginning of the science of psychology. A physician and physiologist, Wundt conducted experiments intended to identify the basic nature of human consciousness and experience. His main focus of research was on the senses of vision, touch, and the passage of time; other topics studied in his laboratory included attention, emotion, and memory.

The approach associated with Wundt is structuralism, which seeks to describe the basic building blocks or “structure” of consciousness. The main technique used by Wundt and his colleagues was introspection or “inner sense.” In this method, trained subjects are given a stimulus. They then are asked to describe the sensations that made up their conscious experience of that stimulus.

Now you can try introspection yourself. Look at the stimulus that will appear on the screen.

**Show a picture of an apple (or hold up any handy object).**

What is your experience of this apple? How would you describe the sensations of each of the parts of the apple—its colors, its roundness, its shading?

In Wundt’s laboratory, you might be asked to reflect on your experience of this stimulus for several minutes or even several hours!
FUNCTIONALISM EXERCISE (ALSO CAN BE MADE INTO A STUDENT ASSIGNMENT):

Read this to the class:

William James opened a small psychology laboratory in 1870 that he used to demonstrate some of the basic processes he taught in his classes at Harvard University. However, the laboratory was for demonstration, not research. James identified himself as a philosopher, not a psychologist. James published *The Principles of Psychology* in 1890. This massive work (two volumes of almost 1,400 pages) contained his theoretical positions in psychology.

Functionalism was the idea that mental processes were useful as functional activities to living creatures in their attempt to maintain and adapt themselves in the world of nature. James developed this position as a reaction against the view of the structuralists that the mind can be divided into units. James’s focus on the mind’s ability to adapt was derived from Darwin’s evolutionary theory that all characteristics of a species must serve some adaptive purpose. According to James, psychology’s goal should be to investigate the function, or purpose, of consciousness rather than its structure.

James used the concept of “stream of consciousness” to describe the mind.

Present this instruction:

What are the thoughts going through your mind right now? Perhaps you are thinking about the instructor in front of you, but if you let your mind wander, you may start to think about where you are going later today, what you did yesterday, the feeling that you are getting hungry and would like something to eat, or perhaps your concern over whether your roommate is still asleep. According to James, these thoughts cannot be separated into component parts as proposed by the structuralists. Instead, they form a stream of the total flow of thoughts, and are not necessarily tied to direct experience.

GESTALT EXERCISE (ALSO CAN BE MADE INTO A STUDENT ASSIGNMENT):

Gestalt psychology is based on the observation that we perceive experiences in ways that cannot be reduced simply to a set of basic sensations. The word “gestalt” comes from the German word for structure, or form. The Gestalt psychologists were represented by, among others, Max Wertheimer, Kurt Koffka, Wolfgang Kohler, and Kurt Lewin, who developed their ideas in the 1920s, having begun their work in Germany and then moving to universities in the United States in the 1930s. They were noted for developing the “laws” of Gestalt psychology, many of which were based on observations derived from studying how people perceived visual illusions.

Present this instruction:

Now try this experiment from Gestalt psychology. Look at this picture:
Show this picture:

What do you see when you look at this picture? Perhaps you noticed two white profiles looking at each other against a black background. Or perhaps you saw a black vase against a white background. Whichever one you saw first, now try to find the other. Gestalt psychologists were interested in the patterns that people saw in stimulus objects and invented a number of illusions designed to learn more about the perceptual assumptions (and errors) that follow from the tendency to view “the whole.” Psychologists now call this “top-down” processing.

BIOGRAPHY OF JOHN B. WATSON (FROM PETTIJOHN’S “CONNECTEXT”)

John B. Watson was born in 1878 in a rural community outside Greenville, South Carolina, where he attended the local country schools near his parents’ farm. At 16, he entered Furman University, where he earned an MA degree.

Watson received his PhD in experimental psychology at the University of Chicago in 1903. His research was on the sensory cues used by rats in learning to run through a maze. He remained at Chicago for five years.

