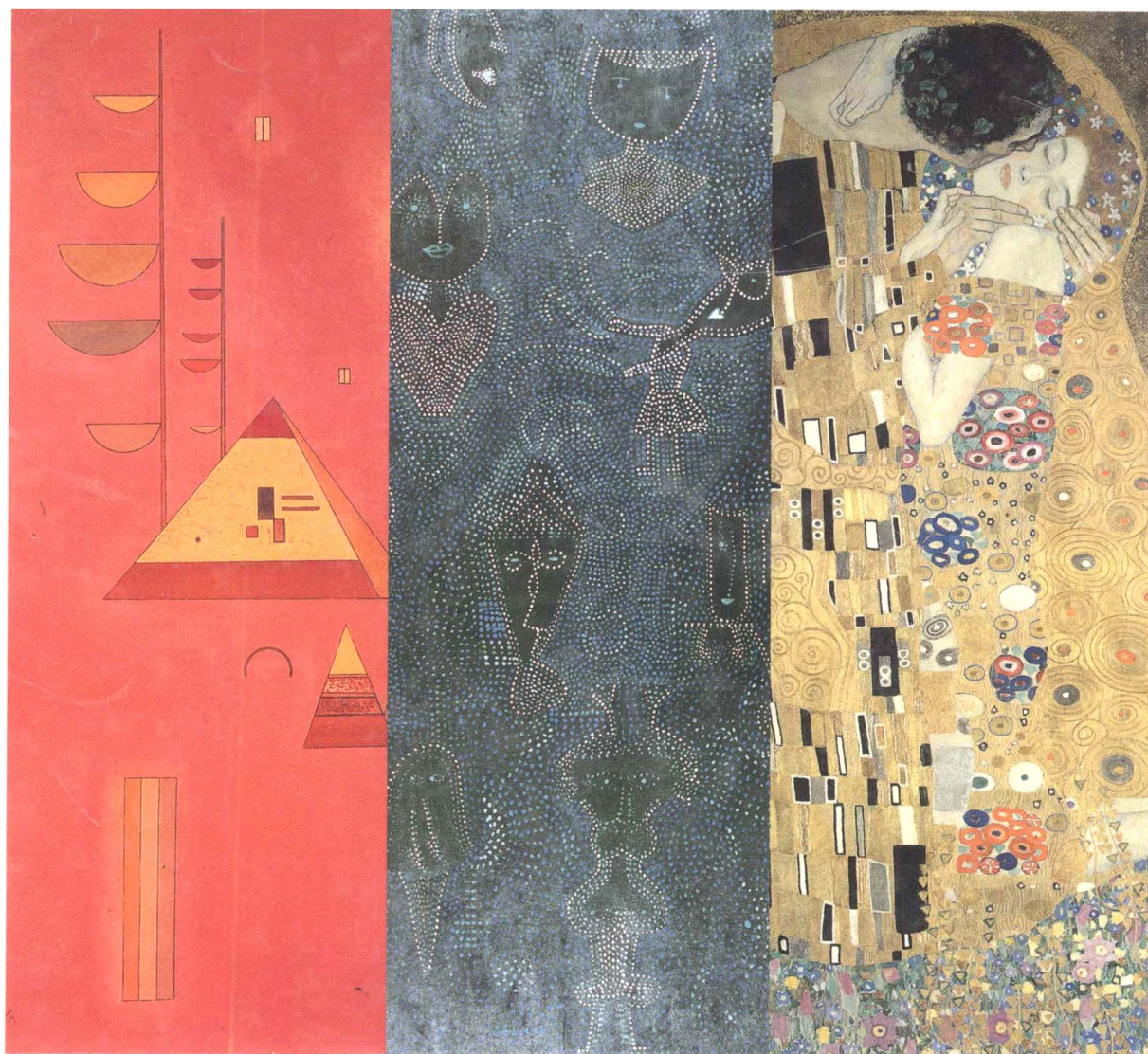


Psychology

John W. Santrock



S I X T H E D I T I O N

Psychology

John W. Santrock

UNIVERSITY OF TEXAS AT DALLAS



S I X T H E D I T I O N




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About the Author

John W. Santrock

John Santrock received his Ph.D. from the University of Minnesota in 1973. He taught at the University of Charleston and the University of Georgia before joining the psychology department at the University of Texas at Dallas. He was recently a member of the editorial board of *Developmental Psychology*. His research on father custody is widely cited and used in expert witness testimony to promote flexibility and alternative considerations in custody disputes. John has also authored these exceptional McGraw-Hill texts: *Child Development*, Eighth Edition, *Life-Span Development*, Seventh Edition, *Children*, Fifth Edition, and *Adolescence*, Seventh Edition. He is co-author, with Jane Halonen, of *Psychology, the Contexts of Behavior*, Third Edition.



John Santrock has been teaching introductory psychology since the 1960s and continues to teach a range of undergraduate psychology courses.

Preface

I have taught introductory psychology since 1967. Over the past four decades, my motivation and love for imparting psychology as a relevant science—one that is empirically sound yet meaningful for people's lives—has not wavered. Even when I first began teaching introductory psychology, I supplemented the text I used by having students read about such relevant topics as Erikson's theory of human development, case studies in abnormal psychology, and topics in applied psychology. In no other discipline (I am admittedly biased) will you find so many opportunities to better understand yourself and the people around you than in the discipline of psychology. This belief not only has been a foundation of my teaching introductory psychology for four decades, but also is the heart of this book.

New Or Revised?

When an introductory textbook reaches its sixth edition, it typically generates two reactions from instructors. The first is that instructors believe the book must be successful to have lasted this long in such a highly competitive and, most would say, overpublished market. Second, most instructors believe they already are sufficiently aware of the book's content and approach, because they have either used or evaluated a previous edition.

We acknowledge the accuracy of the first impression—over 300,000 students have used previous editions. However to the instructors who have the second frame of mind regarding the sixth edition, we optimistically challenge them to put it to the test. Why? With a new theme based on extensive marketing research, the inclusion of many new topics, the deletion of others, a new illustration program, new learning and study aids, new design, and line-by-line revision of existing material, *we are confident that this edition more closely resembles a new rather than a revised edition*. You will find more than 400 new citations from 1998–2000 along. The closer you look, the more confident we are that you will be surprised and impressed by the changes.

