CHAPTER OUTLINE

1. Introduction: The Origins of Psychology

    A. Today, psychology is defined as the science of behavior and mental processes.

    B. The Early Influences of Philosophy and Physiology
        i. The origins of psychology can be traced back to the writings of great philosophers such as Aristotle, a Greek philosopher who wrote about topics such as sleep, dreams, the senses, and memory.
        ii. Renee Descartes (1596–1650), a French philosopher, promoted a doctrine called interactive dualism—the idea that the mind and body are separate entities. Today, psychologists continue to debate the relationship between mental activity and the brain.
        iii. Early philosophers also laid the groundwork for the nature–nurture issue, which continues to be central to psychology. Today, the debate is often framed in terms of heredity (nature) versus environment (nurture).
        iv. Physiology is a branch of biology that studies the functions and parts of living organisms. Physiologists' early scientific discoveries led to the idea that scientific methods could be applied to issues of human behavior and thinking.

    C. Wilhelm Wundt: The Founder of Psychology
        i. German physiologist Wilhelm Wundt (1832–1920) published his landmark text, Principles of Physiological Psychology, in 1874. In 1879, he opened the first psychology research laboratory at the University of Leipzig.
        ii. Wundt defined psychology as the study of consciousness and emphasized the use of experimental methods to study and measure consciousness.

    D. Edward B. Titchener: Structuralism
        i. Edward B. Titchener (1867–1927) formally established structuralism, the first major school of thought in psychology; it held that complex conscious experiences could be broken down into elemental structures, or component parts, of sensations and feelings.
        ii. To identify these structures of conscious thought, Titchener trained subjects in a procedure called introspection.
        iii. The limitations of introspection, the most important being that it was unreliable, led to the demise of structuralism on Titchener's death in 1927.

    E. William James: Functionalism
        i. William James (1842–1910) was an American physiologist and psychologist whose dynamic views had an enormous impact on the development of psychology in the United States; his ideas became the basis for a new school of psychology called functionalism.
        ii. Functionalism stressed the importance of how behavior functions to allow people and animals to adapt to their environments. Functionalists examined how psychology could be applied to areas such as education, child rearing, and the work environment.
        iii. William James and his students
            a. In 1878, G. Stanley Hall (1844–1924) received the first Ph.D. in

psychology awarded in the United States. He established the first psychology research laboratory in the United States at Johns Hopkins University in 1883. He began publishing the American Journal of Psychology. In 1892, Hall founded and was elected the first president of the American Psychological Association (APA).

b. Mary Whiton Calkins (1863–1930) was an American psychologist who conducted research on memory, personality, and dreams; established a psychological laboratory at Wellesley College in 1891; wrote a well-received textbook titled Introduction to Psychology; and was the first woman to be elected president of the APA (1905).

c. Margaret Floy Washburn (1871–1939) was the first American woman to officially earn a Ph.D. in psychology. In 1908, she published an influential text titled The Animal Mind; in 1921, she became the second woman elected president of the APA.

F. Sigmund Freud: Psychoanalysis

i. Sigmund Freud (1856–1939) was an Austrian physician and the founder of psychoanalysis, which emphasized

a. human behavior as motivated by unconscious conflicts, which are almost always sexual or aggressive in nature.

b. past experiences, especially childhood experiences, as critical to the formation of adult personality and behavior.

ii. Freud's psychoanalytic theory of personality also provided the basis for a distinct form of psychotherapy.

G. John B. Watson: Behaviorism

i. In the early 1900s, the school of psychology called behaviorism emerged as a dominating force. It emphasized the study of overt behavior—observable behaviors that could be objectively measured and verified.

ii. Ivan Pavlov (1849–1936) was the Russian physiologist whose pioneering research on learning contributed to the development of behaviorism; he discovered a basic learning process that involves the association of stimuli.

iii. John B. Watson (1878–1958) was an American psychologist who championed behaviorism, emphasizing the study of observable behavior and rejecting the study of mental processes. The goal of behaviorists was to discover the fundamental principles of learning.

iv. B. F. Skinner (1904–1990) was an American psychologist and, like Watson, a strong proponent of behaviorism.

v. Between Watson and Skinner, behaviorism dominated American psychology for almost half a century.

H. Carl Rogers: Humanistic Psychology

i. In the 1950s, a new school of thought called humanistic psycho logy emerged. It was so distinctly different from both psychoanalysis and behaviorism that it was sometimes referred to as the "third force" in American psychology.

ii. Carl Rogers (1902–1987) was the American psychologist who founded the school of humanistic psychology, which emphasized

a. conscious experiences, including each person's unique potential for psychological growth and self-direction.

b. self-determination, free will, and the importance of choice in

human behavior.

iii. Abraham Maslow (1908–1970) was the American humanistic psychologist who developed a theory of motivation that emphasized psychological growth.