In 1908 he began teaching at Johns Hopkins University, where he remained until 1920 when a highly publicized divorce forced him to resign. Watson was the driving force for the school of behaviorism, and his approach can be seen in a popular quote: “Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief, and yes, even beggar-man and thief, regardless of his talents, inclinations, tendencies, abilities, vocations, and race of his ancestors” (1924, p. 82). In 1921, Watson entered the business world and soon became vice president of an advertising agency. He married his former laboratory assistant and continued to write popular articles on psychology for some time. He died in 1958 at the age of 80.

BIOGRAPHY OF SIGMUND FREUD (FROM PETTIJOHN’S “CONNECTEXT”)

Feldman: Essentials of Understanding Psychology, 11e
Sigmund Freud was born in May 1856 to a lower-middle-class family, the son of wool merchants in the Austrian town of Freiburg. When he was 4, his family moved to Vienna. His parents soon recognized and encouraged young Freud's intellectual capacities. After receiving his medical degree in 1881, he began to practice medicine; shortly afterward he met a young woman whom he eventually married.

Departing from the traditional academic setting of the psychological laboratory, he began to study mental disorders by clinical observation. Initially, Freud’s theories shocked his highly conservative colleagues, most of whom either dismissed him entirely or countered him vehemently with caustic criticism. Freud refused to be discouraged by his adversaries, and continued his investigations with an almost obsessive fervor, gaining the support of only a handful of men who, like Jung and Adler, were themselves destined to make major contributions to psychoanalysis.

Freud spent nearly all his life in Vienna, and when Nazi storm troopers invaded the city in 1938, he was arrested in his home and held in captivity until his stock of unsold books could be retrieved and burned publicly. On his release a few weeks later, he moved to London, where he lived out the last months of his life. In September 1939, Freud died of cancer at the age of 83.

**IMPORTANCE OF PERSPECTIVES IN PSYCHOLOGY**

These five perspectives form a central theme of the course in that the course and many topics within the course are organized around them. Alert students to the fact that if they understand these perspectives, they will be in very good shape to understand material presented throughout the course. It will be easier for students to grasp these concepts if after presenting these briefly and defining them, you show how they would apply to a fictional character (see below).

**MEDIA PRESENTATION IDEAS**

**ANALYSIS OF A FICTIONAL CHARACTER**

Show a brief segment from a movie or television show in which a character displays psychological symptoms. Ask students to discuss the character’s symptoms from the five major perspectives.

**MODULE 3: RESEARCH IN PSYCHOLOGY**

**Learning Objectives**

3–1 What is the scientific method?

3–2 What role do theories and hypotheses play in psychological research?

3–3 What research methods do psychologists use?

3–4 How do psychologists establish cause-and-effect relationships in research studies?
Research —systematic inquiry aimed at the discovery of new knowledge—is a central ingredient of the scientific method in psychology. It provides the key to understanding the degree to which hypotheses (and the theories behind them) are accurate.

The scientific method is the approach used by psychologists to systematically acquire knowledge and understanding about behavior and other phenomena of interest. It consists of four main steps: (1) identifying questions of interest, (2) formulating an explanation, (3) carrying out research designed to support or refute the explanation, and (4) communicating the findings.

Descriptive research is designed to systematically investigate a person, group, or patterns of behavior. These methods include archival research, naturalistic observation, survey research, and case studies.

THEORIES: SPECIFYING BROAD EXPLANATIONS

In using the scientific method, psychologists start by identifying questions of interest. Once a question has been identified, the next step in the scientific method is to develop a theory to explain the observed phenomenon. Theories are broad explanations and predictions concerning phenomena of interest. Psychologists Bibb Latané and John Darley, responding to the failure of bystanders to intervene when Kitty Genovese was murdered in New York, developed what they called a theory of diffusion of responsibility.

HYPOTHESES: CRAFTING TESTABLE PREDICTIONS

Although the diffusion of responsibility theory seems to make sense, it represented only the beginning phase of Latané and Darley’s investigative process. Their next step was to devise a way to test their theory. To do this, they needed to create a hypothesis. A hypothesis is a prediction stated in a way that allows it to be tested. Hypotheses stem from theories; they help test the underlying soundness of theories.