What Did We Learn?

What do most instructors and students really want from an introductory psychology text? In preparation for this revision, the author and the publisher were determined to obtain a concrete answer to this question. To accomplish this, *the publisher solicited and received, through reviews and focus groups, more feedback from instructors and students than for all of the previous editions combined*.

What did we learn? At the top of both instructors' and students' lists was their desire for a text that presents psychology as a *relevant science*. In our research, the majority of students gave their texts low grades for relevance and many believed their

courses failed to satisfy the goals they had in taking it. When asked to say how the subject matter could be presented in more relevant terms, students most commonly replied that the author must succeed in relating it to their own lives and experiences. Our panel of instructors agreed that the principal goal of the course is to present psychology as a science that students understand from an applied and personal perspective.

Psychology: The Relevant Science

As many instructors (and authors) know, it is quite a challenge to perceive what is needed to fulfill students' expectations, and then to fulfill them. How can we ensure that every page of a textbook has relevance? As we revise each sentence and each feature in the book, we must constantly ask ourselves: Why is this important? Is this a meaningful issue for today's students?

Psychology, sixth edition, has been infused with content, exercises, and resources that focus on psychology as a relevant science. The discipline of psychology is ideally suited to address some of the most important aspects of our lives. We don't have the answers to all of life's questions, but psychology can tell us much about matters like these:

- How our biological heritage affects our behavior
- How, and to what extent, our environmental experiences can change our lives
- How we perceive, remember, solve problems, and can become more creative
- How the social worlds of people and relationships affect the way we behave
- How the culture we live in influences us
- How we are similar to and different from others
- How science can provide us with more objective information about many aspects of life
- How to draw on conceptually diverse ideas in thinking about problems and issues
- How to understand controversies about mind and behavior
- How to think critically about many aspects of mind and behavior

The above ten areas are featured in a new section in Chapter 1 called "Psychology and Life: What Matters." They also are woven through the remainder of the text where appropriate. In addition, as you will see shortly, some of the book's main features emphasize psychology's relevance.

Every chapter of the book includes these "Psychology of Life" features:

Images of Psychology and Life

This section appears at the beginning of each chapter and introduces students to some aspect of the chapter in an

interesting way. Examples of topics include: “Why Youth Kill” (chapter 1), “The Human Versus Big Blue, Cog, and CYC” (chapter 8), and “Showering Seven Times a Day, Looking at a Bleak Future, and Avoiding Breathing on People” (chapter 13).

Explorations in Psychology

These boxes, seamlessly interwoven with the text, provide an expanded look at many fascinating ideas and issues related to the content at that particular point in the chapter. Examples of topics include: “From Horoscopes to the Sex Lives of Tigers” (chapter 1), “The Brains of the Mankato Nuns” (chapter 3), and “Using Optimistic Thinking to Go from Sausage Stuffer to Optimistic Supersalesman” (chapter 15).

Thinking About Psychology and Life

These boxes appear several times in each chapter and encourage students to think critically or evaluate themselves in regard to content in that part of the chapter. Examples of topics include: “Nature, Nurture, and Politics” (chapter 3), “Evaluating Your Creative Thinking” (chapter 9), and “Are You Introverted or Extroverted?” (chapter 12).

Resources for Psychology and Life

This section appears at the end of each chapter and lists books, agencies, phone numbers, research journals, and psychological organizations. These extensive resources enlarge the scope of the chapter to help students learn more about research and practical matters in psychology and life.

Development

As we have emphasized, the content of *Psychology*, sixth edition, was extensively overhauled and fine-tuned. Two types of consultants went over every sentence and section with a fine-tooth comb, making countless recommendations for what to add, subtract, revise, update, and rephrase.

Expert Research Consultants. A number of leading research experts in psychology evaluated individual chapters in their areas of expertise. Their detailed recommendations significantly improved the currency and accuracy of the text’s research content.

Expert Teaching Consultants. As previously mentioned, the sixth edition of *Psychology* underwent a more thorough review by individuals who teach introductory psychology than all of its first five editions combined. Their overall “big picture” view and detailed, line-by-line comments about what should go into an introductory psychology text and how it should be said have substantially reshaped this book in very positive ways.

Student Reviews and Focus Groups

For the first time in a formal context, we involved students in almost every facet of this revision. After all, they are the ultimate consumers of its content, and based on what we learned and the changes and improvements that were made as a result, we only wish we had obtained more of their input on earlier editions.

In addition to their part in determining the “relevance” theme for this edition, they told us (in focus groups) what elements worked and did not work for them in the various texts they used. They reacted to and advised us regarding several ideas we had developed for new substantive as well as pedagogical features. They critiqued the illustration program and gave numerous suggestions that helped guide the new format and design you see featured in this edition. All in all, their preferences are evident throughout the book.

“I really enjoy the layout of the book. I think the design, graphics are the most appealing part of this book. They make it interesting and they make it easier to turn the page.”

“This is definitely a student friendly book, and it is not too intimidating, so it’s accessible. I think [Explorations in Psychology] is a very interesting section in the book. It is aesthetically pleasing, it adds a little bit of more interesting info among pages of technical info. It offers more ease of reading.”

Heather Shafer, Student

“Pretty student friendly and accessible. It’s an attractive, inviting book. [Through the Eyes of a Psychologist] . . . is aesthetically pleasing, with good interesting quotes.”

Srin Chakravorty, Student

“I like how the author is writing on a personal level. It’s easy to read . . . [the text is] . . . well laid out, easy for eyes to move through the book, adds to the overall effect quite positively. . . .”

Kelly Murphy, Student

“[The text is] very easy to comprehend. It is coherent . . . box titles are very attention-grabbing . . . good explanations. [The design] is the best part. The art is really cool, attention getting and visually appealing.”