2. Contemporary Psychology
    A. Major Perspectives in Psychology
        1. The biological perspective emphasizes studying the physical bases of human and animal behavior, including the nervous system, endocrine system, immune system, and genetics.
        2. The psychodynamic perspective emphasizes the importance of unconscious influences, early life experiences, and interpersonal relationships.
        3. The behavioral perspective emphasizes how behavior is acquired or modified by environmental causes.
        4. The humanistic perspective focuses on the motivation of people to grow psychologically, the influence of interpersonal relationships on a person's self-concept, and the importance of choice and self-direction in striving to reach one's potential.
        5. The cognitive perspective focuses on the important role of mental processes in how people process and remember information, develop language, solve problems, and think.
        6. The cross-cultural perspective (embodied in cross-cultural psychology) studies the differences among cultures and the influences of culture on behavior.
            a. Culture refers to the attitudes, values, beliefs, and behaviors shared by a group of people and communicated from one generation to another.
            b. The tendency to use your own culture as the standard for judging other cultures is called ethnocentrism.
            c. Individualistic cultures emphasize the needs and goals of the individual over the needs and goals of the group.
            d. Collectivistic cultures emphasize the needs and goals of the group over the needs and goals of the individual.
        7. Evolutionary psychology refers to the application of the principles of evolution to explain psychological processes and phenomena. This perspective has grown out of a renewed interest in Charles Darwin's theory of evolution.
    B. Specialty Areas in Psychology
        1. Contemporary psychology enjoys enormous diversity. Important specialty areas include biological psychology, cognitive psychology, experimental psychology, developmental psychology, social psychology, personality psychology, health psychology, educational psychology, industrial/organizational psychology, clinical psychology, and counseling psychology.
        2. Mental health professionals
            a. Clinical psychologists typically have a doctorate in psychology and training in treating psychological disorders.
            b. Psychiatrists have a medical degree and can prescribe drugs and other biomedical procedures.
            c. Typically, psychoanalysts are clinical psychologists, psychiatrists, or other mental health professionals with extensive training in psychoanalytic psychotherapy.

3. The Scientific Method

The four basic goals of psychology are to (1) describe, (2) explain, (3) predict, and (4) control or influence behavior and mental processes. To achieve these goals, psychologists rely on the scientific method, which is a set of assumptions, attitudes, and procedures that guide researchers in creating questions to investigate, in generating evidence, and in drawing conclusions.

A. Psychologists are guided by these basic scientific assumptions:
   i. Events are lawful—that is, behavior and mental processes follow consistent patterns.
   ii. Events are explainable—that is, behavior and mental processes have a cause or causes that can be understood through careful, systematic study.
   iii. Psychologists are open-minded but they have a healthy sense of scientific skepticism—that is, they critically evaluate the evidence and are cautious in the claims they make.

B. In analyzing evidence from psychological research, students should think critically—that is, they should actively question statements rather than blindly accepting them.

C. The Steps in the Scientific Method: Seeking Answers

Psychology is based on empirical evidence—evidence that is the result of objective observation, measurement, and experimentation.

   i. Step 1. Formulate a hypothesis that can be tested empirically
      a. A hypothesis is a tentative statement that describes the relationship between two or more variables.
      b. Variables are factors that can vary, or change, in ways that can be observed, measured, and verified.
      c. An operational definition defines the variable in terms of how the factor is to be measured, manipulated, or changed.
   ii. Step 2. Design the study and collect the data

There are two basic categories of research methods—descriptive and experimental.

      a. Descriptive methods are research strategies for observing and describing behavior. Commonly used descriptive methods include naturalistic observation, surveys, case studies, and correlational studies.
      b. The experimental method is used to show that changing one variable causes change in a second variable.
   iii. Step 3. Analyze the data and draw conclusions
      a. Statistics are mathematical methods used to summarize, analyze, and draw conclusions about the data.
      b. Research findings that are statistically significant are not very likely to have occurred by chance.
      c. A statistical technique called meta-analysis involves pooling the results of many research studies into a single analysis.
   iv. Step 4. Report the findings
      a. Describing the precise details of the study makes it possible for other investigators to replicate, or repeat, the study in order to increase scientific confidence in the validity of the original findings.
      b. Psychologists report their research findings at professional conferences and in psychology journals.

D. Building Theories: Integrating the Findings

1. A theory, or model, is a tentative explanation that tries to integrate and account for diverse findings on the same topic.
2. Theories are tools for explaining behavior and mental processes; they evolve and change as new evidence emerges, reflecting the self-correcting nature of the scientific enterprise.