A hypothesis must be restated in a way that will allow it to be tested, which involves creating an operational definition. An operational definition is the translation of a hypothesis into specific, testable procedures that can be measured and observed.

ARCHIVAL RESEARCH

In archival research, existing data, such as census documents, college records, and newspaper clippings, are examined to test a hypothesis. Archival research is a relatively inexpensive means of testing a hypothesis because someone else has already collected the basic data. Of course, the use of existing data has several drawbacks. The data may not be in a form that allows the researcher to test a hypothesis fully. The information could be incomplete, or it could have been collected haphazardly.
NATURALISTIC OBSERVATION

In naturalistic observation, the investigator observes some naturally occurring behavior and does not make a change in the situation. Although the advantage of naturalistic observation is obvious—we get a sample of what people do in their “natural habitat”—there is also an important drawback: the inability to control any of the factors of interest.

SURVEY RESEARCH

In survey research, a sample of people chosen to represent a larger group of interest (a population) is asked a series of questions about their behavior, thoughts, or attitudes. Survey methods have become so sophisticated that even with a very small sample researchers are able to infer with great accuracy how a larger group would respond.

THE CASE STUDY

In contrast to a survey, in which many people are studied, a case study is an in-depth, intensive investigation of a single individual or a small group. Case studies often include psychological testing; a procedure in which a carefully designed set of questions is used to gain some insight into the personality of the individual or group.

CORRELATIONAL RESEARCH

Variables are behaviors, events, or other characteristics that can change, or vary, in some way. In correlational research, two sets of variables are examined to determine whether they are associated, or “correlated.” The strength and direction of the relationship between the two variables are represented by a mathematical statistic known as a correlation which can range from +1.0 to -1.0. A positive correlation indicates that as the value of one variable increases, we can predict that the value of the other variable will also increase. A negative correlation tells us that as the value of one variable increases, the value of the other decreases. The inability of correlational research to demonstrate cause and-effect relationships is a crucial drawback to its use.

EXPERIMENTAL RESEARCH

In a formal experiment, the researcher investigates the relationship between two (or more) variables by deliberately changing one variable in a controlled situation and observing the effects of that change on other aspects of the situation. The change that the researcher deliberately makes in an experiment is called the experimental manipulation. Experimental manipulations are used to detect relationships between different variables. Latané and Darley, in testing their theory of the diffusion of responsibility in bystander behavior, developed this hypothesis: The higher the number of people who witness an emergency situation is, the less likely it is that any of them will help the victim. They then designed an
experiment to test this hypothesis. Their first step was to formulate an operational definition of the hypothesis by conceptualizing it in a way that could be tested.

**Experimental Groups and Control Groups**

Experimental research requires that the responses of at least two groups be compared. One group will receive some special treatment—the manipulation implemented by the experimenter—and another group will receive either no treatment or a different treatment. Any group that receives a treatment is called an **experimental group**; a group that receives no treatment is called a **control group**. Returning to Latané and Darley’s experiment, we see that the researchers needed to translate their hypothesis into something testable. To do this, they decided to create a false emergency situation that would appear to require the aid of a bystander. As their experimental manipulation, they decided to vary the number of bystanders present.

**Independent and Dependent Variables**

Latané and Darley’s experimental design now included an operational definition of what is called the **independent variable**. The independent variable is the condition that is manipulated by an experimenter. Crucial to every experiment is the **dependent variable**, the variable that is measured and is expected to change as a result of changes caused by the experimenter’s manipulation of the independent variable. The dependent variable is dependent on the actions of the participants or subjects—the people taking part in the experiment.

**Random Assignment of Participants**

To make the experiment a valid test of the hypothesis, Latané and Darley needed to add a final step to the design: properly assigning participants to a particular experimental group.

How can we ensure that participants in each experimental group will be equally intelligent, extroverted, cooperative, and so forth, when the list of characteristics—any one of which could be important—is potentially endless? The solution is a simple but elegant procedure called random assignment to condition: Participants are assigned to different experimental groups, or “conditions,” on the basis of chance and chance alone.