Erica Mezi, Student

Fewer Chapters

The standard text for the fifth edition had 17 chapters. Because most instructors continue to ask for less encyclopedic texts, we reduced the number of basic chapter to 16 by combining the two social psychology chapters into one. However, based on extensive reviewing we are confident that you will find the combined social psychology chapter complete without being encyclopedic.

We have significantly updated and improved the content in *Psychology*, sixth edition. Much of this updating and improvement is based on input from the research and teaching experts. Following is a chapter-by-chapter overview of the new content in *Psychology*, sixth edition:

CHAPTER 1 What Is Psychology?

Images of Psychology and Life: Why Youth Kill

Psychology’s Beginnings: Merging Ideas from Philosophy and the Natural Sciences

Revision of Wundt’s, Titchener’s, and James’ ideas

Updating of Bandura’s social cognitive theory

Updating of the behavioral neuroscience approach

Expansion and updating of the evolutionary psychology approach
 An eclectic approach
 Thinking About Psychology and Life:
 Saddam Hussein and Mother Teresa
 Extensive new section: Psychology and Life: What Matters
 Explorations in Psychology: From Horoscopes
 to the Sex Lives of Tigers
 Expanded and updated coverage of careers in psychology
 Some job possibilities for students with an
 undergraduate degree in psychology
 Thinking About Psychology and Life: Which Areas
 of Psychology Interest You the Most?

☞ *"I give this chapter an overall rating of A because I find it well organized with clear writing and good coverage. The principle strength is its copious and effective use of examples to illustrate the various approaches to psychology. They make the different schools much more meaningful."*

—Gary D. Laver,
 California Polytechnic State
 University-San Luis Obispo

CHAPTER 2 Psychology's Scientific Methods

New section: Exploring the Science of Psychology
 Thinking About Psychology and Life: Participating
 in Psychological Experiments on the Internet
 Substantial revision of the discussion of the scientific method
 with Bandura's classic research on observational learning
 and aggression as a theme
 Operational definition
 Who Will the Participants Be?
 Extensive revision and updating of research methods
 with examples of aggression research carried through
 as a common theme
 Recent research on physiological underpinnings
 of spousal abuse
 Experimental Research Cautions: Experimenter Bias
 and Research Participant Bias
 Thinking About Psychology and Life: No Magic Bullet
 Multiple Research Methods
 Thinking About Psychology and Life:
 Isn't Everyone a Psychologist?
 Revision and updating of ethics guidelines
 Revision of Explorations in Psychology box:
 Psychology and Values
 Revision and updating of the research challenges
 involved in gender, culture, and ethnicity
 Reading and Understanding Research Journals

☞ *"The coverage is . . . good and the writing is clear. Students should have no trouble understanding this chapter . . . the theme that science is not defined by what it studies but how it studies is a good one."*

—Keith Stanovich
 University of Toronto

CHAPTER 3 Biological Foundations and Neuroscience

New chapter title that includes neuroscience
 Dynamic photographs and drawings of the brain's structures
 Genotype and phenotype
 The Human Genome Project
 The new view of heredity-environment interaction
 Thinking About Psychology and Life:
 Nature, Nurture, and Politics
 New section: The Field of Neuroscience
 Updated and expanded discussion of neurotransmitters
 Agonists and antagonists
 Brandi Binder's case, which provides evidence
 of hemispheric flexibility
 Thinking About Psychology and Life:
 Your Brain and Your Behavior

☞ *"On balance, I feel that the chapter is very superior . . . Organizationally, it is very strong . . . The coverage of the nervous system strikes me as excellent. Extremely sound decisions seem to have been made initially about what to include and what to modify."*

—James Johnson
 Illinois State University

CHAPTER 4 Sensation and Perception

Dynamic drawings and photographs
 Psychophysics
 Revised discussion of absolute thresholds
 Revised discussion of signal detection theory
 Updated coverage of feature detectors
 Comparison of trichromatic and opponent-process theories
 Different types of pain receptors
 Thinking About Psychology and Life: Counting Aces of Spades
 The Stroop Effect
 Thinking About Psychology and Life: Examining Art for
 Perceptual Cues and Organization
 Attention
 Approaches to perception including comparison
 of information-processing and ecological theories
 Thinking About Psychology and Life: Inventing a Video Game
 ☞ *"I thoroughly enjoyed reading this chapter. I give it an A+. I really like the combination of sensation and perception in a single chapter and this chapter is wonderfully written. It has an active and exciting voice that will easily hold the interest of students."*

—Linda Kline
 California State University-Chico

CHAPTER 5 States of Consciousness

The range of sleep in animals
 Circadian rhythms and shiftworkers
 Revised and expanded discussion of sleep deprivation and needs
 Thinking About Psychology and Life:
 Do You Get Enough Sleep?
 Sleep across the human life span

Expanded discussion of sleep disorders including strategies for reducing insomnia
 Revised discussion of interpretation of dreams
 Do males and females dream about different things?
 Thinking About Psychology and Life: Lucid Dreaming
 Revised discussion of theories of hypnosis
 Updated coverage of trends in drug use
 The hazards of binge drinking in college
 Thinking About Psychology and Life: Do You Abuse Drugs?
 Caffeine
 Expanded coverage of alcoholism and prevention/treatment of drug abuse

☞ *“This is a very well-written overview of consciousness. I especially enjoyed the bits of history sprinkled throughout the chapter. I found the charts displaying information on the frequency of REM and NREM sleep, binge drinker, and psychoactive drugs, among others, to be excellent.”*

—Linda Kline
 California State University-Chico

CHAPTER 6 Learning

Diagram of Pavlov’s classical conditioning
 Contingency in classical conditioning
 Thinking About Psychology and Life:
 Classical Conditioning and Calvin Klein Jean Ads
 Ethics of conditioning a phobia in Little Albert
 Associative learning including figure that compares associative learning aspects of classical and operant conditioning
 Diagrams that compare positive reinforcement and negative reinforcement
 Revised and expanded coverage of punishment, including positive and negative punishment
 Figure that compares positive reinforcement, negative reinforcement, positive punishment, and negative punishment
 Recent research on spanking and antisocial behavior
 Thinking About Psychology and Life:
 Models and Mentors in My Life