IV. Descriptive Research Methods

The descriptive research methods are strategies for observing and describing behavior.

i. Naturalistic Observation: The Science of People- and Animal-Watching

A. Naturalistic observation is the systematic observation and recording of behaviors as they occur in their natural settings.
B. An advantage of this method is that it allows researchers to study human behaviors that cannot ethically be manipulated in an experiment.
C. As a research tool, this method can be used wherever patterns of behavior can be openly observed.

ii. Case Studies: Details, Details, Details

A. A case study is an intensive, in-depth investigation of an individual or a small group of individuals.
B. Case studies can be used to investigate rare, unusual, or extreme conditions. Yet, they can provide information that can be used to help understand normal behavior.

iii. Surveys: (A) Always (B) Sometimes (C) You've Got to Be Kidding!

A. A survey is a questionnaire or interview designed to investigate the experiences, beliefs, behaviors, or attitudes of a particular group. Surveys allow researchers to gather information from a much larger group of people than is possible with other research methods.
   1. Surveys involve carefully designed questionnaires in paper-and-pencil format; they may also be computer- or Internet-based. They are also often conducted over the telephone or in person. Interviewers ask a structured set of questions in a predetermined order.
   2. A sample is a selected segment of the larger group or population being studied.
   3. A representative sample very closely parallels the larger group on relevant characteristics, such as age, sex, race, marital status, and educational level.
B. To help ensure that researchers select a representative sample, researchers commonly use random selection, which means that every member of the larger group has an equal chance of being selected for inclusion in the sample.
C. One potential problem with surveys is that people do not always answer honestly; participants may misrepresent their personal characteristics or lie in their responses.

iv. Correlational Studies: Looking at Relationships and Making Predictions

A correlational study examines how strongly two variables are related to each other. Correlations can be used to analyze the data gathered by any type of descriptive research method.

A. A correlation coefficient is a numerical indicator of the strength of the relationship between two factors. It can range from –1.00 to +1.00.
   1. The number in a correlation coefficient indicates the strength of the relationship.
   2. The sign indicates the direction of the relationship between the two variables.
B. A positive correlation is one in which two factors vary in the same direction—that is, the two factors increase or decrease together.

C. A negative correlation is one in which two factors move in opposite directions—that is, as one factor decreases, the other increases.
D. A critical point is that correlation does not necessarily indicate causality.
E. Correlational research is valuable for two reasons:
    1. Correlational research can be used to rule out some factors and identify others that merit more intensive study.
    2. The results of correlational research can sometimes allow you to make meaningful predictions.

V. The Experimental Method

The experimental method is a research method used to demonstrate a cause-and-effect relationship between changes in one variable and the effect that is produced on another variable. An experiment involves deliberately varying one factor, the independent variable, then measuring the changes this produces in a second factor, the dependent variable.

i. Do Violent Video Games Increase Aggressive Behavior? An Experiment

Craig Anderson and Karen Dill (2000) studied the effects of playing violent video games on aggressive behavior.

A. The hypothesis, participants, and random assignment
   1. The hypothesis predicted that playing violent video games would increase aggressive behavior.
   2. The participants were 210 male and female college undergraduates enrolled in an introductory psychology class.
   3. The researchers used random assignment to assign participants to the different experimental groups.
B. The experimental and control groups
   1. The experimental group, or experimental condition, consists of participants who are exposed to the independent variable. In this study, the independent variable was playing Wolfenstein 3D, a violent video game.
   2. The control group, or control condition, consists of participants who go through all the experimental phases but are not exposed to the independent variable. The control group serves as a baseline against which changes in the experimental group can be compared. In this study, the participants assigned to the control group played Myst, a nonviolent video game.
C. The dependent variable: Aggressive behavior
   1. The researchers used a standard measure of aggressive behavior called the Competitive Reaction Time Task.
   2. The researchers operationally defined aggressive behavior as the intensity and duration of noise blasts the participants chose to deliver to their opponents in the Competitive Reaction Time Task.
D. The experimental procedure
   1. The participants were told that the researchers were investigating how people learn and develop skills at motor tasks.
   2. During the first laboratory session, participants practiced playing their assigned video games for 30 minutes.
   3. During the second session, participants played the video games for 15 minutes, then completed the Competitive Reaction Time Task.
   4. Following the second session, each participant received a debriefing statement that explained the study's actual hypothesis and procedures.
E. The results and discussion
   1. The participants who had played the violent video game delivered longer, but not louder, blasts of noise to their opponents than those who played the nonviolent video game.
   2. These results, combined with earlier evidence that students who played more violent video games over a period of years had engaged in more aggressive behavior in their own lives, lend

support to the hypothesis that exposure to violent video games can increase aggressive behavior.