**Were Latané and Darley right?**

To test their hypothesis that increasing the number of bystanders in an emergency situation would lower the degree of helping behavior, Latané and Darley placed the participants in a room and told them that the purpose of the experiment was to talk about personal problems associated with college. Participants were randomly assigned to these groups upon their arrival at the laboratory. Each group included a trained confederate, or employee, of the experimenters. In each two-person group, then, there was only one real “bystander.” As the participants in each group were holding their discussion, they suddenly heard through the intercom one of the other participants—the confederate—having what
sounded like an epileptic seizure and then calling for help. The participants’ behavior was now what counted. The dependent variable was the time that elapsed from the start of the “seizure” to the time a participant began trying to help the “victim.”

Because these results are straightforward, it seems clear that the experiment confirmed the original hypothesis. However, Latané and Darley could not be sure that the results were truly meaningful until they determined whether the results represented a significant outcome.

Moving Beyond the Study

The Latané and Darley study contains all the elements of an experiment: an independent variable, a dependent variable, random assignment to conditions, and multiple experimental groups. Psychologists—like other scientists—require that findings be replicated, or repeated, sometimes using other procedures, in other settings, with other groups of participants, before full confidence can be placed in the results of any single experiment. A procedure called meta-analysis permits psychologists to combine the results of many separate studies into one overall conclusion.

STUDENT ASSIGNMENTS

LIRRARY RESEARCH ON ESP

Send your students to your library’s online database in psychology. If your library does not have this facility, have students complete this assignment via a search engine such as Google. Give them this assignment: For a topic that interests you, find an article that you feel does a good job of addressing the topic. Find one that does a poor job of addressing the topic. What makes the difference between a good (i.e., scientific) and a poor (i.e., nonscientific) study on this topic?

SCIENTIFIC METHOD

Ask students the following questions about the scientific method in psychology:

Why is it necessary for psychological researchers to use the scientific method?

Think about a psychological issue of interest to you. How would you approach it from a scientific perspective?

Is it more or less difficult for psychologists to study phenomena of interest than is true for scientists in other disciplines?

OPERATIONALIZATION: DIFFUSION OF RESPONSIBILITY

The textbook describes the research conducted by Latané and Darley on diffusion of responsibility. In this experiment it was hypothesized that the more the number of people in the room, the less likely an
individual bystander would help. The hypothesis was operationalized by varying the number of people in the room when a confederate appeared to be having an epileptic seizure. Describe two other methods that could be used to operationalize this hypothesis.

**PSYCINFO**

For a brief assignment, have students use PsycInfo (or Google Scholar) to find a current example of each type of research method (e.g., archival, case study). Briefly describe the method used in each study that students identify.

**METHODS OF RESEARCH**

Have students complete Handout 2–1.

**CORRELATIONAL RESEARCH**

Have students complete Handout 2–2.

**EXPERIMENTAL DESIGN**

Have students complete Handout 2–3.

**LECTURE IDEAS**

**“PSYCHIC EXPERIMENTS”**

To show the importance of the scientific method, particularly ruling out alternative, competing hypotheses, here are three demonstrations that are very simple to do. It just takes a bit of show “person”ship.

**Experiment 1:**

This idea is loosely based on the “magic” tricks of Daryl Bem, Cornell psychologist.

The idea is to lure students into thinking that you can read their minds by guessing which object in the classroom they will have chosen. You will use a trick called “Black Magic.” After amazing them with your psychic powers, you then ask students to suggest alternative hypotheses to the possibility that you actually read their minds. The setup for this demonstration is reference to the Ganzfield procedure in which a “receiver” attempts to read the mind of a “sender.” The procedure involves the receiver trying to guess which of four objects he or she had chosen. The chance rate is 25% correct, but Bem’s meta-analysis demonstrated a hit rate of 33%–35%. Say that Bem was therefore able to prove the existence of
psychic phenomena (also called the “Psi” effect). If the class cooperates by concentrating their thoughts on an object in the room, you may be able to demonstrate the effect today.