☞ *“The overall rating for this chapter is an ‘A’ (Excellent). It is well written and the concepts are clearly defined and described. In particular, Santrock did an excellent job differentiating between positive and negative reinforcement and negative reinforcement and punishment. The latter distinction is particularly important as students often confuse those two concepts.”*

—David Penn
 Louisiana State University

CHAPTER 7 Memory

Substantial overhaul of chapter organization with this new sequence: The Nature of Memory, Memory Encoding, Memory Storage, Memory Retrieval and Forgetting, and Memory and Study Strategies
 Exploring memory with an emphasis on Daniel Schacter’s ideas on the remarkable capabilities of memory as well as its imperfections
 Dynamic diagrams of memory processes

Thinking About Psychology and Life:
 Evaluating People’s Memories in the Courtroom
 Explorations in Psychology: Cognitive Neuroscience:
 Watching Brain Activity During Memory Encoding
 Remembering faces: Ted Kaczynski
 Thinking About Psychology and Life: Generating Retrieval Cues
 Revised discussion of priming
 The three-level hierarchical structure
 of autobiographical memory
 New main section: Emotional Memories
 Memory and personal trauma
 Revised and updated discussion of repressed memories
 Significantly revised and expanded coverage
 of memory and study strategies
 Thinking About Psychology and Life:
 Memory and Study Strategies

☞ *“This chapter’s strength is the breadth of the material covered. The author covers both classic memory research and areas of memory research that are currently in vogue in the field. I was unable to identify any substantial area of memory research that the author had neglected to address. Given the breadth and quantity of material on memory, this is an outstanding accomplishment.”*

—Cynthia Sifonis
 University of Illinois

CHAPTER 8 Thinking and Language

Images of Psychology: The Human Versus Big Blue, Cog, and CYC
 New sequential organization of thinking: What Is Thinking?; Forming Concepts; Solving Problems; Thinking Critically, Reasoning, and Making Decisions
 The concept of schools of art
 Revised discussion of finding and framing problems
 New section on obstacles to solving problems that focuses on becoming fixated and lacking motivation and persistence
 Thinking About Psychology and Life: The Candle, Nine-Dot, and Six-Matchstick Problems
 Revised and updated discussion of critical thinking
 Thinking About Psychology and Life:
 Seeking Multiple Explanations
 Ellen Langer’s ideas about mindless behavior
 Confirmation bias
 Belief perseverence
 Overconfidence bias
 Hindsight bias
 Research on language environments of children in poverty
 Explorations in Psychology: How to Talk with Babies and Toddlers
 Revision and updating of bilingual education

☞ *“Santrock has his writing style going for him. I thought the descriptions were clear and accessible to any but the most ill-prepared undergraduate . . . there are some things about the book that are very attractive. What is here is well-balanced.”*

—John Best
 Eastern Illinois University

CHAPTER 9 Intelligence

Images of Psychology: Being Creative in “X”
 Reorganization with the construction/evaluation of intelligence tests now discussed early in the chapter
 Links between reliability and validity
 Thinking About Psychology and Life: Should Parents Be Testing Their Own Child’s IQ?
 Explorations in Psychology: Project Spectrum
 Thinking About Psychology and Life:
 Evaluating Your Multiple Intelligences
 Sternberg’s triarchic intelligence and schools
 Evaluating the multiple intelligences approach
 Explorations in Psychology: The Repository for Germinal Choice
 Thinking About Psychology and Life:
 Can Intelligence Be Increased?
 Extensive revision and expansion of discussion of creativity
 Thinking About Psychology and Life:
 Evaluating Your Creative Thinking

“I found the Intelligence chapter of this text informative, well-balanced, and up-to-date. It was also fun to read. . . . Particularly praiseworthy are the historical reviews. The social relevance of the topic is addressed quite well.”

—Mihalyi Csikszentmihalyi
 University of Chicago

CHAPTER 10 Human Development

Sequential reorganization of chapter so that major theories, such as Piaget’s and Erikson’s, are now presented intact rather than in separate locations
 Discussion of gender removed and placed in Chapter 16, “Social Psychology”
 Images of Psychology: Jessica Dubroff, Child Pilot
 Thinking About Psychology and Life: Is There a Best Age to Be? Early-later experience issue
 Conclusions about developmental issues
 New research on smoking mothers
 Balanced evaluation of Piaget’s Theory
 Evaluation of Erikson’s Theory
 Temperament
 Explorations in Psychology: Child Care in the United States
 The mother’s and father’s roles
 Why do people want to have children?
 Revised discussion of Kohlberg’s theory
 Thinking About Psychology and Life:
 How Long Would You Like to Live?
 Contemporary discussion of estrogen replacement therapy
 Revised and expanded coverage of biological theories of aging
 Alzheimer’s disease
 Revised and updated coverage of cognition and aging
 Skills that employers want job candidates to have
 McArthur (1999) study of midlife development
 Successful aging
 Thinking About Psychology and Life:
 Exploring Personal Life Investment

“This chapter was wonderful. Santrock presents the information in a relaxed, straightforward manner that makes readability and comprehension almost guaranteed!”

—Susan Amato
 Boise State University

CHAPTER 11 Motivation and Emotion

Images of Psychology: Terry Fox’s Marathon Run
 Reorganization of some ideas about the “whys” of behavior
 Revised discussion of drive reduction theory
 Thinking About Psychology and Life:
 Are You a Sensation Seeker?
 Revised and updated discussion of obesity
 Moved discussion of dieting to this chapter from health psychology chapter
 Moved discussion of anorexia nervosa and bulimia to this chapter from health psychology chapter
 Pheromones and aphrodisiacs
 Viagra
 Explorations in Psychology: America’s Sexual Landscape and Its Myths
 Goal-setting, planning, and monitoring
 Thinking About Psychology and Life:
 How Goal-Directed Are You?
 Explorations in Psychology: Comparing Math Achievement in Asian and American Cultures
 Reorganization of discussion of emotions. New sequence: Defining Emotion; Biological Dimensions; Cognitive Dimensions; Behavioral Dimensions; Sociocultural Dimensions; and Classifying Emotions
 Expanded discussion of the autonomic nervous system
 New section on neural circuits and neurotransmitters
 More dynamic diagrams of emotion topics
 The Facial Feedback Hypothesis
 Thinking About Psychology and Life: Pursuing the Good Life

“This chapter is well written and clear. Transitions between topics are smooth and there are numerous links to outside topics, such as other chapters in the book. The summary tables, photos, and figures are all very good. Another strength is the implicit theme of normal range versus pathology.”