F. Reporting the findings
    1. On April 23, 2000, the APA issued a news release describing Anderson and Dill's findings; the study was published in the Journal of Personality and Social Psychology.
    2. Anderson testified before the U.S. Senate Commerce Committee that playing violent video games may be more harmful than watching violent television or movies, because the player identifies with the aggressor and because violent video games are interactive and require players to actively choose to act aggressively.

ii. Variations in Experimental Design

A. Placebo control group
    1. A placebo control group is a control group in which participants are exposed to a placebo, an inert substance or a treatment that has no known effects. In one study using a placebo control group, experimenters concluded that test scores improved simply because of a practice effect.
    2. A placebo control group can help researchers check for expectancy effects, which are changes that may occur because subjects expect changes to occur; sometimes referred to as placebo effects.
        A. A double-blind study is one in which neither the participants nor the researcher who interacts with them is aware of the condition to which the participants have been assigned.
        B. In a single-blind study, the researcher, but not the subjects, is aware of critical information about the condition to which the participants have been assigned.
            c. The purpose of the double-blind technique is to guard against the possibility that the researcher will inadvertently display demand characteristics—subtle cues or signals that communicate what is expected of certain subjects.

B. Natural experiments

In a natural experiment, researchers carefully observe and measure the impact of a naturally occurring event on their study participants. As a contrast, they measure the same indicators in a matched control group not exposed to the event.

C. Limitations of Experiments
    1. The artificial conditions of some experiments may produce results that do not generalize well or apply to real situations or populations beyond the participants in the study.
    2. Even when it is possible to create the conditions that the researchers want to study, it may be unethical to do so.

D. (Science Versus Pseudoscience) What Is Pseudoscience?
    1. A pseudoscience is a theory, method, or practice that promotes claims in a way that appears to be scientific and plausible even though supporting empirical evidence is lacking or nonexistent.
    2. Some claims of paranormal phenomena fall under the category of pseudoscience. Paranormal phenomena are alleged abilities

or events that fall outside the range of normal experience and established scientific explanations—for example, extrasensory perception.

3. Characteristics of pseudoscientific claims
    A. Many violate the rule of falsifiability. In order for a claim to be proved true, you must be able to identify some type of evidence that would refute the claim or prove that it is false.
    B. They often use anecdotes or testimonials as evidence to support their claims.
    C. Factors that could account for the apparent success of the claims include simple coincidence, expectancy or placebo effects, misremembering, and illusory correlation (the mistaken belief that two factors or events are related when they are not).
    D. They typically apply scientific principles in ways that are not substantiated by empirical evidence and are actually contradicted by scientific explanation.
4. The Is It TRUE? Model can be used to evaluate claims about behavior or mental processes that seem farfetched.

    T = Is It Testable?
    R = Is It Reliable?
    U = Is It Unusual?
    E = Is It Explainable?

VI. Ethics in Psychological Research

1. The American Psychological Association (APA) has developed a strict code of ethics for conducting research with both human and animal subjects, the Ethical Principles of Psychologists and Code of Conduct.
2. Psychologists must respect the dignity and welfare of participants; must not expose research participants to dangerous or harmful conditions that might cause either physical or emotional harm; and must obtain approval from the ethics panel at the institution where the study is to be conducted.
3. Five key provisions of the APA ethical guidelines regulate psychologists' research with humans. These cover
   i. informed consent and voluntary participation.
   ii. students as research participants.
   iii. the use of deception.
   iv. confidentiality of records.
   v. information about the study and debriefing.
4. (In Focus) Questions About the Use of Animals in Psychological Research
   i. Research using animal subjects must have an acceptable scientific purpose.
   ii. There must be a reasonable expectation that the research will
      1. increase knowledge about behavior,
      2. increase understanding of the species under study, or
      3. produce results that benefit the health or welfare of humans or other animals.
   iii. Animal subjects are sometimes used for research that could not feasibly be conducted on human subjects.
   iv. Psychological research with animals has made essential contributions to virtually every area of psychology. Significant gains have also been made in helping animals, including the preservation of endangered species, improvements in the care of zoo animals, and the prevention of animal diseases.

VI. Application: Evaluating Media Reports About Psychology

i. Be especially skeptical of sensationalistic claims or findings.
ii. Anecdotes are the essence of talk shows, not scientific evidence.
iii. Remember that the goal of “shock” radio and television is ratings.
iv. Look for the original source of a professional publication.
v. Consider how the research was funded.
vi. Consider the methods and operational definitions used.
vii. Remember the distinction between correlation and causality.
viii. Skepticism is the rule, not the exception, in science.