*Follow these steps:*

Before the class, arrange to have a volunteer to assist you. This volunteer will appear to have been randomly chosen, but actually you will have preselected this person. You can honestly ask this person in front of the class whether you arranged ahead of time regarding which object was selected, and the honest answer will be no, because you will not have arranged ahead of time which object was actually selected. You will arrange ahead of time which object the assistant will point to before whatever object the class selects. This will be a black object. Any object that the volunteer points to after the black one will be the object chosen by the class. As you can see, nothing is really left to chance at all, nor have you been dishonest.

Tell the class that you will step out of the room and they will have up until the time you count to 30 to choose the object. The assistant will be in the room during this time.

Return to the room and now tell the class that in order to replicate the Ganzfield procedure, you will need to have the volunteer point to several objects in the room. You will use your psychic powers (along with the class’s cooperation) to determine which object they have chosen. During this time, the volunteer will point to three or four objects, then to an object that is black. The object after the black one should be what the class selected.

Feel free to ham this up. For each object, carefully inspect it, put your hands on it, look as though you are concentrating, and then announce in a loud voice, “No, this is definitely not the object.” For one or two of the objects, you can start to say “yes,” but then shake your head and say no. Chide the class and tell them to concentrate harder because you are getting confusing signals. For the object after the black one, first start to say no, then say very loudly, “YES! THIS IS THE OBJECT.” Look at the class and take a well-deserved bow.

Now ask the class if they now believe in ESP. With luck, no one will have seen this trick performed before. Encourage them to think of alternative hypotheses and if necessary, lead them to think of the trick as involving not the object itself but the object AFTER the black object.

**Experiment 2:**

Another or a second presentation along similar lines involves a very simple card trick. This can be performed using a slide or with a set of cards (although this will take some sleight of hand). The slide trick is definitely easier. Reproduce these images:

Slide 1:
Slide 2:

As you can see, Slide 2 and Slide 1 have completely different sets of cards. You will ask for a volunteer and say that the volunteer is to think of one of the cards from Slide 1. You will have magically guessed which card that is, as will be shown when you reveal Slide 2. If you can do this with actual cards, you would have the advantage of being able to pretend to deal out the cards minus the one that the volunteer chose. The problem is that you would then have to switch hands behind your back. With the overheads, tell the class that you have figured out ahead of time which card your volunteer will select. After the volunteer thinks of the card, show Slide 2. Unless the volunteer guesses the deception right away (try not to pick a math major!), then you can ask the class to suggest hypotheses regarding how you “knew” which card would be selected.

Feel free to adapt either of these tricks to your own personal style or to choose an alternate trick that you are comfortable with. The main point is that you encourage the students to think of competing hypotheses. This demonstration also helps to teach students the importance of careful observation. Both tricks can be solved if students pay attention to exactly what you do and say.

**Experiment 3:**

This comes from your very own textbook author, Robert Feldman and is even simpler than the previous ones and just as effective.

Prepare three piles of cards:

Pile 1: has three cards

Pile 2: has four 3’s (from all four suits)

Pile 3: the third pile

Put them together at the top of a deck to create the illusion that you are going to be randomly taking them off the top but they will have been prearranged.
Now ask for a volunteer and state that you will predict which pile the volunteer will pick because your psychic powers are so strong. In fact, you will write down your prediction ahead of time! Without allowing the volunteer to see what you are doing, write down the number 3 on a large sheet of paper, fold it up, and then turn to the task at hand. Instruct the volunteer to think of a number and really concentrate. Close your eyes and pretend to be “sensing” what the volunteer is thinking. Then instruct the volunteer to point at the pile she or he has chosen. After pointing to any of the piles, say, “Yes, that is what I predicted! I have written down the number 3!!” Of course you will be right because in Pile #1, there are 3 cards, Pile #2 has all 3’s, and the third pile is “Pile #3.” After the applause dies down, ask the audience if you have proven you are truly psychic. Of course they won’t think you are, but now you can ask them to generate hypotheses about the secret of the trick. Through this process, you will be demonstrating the value of considering alternative hypotheses and being ready to critique a result even if it seems to be dramatically proving a point.