—Valerie Ahl
 University of Wisconsin

CHAPTER 12 Personality

New summary figure on defense mechanisms
 Thinking About Psychology and Life: Your Defense Mechanisms
 Change of social learning theory to more contemporary social cognitive theory
 Thinking About Psychology and Life:
 Evaluating Who’s Among the Self-Actualized
 Self-esteem research
 Revision of Allport’s view of traits
 Thinking About Psychology and Life:
 Are You Introverted or Extraverted?
 New figure on the Big Five factors of personality
 Research on the Big Five factors
 Updated research on the MMPI-2

“The content covered in this chapter is very appropriate for a survey class. Overall, an excellent presentation of these very complex topics. . . . this chapter is quite ‘perfect.’”

—Jutta Street
Wake Technical Community
College

CHAPTER 13 Abnormal Psychology

Restructured chapter headings and subheadings
Images of Psychology: Showering Seven Times a Day, Looking at a Bleak Future, and Avoiding Breathing on People
Revised discussion of defining abnormal behavior and improved examples
Some myths and misconceptions about abnormal behavior
Legal aspects of mental disorders moved to earlier in chapter with expanded, revised content
Explorations in Psychology: Jack Ruby, Sirhan Sirhan, Jeffrey Dahmer, Ed Gein, John Hinkley, and Lorena Bobbitt
Figure 13.4: Some Prominent Categories of Mental Disorders in *DSM-IV*
Revised and updated discussion of panic disorder and agoraphobia
Social phobia
John Madden and Jack Nicholson
Dissociative identity disorder
Thinking About Psychology and Life:
Evaluating Whether You Are Depressed
More on manic episodes
Explorations in Psychology: Suicide
Russell Weston, Jr., and schizophrenia
Revised discussion of personality disorders with expanded description of clusters

“My overall impressions of this chapter are quite favorable. Santrock makes very good use of clinical case material which serves to catch the student’s attention and highlights the issues being discussed . . . the research is current and accurately summarized.”

—Richard P. Halgin
University of Massachusetts-
Amherst

CHAPTER 14 Therapies

New, less complex organization
Images of Psychology: Should I End My Life Today?
Revised and updated discussion of mental hospitals and deinstitutionalization
Recent developments, including managed care
Licensing and certification
Connections with personality theories
More case study examples
Figure 14.5: Overview of Main Psychotherapy Approaches
Revised discussion of person-centered therapy, including new therapist-client exchange
Figure 14.9: Classical Conditioning: The Backbone of Aversive Conditioning
Revised and expanded discussion of Beck’s cognitive therapy
Comparison of Ellis’ and Beck’s therapies

Revised, updated discussion of self-help support groups
Thinking About Psychology and Life: Designing a Study to Evaluate the Effectiveness of Psychotherapy
Revised, expanded, updated discussion of research on the effectiveness of psychotherapy
Thinking About Psychology and Life:

Evaluating Whether to Seek Psychotherapy
Revised, updated discussion of gender/ethnicity and therapy
Updated, revised discussion of drug therapy
Figure 14.12: Drug Therapy for Mental Disorders
Revised, expanded Figure 14.13: Therapy Comparisons
New final section for chapter: Therapy Integrations

“This chapter is very good. Santrock has done a very nice job of covering the major therapies and incorporating pedagogical tools that will engage students and help them understand the wealth of material. I would give the chapter an overall qualitative rating of A.”

—Richard P. Halgin
University of Massachusetts-
Amherst

CHAPTER 15 Health Psychology

Reorganization of chapter with stress and coping now coming prior to promoting health
Revised, updated, expanded introduction to the scope of health psychology
Two biological pathways to stress
Updated, revised discussion of psychoneuroimmunology including recent research
Revised discussion of Lazarus’ ideas on stress
Thinking About Psychology and Life:
Evaluating Life Events in Your Life
Explorations in Psychology: Poverty, Stress, and Violence: The Lives of Lafayette and Pharaoh
Thinking About Psychology and Life: Opening Up
Explorations in Psychology: Using Optimistic Thinking to Go from Sausage Stuffer to Optimistic Supersalesman
Recent research on social support and coping with stress
Updated, revised discussion of assertive behavior
Thinking About Psychology and Life: Dealing with Conflict
Thinking About Psychology and Life: Coping with Failure
Revised discussion of proper nutrition
Updated and expanded discussion of not smoking
Sound Sexual Decision Making (new section for this edition)
Thinking About Psychology and Life:
Sexual Myths and Realities

“I was very impressed with all the current research and writings cited in this chapter. Many of the citations had 1998 and 1999 after them. I appreciate the thorough literature searches that you have made for the book.”

—Michael Zickar
Bowling Green State University

CHAPTER 16 Social Psychology

This edition has an integrated single chapter on social psychology (the fifth edition had two separate chapters)
Images of Psychology and Life: The Reverend James Jones’ Dark Side with David Koresh and Marshall Herff Applewhite

Substantial reorganization of chapter. Attribution now is the first main topic discussed

Expanded, updated coverage of attribution

Self-serving bias

Revised and updated discussion of attitudes and behavior

Social influence is now a major heading with subheadings of Conformity and Obedience, Group Influence, and Cultural and Ethnic Influences

Normative social influence and informational social influence

Revised, updated discussion of groupthink

Revised discussion of cultural/ethnic influences

Thinking About Psychology and Life:

Prejudice and Reconstructive Memory

Thinking About Psychology and Life: Seeking Common Ground

New section on aggression

Gender now discussed at appropriate places in this chapter rather than in Chapter 10, "Human Development."

Updated discussion of freshman life goals

Thinking About Psychology and Life:

The Type of Love You Have

Strategies for overcoming loneliness

Ellen Berscheid's (1999) ideas about environmental demands and close relationships

☞ *"This chapter was well-done in practically all aspects. It is interesting, well-written, and contains a nice blending of classic and contemporary scholarship. The author uses examples, illustrations, cartoons, photographs, and the like in a persuasive, didactic way. The chapter also reflects a high degree of care and wisdom (such as the thoughtful discussion of Milgram's work, including more recent ethical concerns). As compared to the relevant material in leading social psychology texts, the coverage and writing in Santrock's social psychology chapter are outstanding."*

—John Harvey
University of Iowa

Optional Chapters

In addition to the main 16 chapters that are standard in many introductory psychology texts, the optional bundle for *Psychology*, sixth edition, consists of four chapters that can be packaged with the main book:

Evolution and Heredity
Gender and Sexuality
Applied Psychology
The Psychology of Religion

These four chapters were chosen by instructors as the most popular ones to add to a standard introductory psychology text. Each chapter is accompanied by a full Web-based ancillary package including Student Study Guide, Instructor's Manual, Test Bank, and AIE resources.

CHAPTER 17 Evolution and Heredity

More streamlined and easier to read discussion of evolution

Thinking About Psychology and Life:

The "Nobel Prize Sperm Bank"

New research on sperm sorting for selection of the offspring's sex

Expanded and updated coverage of genetic counseling

Incorporated material on identical twins reared apart into body of text

Contemporary section on conclusions about heredity-environment interaction

Thinking About Psychology and Life:
Nature, Nurture, and Politics

☞ *"Santrock's evolution and heredity chapter is thorough and well-organized. Terms are clearly defined and wonderful photographs represent human diversity. I give it a rating of excellent."*

—Eastern Maine Technological College

CHAPTER 18 Gender and Sexuality

Improved discussion and definitions of estrogens and androgens

New coverage of evolutionary psychology view of gender

New discussion of social roles view of gender

Thinking About Psychology and Life: Rethinking the Words We Use in Gender Worlds

New section on gender in contexts

Extensively revised and updated discussion of men's issues

Expanded coverage of the human sexual response pattern

New material on Viagra

Expanded discussion of heterosexual attitudes and behavior

Revised and updated coverage of forcible sexual behavior and harassment

New section on sound sexual decision making

Thinking About Psychology and Life:
Sexual Myths and Realities

New discussion of strategies for protecting against AIDS and other sexually transmitted diseases

☞ *"I am extremely satisfied with the focus of Santrock's gender and sexuality chapter. Why? Because one of the courses I teach here is Human Sexuality. Santrock's gender and sexuality chapter provides an excellent introduction to the fascinating topic of human sexuality and does it with tact. My students love this gender and sexuality chapter. The gender and sexuality coverage projects well into the 21st century."*

—Kirtland Community College

CHAPTER 19 Applied Psychology

This is virtually a completely new chapter for the sixth edition of *Psychology*

Thinking About Psychology and Life:

Knock 'Em Dead in an Interview

New discussion of research on the Big Five factors and predicting job success

New section on leadership in the world of work

Human factors psychology no longer is discussed under I/O psychology but now has its own section

New research on human factors by the FAA

New research on human factors involved in touch

New description of environmental psychologist

Roberta Feldman and her work

Thinking About Psychology and Life: Analyzing the Built Environment in Which You Live

New main section: Forensic Psychology

Explorations in Psychology: Psychological Profiling
 New main section: Sport Psychology
 New main section: Educational Psychology
 Explorations in Psychology and Life: Schools for Thought

☞ “*Santröck did a nice job of providing a broad overview of these exciting new fields in psychology. The chapter should be very interesting to a wide variety of students, psychology major and nonmajor alike.*”

—Earlham College

CHAPTER 20 The Psychology of Religion

Includes recent survey on religious interest in America
 New discussion of controversy involving what religion is and what spirituality is
 Thinking About Psychology and Life: Spiritual Well-Being
 New discussion of positive and negative aspects of religion
 Deletion of section on fundamentalism and right-winged authoritarianism
 New section on religion and physical health
 Much expanded and updated coverage of religion and mental health
 Recent research on religious coping styles
 Recent research on religion and sexuality
 Recent research on gender and religion
 Recent research on religiousness and generosity toward the poor
 Thinking About Psychology and Life:
 Religion, Spirituality, and Cults
 New section on religion and cults
 Significantly updated research citations

☞ “*The psychology of religion is a much neglected topic and I applaud John Santröck for writing this chapter. He did a good job of covering the breadth of the psychology of religion and the chapter is written in an engaging manner. The resource list at the end is lovely.*”

—Arizona State University

Acknowledgments

I owe debts to many people who substantially improved the 6th Edition of *Psychology* but three individuals deserve special thanks. Joseph Terry, Psychology Editor, was especially influential in supporting and shaping the book. Jim Rozsa, Senior Marketing Manager in Psychology, played a key role in conceptualizing the book's many changes and themes. I also benefited enormously from Glenn Turner's extensive, detailed analysis and recommendations. I value not only the extraordinary, competent professional input of these three individuals, but also their friendship.

In both the 5th edition and the current, 6th edition of *Psychology* a number of leading experts in different subfields of psychology have provided me with invaluable advice about their areas of expertise.