**Note regarding Latane and Darley’s study:**

An article published in 2007 in the *American Psychologist* challenged some of the conclusions reached about the Kitty Genovese case:


**ARCHIVAL RESEARCH:**

**Provide students with these examples of archival research:**

Searching high school records of people who later became criminals to see if there were early signs of misbehavior.

Looking up marriage licenses to find out the average age difference between spouses.

Finding out whether there are racial biases in jury decisions by examining court records.

Studying speeches made in Congress by men and women to see if there are differences in their use of particular words or phrases.

Examining census records to determine whether there are relationships between education and death rates.

Examining the use of online help manuals by people who buy printers to see if those with more knowledge of computers are less likely to use manuals.

Using cellphone signals to identify the behavioral patterns of people as they carry out their everyday activities.
Provide students with these examples of naturalistic research:

Watching the patients in a psychiatric ward during meals to see if they speak to each other.

Having people of different races drop their books while walking on a campus sidewalk and counting the number of people who stop to help to see if people are more likely to help those of the same race as themselves.

Determining whether people are more or less likely to ride an elevator than to walk in the morning versus the afternoon.

Watching people in a computer lab and counting the number of times that they interrupt their studies to answer e-mails.

Counting the length of time it takes people in a grocery store to decide on a cereal brand.

Watching men and women in conversation to examine their nonverbal behavior.

Counting the number of times that students versus nonstudents make calls on their cell phones during basketball games.

Watching children in a playgroup and recording the number of times they smile at other children.

Recording the number of times that a teacher in a classroom calls on boys and girls to see if boys are more likely to be called on to answer questions.

Observing whether people are more likely to cross against the light in a suburban street or a street in the center of a city.

Counting the number of times clients with various disorders cancel their psychotherapy appointments.

 Provide students with these examples of survey research:

Asking a random sample of people to complete an online questionnaire about political attitudes.

Asking people to list their favorite foods to determine if there are geographic differences in food preferences.

Interviewing people to ask them about their health practices.

Asking people to rate their preferences for different yogurt flavors.
Asking people to rate their attitudes toward new television technologies.

Giving people a chance to rate their preferences for catalog shopping by phone or online.

Having people describe whether or not they have experienced particular psychological symptoms throughout their lifetimes.

Asking about people’s experiences in elementary school with male versus female teachers.

Asking a sample of 50 people to participate in an opinion poll.

Finding out from airline passengers whether they would prefer to buy their meals on the airplane or in the airport terminal.

**VARIABLES TO STUDY IN CORRELATIONAL RESEARCH:**

Provide students with these examples of variables to study in correlational studies:

- Depression and chocolate consumption.
- Self-esteem and height.
- Exercise and cancer risk.
- Depression and length of Internet use.
- Time spent playing video games and grades.
- Attractiveness and popularity.
- Height and intelligence.
- Noise level of music and heart rate.
- Body image and weight.
- Achievement test scores and scholarship funding.
- Stress hormones and perceived stress level.
- Number of action movies seen in past 12 months and sensation-seeking as a personality variable.
- Intelligence and enjoyment of pop music.
- Marijuana smoking and high school grades.
- Time spent reading novels and depression scores.
Alcohol consumption and problem-solving ability.

Sex role attitudes and political conservatism.

Weight gain and risk of poor self-rated health.

Anxiety and lack of concern over test performance.

Behavior problems and popularity in schoolchildren.

CASE STUDY

Provide students with these examples of case studies:

Giving a troubled adolescent a set of lengthy questionnaires and interviews.

Examining a group of substance-addicted adults with tests of biological functioning.

Asking a mother to talk in-depth about her experiences of raising a child with autism.

Asking a human resources manager to describe how she makes decisions about recommending applicants for employment.

Studying intensively the work habits of a small group of successful CEOs.

Intensive neurological and neuropsychological testing of a group of children with a rare brain disorder.

Documenting progress in psychotherapy with a victim of Hurricane Katrina.

EXPERIMENTAL RESEARCH

Provide students with these examples of experimental research:

Determining whether negatively worded advertisements cause people to buy more or less of a product.

Examining people to determine whether memory is better for words or pictures.

Having people take a memory test in a laboratory to determine which conditions are best for promoting short-term memory.

Providing therapy to people with severe anxiety disorders and comparing them to a control group that did not receive therapy.

Determining whether people are more likely to lie when they are put in a condition of thinking they need to impress the experimenter compared to a condition in which they do not think they need to impress the experimenter.
Comparing people’s anxiety levels when told to imagine a stressful job interview compared to when told to imagine listening to relaxing music.

SUMMARY OF DESCRIPTIVE RESEARCH METHODS

Use this chart to summarize research methods used in descriptive research:

<table>
<thead>
<tr>
<th>Research Method</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archival</td>
<td>Inexpensive</td>
<td>Data can be in poor form</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Haphazardly collected</td>
</tr>
<tr>
<td>Naturalistic</td>
<td>Natural habitat</td>
<td>Inability to control factors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subjects may alter actions</td>
</tr>
<tr>
<td>Surveys</td>
<td>Straightforward</td>
<td>Memory lapses in respondents</td>
</tr>
<tr>
<td></td>
<td>Accuracy with small samples</td>
<td>Responses tailored to what researcher wants to hear</td>
</tr>
<tr>
<td>Case Study</td>
<td>In-depth and focused</td>
<td>Generalizations must be made cautiously</td>
</tr>
</tbody>
</table>

MEDIA PRESENTATION IDEAS:

CURRENT RESEARCH EXAMPLES

Interesting research examples can be taped from news documentary programs and cable networks such as the History Channel (somewhat a misnomer as it now incorporates many scientific programs) and shown for educational purposes on a one-time basis without violating copyright laws. The purpose of showing one of these examples in connection with this module (compared to the others on research) would be to highlight the importance of using the scientific method to arrive at conclusions about human behavior. One excellent example comes from the Discovery Channel program “Myth Busters” in which the team debunks the notion of mind control.

MODULE 4: CRITICAL RESEARCH ISSUES

Learning Objectives

4–1 What major issues confront psychologists conducting research?

THE ETHICS OF RESEARCH
Most psychologists argue that deception is sometimes necessary to prevent participants from being influenced by what they think a study’s true purpose is. As research has the potential to violate the rights of participants, psychologists are expected to adhere to a strict set of ethical guidelines aimed at protecting participants. Those guidelines involve the following safeguards:

- Protection of participants from physical and mental harm.
- The right of participants to privacy regarding their behavior.
- The assurance that participation in research is completely voluntary.
- The necessity of informing participants about the nature of procedures before their participation in the experiment.
- All experiments must be reviewed by an independent panel before being conducted.

One of psychologists’ key ethical principles is informed consent. Before participating in an experiment, the participants must sign a document affirming that they have been told the basic outlines of the study and are aware of what their participation will involve, what risks the experiment may hold, and the fact that their participation is purely voluntary and they may terminate it at any time.

Exploring Diversity

When Latané and Darley, both college professors, decided who would participate in their experiment, they turned to the people at hand: college students. Using college students as participants has both advantages and drawbacks. The big benefit is that because most research occurs in university settings, college students are readily available. The problem is that college students may not represent the general population adequately. In fact, undergraduate research participants are typically a special group of people: relative to the general population, college students tend to be from Western, educated, industrialized, rich, and democratic cultures.

Because psychology is a science whose goal is to explain all human behavior generally, its studies must use participants who are fully representative of the general population in terms of gender, age, race, ethnicity, socioeconomic status, and educational level.

SHOULD ANIMALS BE USED IN RESEARCH?