Chapter 1: What Is Psychology: *Ludy Benjamin, Texas A&M, Charles Brewer, Clemson University*; Chapter 2: Psychology's Scientific Methods: *Keith E. Stanovich, University of Toronto*; Chapter 3: Biological Foundations and the Brain: *Jackson Beatty, UCLA*; Chapter 4: Sensation and Perception: *Alice O'Toole, University of Texas at Dallas*; Chapter 5: States of Consciousness: *G. William Domhoff*; Chapter 6: Learning: *Michelle Perry, U. of Illinois at Urbana, Champaign*; Chapter 7: Memory: *James Bartlett, University of Texas at Dallas; Daniel Schacter, Harvard University, Steven Smith, Texas A&M*; Chapter 8: Thinking and Language: *Karen A. Luh; Jean Berko Gleason*; Chapter 9: Intelligence: *Mihalyi Csikszentmihalyi, University of Chicago*; Chapter 10: Human Development: *Illene Noppe, University of Wisconsin—Green Bay*; Chapter 11: Motivation and Emotion: *Laura King, SMU*; Chapter 12: Personality:

N.C. Higgins, University of North British Columbia; Chapter 13: Abnormal Psychology: *Lillian Comas-Diaz, Transcultural Institute*; Chapter 14: Therapies: *Richard P. Halgin, University of Massachusetts, Amherst*; Chapter 15: Health Psychology: *David Mostofsky, Boston University; James Pennebaker, University of Texas*; Chapter 16: Social Psychology: *Stanley Gaines, Pomona College; James Jones, U. of Delaware; John Harvey, U. of Iowa, Richard Brislin, East-West Center*; Chapter 17: Evolution and Heredity: *David Buss, University of Texas*; Chapter 18: Gender and Sexuality: *Florence Denmark, Pace University; Seth Kalichman, Georgia State U.*; Chapter 19: Applied Psychology: *Robert Gifford, University of Victoria*; Chapter 20: The Psychology of Religion: *Raymond Paloutzian, Westmont College*

In addition, many instructors who teach introductory psychology made special efforts to provide detailed feedback, in many cases on a line-by-line basis, about *Psychology, 6th Edition*. They were:

Valerie Ahl, *University of Wisconsin-Madison*
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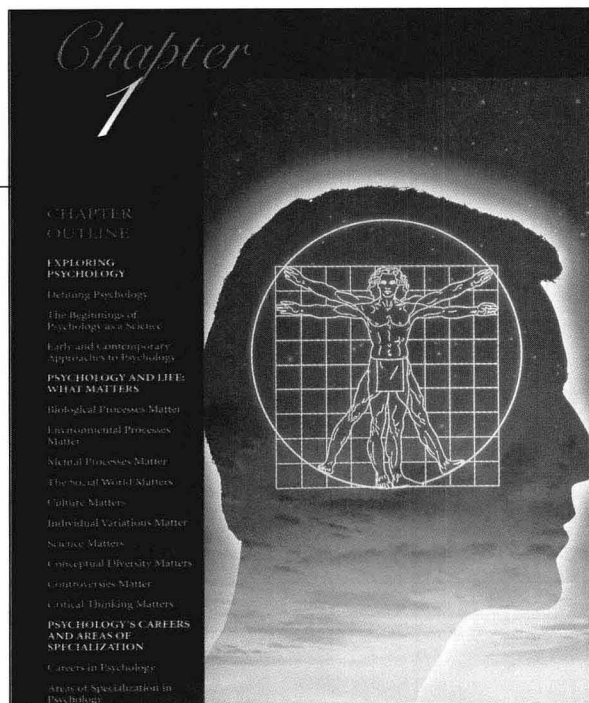
Another group of psychologists also deserve thanks. They wrote material for individual chapters in previous editions and some of this material served as a base for the development of chapters in the 6th edition. In this regard, thanks go to:

Alice O'Toole, *U. of Texas at Dallas* (Research in Psychology; Sensation and Perception)
James Bartlett, *U. of Texas at Dallas* (Memory; Thinking and Language)
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Robert Gifford, *U. of Victoria* (Applied Psychology)
Raymond Paloutzian, *Westmont College* (Psychology of Religion)
Morton Harmatz, *U. of Massachusetts* (Therapies)
Barry Stein, *Tennessee Technological U.* (Thinking and Language)

Students not only should be challenged to study hard and think more deeply and productively about psychology, they should also be provided with an extensive pedagogical framework to help them learn. Each of the learning and study aids that follow, some of which are unique to this text, have been tested and endorsed by the majority of students attending our focus groups. As a consequence, we are more confident than ever before that your students will find this edition of *Psychology* to be very student friendly.

Chapter Outline

Shows the organization of topics by heading levels.



NEW! Mini Cognitive Maps

These mini-maps appear three to five times per chapter and provide students with a more detailed, visual look at the organization of the chapter.

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Woodham was known as a chubby nerd at his school in Pearl, Mississippi. But in the fall of 1997, he shed that image by stabbing his mother to death and shooting nine of his classmates, killing two of them. Woodham wrote in a letter, "I killed because people like me are mistreated every day. Murder is not weak and slow-witted. Murder is gutsy and daring."

University of Virginia psychologist Dewey Cornell (1998) says that many youth give clear indications of their future violence but aren't taken seriously. Kip Kinkel had an obsession with guns and explosives, a history of abusing animals, and a nasty temper when crossed. When police examined his room, they found two pipe bombs, three larger bombs, and bomb-making recipes that Kip had downloaded from the Internet. Clearly, signs were present to suggest some serious problems in Kip's life. But it is difficult to predict whether youth like Kip will actually act on their anger and sense of powerlessness to commit murder (Garbarino, 1999).

Exploring Psychology

Trying to figure out what motivates people like Kip Kinkel to commit murder is one of the many things psychologists do. What do psychologists do?

Imagine that you are seated at dinner next to someone you have never met and learn that she is a psychologist. What comes to mind when you find out she is a psychologist? To many people, it means that she analyzes people's problems. When my wife is asked what her husband does for a living and she says "psychologist," they commonly respond, "Does he psychoanalyze you all the time?" When I meet people and they find out I'm a psychologist, you can see a reaction, like, "Uh oh, I'd better be on my guard or he will find out what I'm really like."

Many psychologists do analyze people's problems and try to help them cope with them. However, many psychologists are researchers, not therapists. No single image encompasses psychologists' varied activities. Consider the following descriptions of some contemporary psychologists at work.