Researchers who use nonhuman animals in experiments have their own set of exacting guidelines to ensure that the animals do not suffer. Specifically, researchers must make every effort to minimize discomfort, illness, and pain. Procedures that subject animals to distress are permitted only when an alternative procedure is unavailable and when the research is justified by its prospective value. Psychological research that employs nonhumans is designed to answer questions different from those posed in research with humans.
THREATS TO EXPERIMENTAL VALIDITY: AVOIDING EXPERIMENTAL BIAS

Even the best-laid experimental plans are susceptible to experimental bias—factors that distort the way the independent variable affects the dependent variable in an experiment. One of the most common forms of experimental bias is experimenter expectations: An experimenter unintentionally transmits cues to participants about the way they are expected to behave in a given experimental condition. A related problem is participant expectations about appropriate behavior.

To solve this problem, psychologists typically use a procedure in which all the participants receive a treatment, but those in the control group receive only a placebo—a false treatment, such as a pill, “drug,” or other substance that has no significant chemical properties or active ingredient.

To overcome the possibility that experimenter expectations will affect the participant, the researcher can use the double-blind procedure.

Becoming an Informed Consumer of Psychology

As the field of psychology is based on an accumulated body of research, we must scrutinize thoroughly the methods, results, and claims of researchers. Several basic questions can help us sort through what is valid and what is not. Among the most important questions to ask are these:

- What was the purpose of the research?
- How well was the study conducted?
- Are the results presented fairly?

STUDENT ASSIGNMENTS

ETHICAL PRINCIPLES

Go to the APA Web site and look up the Ethical Principles of Psychologists and Code of Conduct


Choose three of the principles and answer the following questions:

- Why do you think this principle is important?
- What difficulties might psychologists encounter when applying this principle?
- Describe a real-life situation in which this principle might be used.
Have students volunteer to be participants in a psychological experiment.

After they have completed their participation, ask them to answer these questions:

- Did you know what the hypothesis was in this study?
- If so, how do you think your performance was affected by this knowledge? If not, how might your performance have been affected by this knowledge?
- What could the experimenter have done in this study to reduce experimental bias?

EVALUATING RESEARCH

Go to the APA Web site (www.apa.org) and on the home page find a recent study that interests you.

Evaluate the study’s findings:

- What was the purpose of the research?
- How well was the study conducted?
- Are the results presented fairly?

LECTURE IDEAS

ETHICAL CONCERNS

Enhance this part of the lecture by presenting a brief history and synopsis of the Ethical Principles of Psychologists and Code of Conduct (http://www.apa.org/ethics/code2002.html).

Be sure to differentiate clearly between the need to protect participants from undue risk, the need to inform participants in advance regarding what will take place when they complete the research, and the need to maintain the scientific integrity of the research. For example, if Latane and Darley had informed participants of exactly what would transpire in the study on diffusion of responsibility, their results would not necessarily have provided them with valid results because participants would have known that they were expected to help (this issue relates also to participant expectations). Another topic of interest to students is that of withholding psychological services in the interests of maintaining the integrity of the experimental design.

EXPERIMENTAL BIAS

Cite specific problems associated with experimental bias in psychological research, distinguishing between bias due to experimenter expectations and bias due to participant expectations. Placebos can be used to minimize the effects of participant expectation, particularly when used in a double-blind
procedure. However, placebos can sometimes lead to improvement due to the “placebo effect” (see http://www.nytimes.com/2010/05/04/opinion/04judson.html) for an excellent discussion of this issue). Raise the issue of why deception is needed and how best to handle the balance between informed consent and the need to minimize bias.

**MEDIA PRESENTATION IDEAS**

**SCIENTIFIC AMERICAN FRONTIERS: THE WONDER PILL**

This Scientific American Frontiers episode features the ways in which placebo effects can bias research on treatment effectiveness:

http://www.pbs.org/saf/1307/

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Need specific chapters? Create a book that contains only the chapters you want, in the order you want. Create will even re-number the pages for you! Feldman, *Understanding Psychology*, offers five additional modules on the following topic areas:

- Diversity and Culture
- Forensic Psychology
- Industrial/Organizational Psychology
- Sustainability/Environmental Psychology
- Statistics