- A research psychologist trained in cognitive psychology painstakingly constructs the thousands of steps of a computer program that, presented with hundreds of sentences, will learn language as an infant does.
- Another research psychologist trained in physiological psychology and neuroscience injects epinephrine into a rat that has learned a maze to determine how the hormone affects its memory.
- A clinical psychologist probes a depressed client's thoughts for clues about the cause of the depression and thinks about ways to help the client cope more effectively.
- A school psychologist gives children a number of psychological tests and recommends the most effective learning environment for each child.
- A psychologist interested in gender and women's issues teaches at a small college and works with her college and the community to eliminate sexual harassment.
- An organizational psychologist has a consulting firm that advises corporations on ways to improve communication and work productivity.

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Through the Eyes of Psychologists

Sandra Graham, UCLA

"Academic psychology cannot maintain its integrity by continuing to allow ethnic minorities to remain marginalized in mainstream research."

simple thought of as variations from the norm or average. These nonmainstream individuals have been viewed as confounds or "noise" in data. Consequently, researchers have deliberately excluded them from the samples they have selected (Ryan-Finn, Cause, & Grove, 1995). Because individuals from diverse ethnic groups have been excluded for so long, there likely is more variation in people's real lives than research data have indicated in the past (Stevenson, 1995).

Researchers also have tended to use "ethnic gloss" when they select and describe diverse ethnic groups (Trimble, 1989). Ethnic gloss is using an ethnic label such as *African American* or *Latino* in a superficial way that portrays an ethnic group as being more homogeneous than it really is. For example, a researcher might describe a research sample like this: "The participants were 20 African Americans, 20 Latinos, and 20 Anglo-Americans." A more complete description of the Latino group might be something like this: "The 20 Latino participants were Mexican Americans from low-income neighborhoods in the southwestern area of Los Angeles. Twelve were from homes in which Spanish is the dominant language spoken, 8 from homes in which English is the main language spoken. Ten were born in the United States, 10 in Mexico. Ten described themselves as Mexican American, 5 as Mexican, 3 as American, 2 as Chicano, and 1 as Latino." Ethnic gloss can cause researchers to obtain samples of ethnic groups that are not representative of the group's diversity, which can lead to overgeneralization and stereotyping.

Reading and Understanding Research Journals

A research challenge that you might face involves reading and understanding research journals. Regardless of the career you pursue, you can benefit from learning about the journal process. Possibly as a student you will be required to look up original research in journals as part of writing a paper. During or after college, you might want to consult journals to obtain information about some aspect of a career or your personal life. And as an inquiring person, you might want to look up information in journals after you hear or read about something that piques your curiosity.

A journal publishes scholarly and academic information, usually in a specific domain—like physics, math, sociology, or, in the case of our interest, psychology. Scholars in these fields publish most of their research in journals, which are the core information in virtually every academic discipline.

Journal articles usually are written for other professionals in the field of the journal's focus—such as geology, anthropology, or, again in our case, psychology. Because the articles are written for other professionals, they might contain technical language and specialized terms that are difficult for nonprofessionals to understand. As you move through this course, you will be learning a great deal more about the specialized field of psychology, which should improve your ability to understand journal articles in this field.

Research journals are the core of information in virtually every academic discipline. Those shown here are among the increasing number of research journals that publish information about psychology. What are the main parts of a research article that present findings from original research?

Images of Psychology and Life

Opens each chapter with an imaginative, high-interest discussion that focuses on a topic related to the chapter content.

What Is Psychology?

Images of Psychology and Life Why Youth Kill

"My friend . . . care for your psyche, and . . . make it as good as possible. . . . Know thyself, for once we know ourselves, we may learn how to care for ourselves, but otherwise we never shall."

Socrates
Greek Philosopher, 4th Century B.C.

Preview

PSYCHOLOGY IS A FASCINATING FIELD that contains some of the most interesting inquiries you will encounter in any area you study in college. In the following *Images of Psychology* section we will introduce you to one of those interesting areas of inquiry: Why do youth kill? Some of the other intriguing questions we will explore in this chapter are these:

- How did psychology come into being?
- What matters in psychology and life?
- How does our brain influence what we do?
- How can children be taught to think critically?
- How did Ted Kaczynski, math professor, become Ted Kaczynski, Unsubomber?

SHARPLY BUILT 15-YEAR-OLD Kip Kinkel has an innocent look and a shy smile. In May 1998, Kinkel strode into the cafeteria at Thurston High School in Springfield, Oregon, and opened fire on his fellow students, murdering two of them and injuring many others. Later that day, police went to Kip's home and found his parents lying dead on the floor, also victims of Kip's violence. A series of other school-related shootings also have recently occurred in the United States. In April, 1999 at Columbine High School in Littleton, Colorado, Eric Harris (18) and Dylan Klebold (17), members of an outcast clique called "The Trenchcoat Mafia," killed 12 students and a teacher, planted bombs around the school, then committed suicide. Harris had a web page on which he had bragged of making four pipe bombs more than a year before the shootings but no one apparently took it seriously.

Is there any way psychologists can predict whether a youth will turn violent? It's a complex task but they have pieced together some clues (Cowley, 1998). Violent youth are overwhelmingly male and many are driven by feelings of powerlessness. Violence seems to infuse these youth with a sense of power. Sixteen-year-old Lake



A sign at the entrance of the high school where the shooting spree took place asks Kip "why?" What are some possible reasons Kip Kinkel committed these brutal acts of violence?



Students from Columbine High School in Littleton, Colorado, leave the school after two classmates went on a shooting rampage in April, 1999.

Preview

A brief look at what the chapter is about, including a series of questions that will be explored.

NEW! Through the Eyes of Psychologists

This feature, appearing several times throughout each chapter, includes a photograph and quotation from leading psychologists to stimulate further thinking about the content.

Summary Tables

These within-the-chapter reviews are coordinated with, and have the same headings as, the within-the-chapter cognitive maps. They give students a handle on information before they reach the end of the chapter.

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SUMMARY TABLE 1.1 Exploring Psychology		
Concept	Processes/Related Ideas	Characteristics/Description
Defining Psychology	Its Nature	Psychology is the scientific study of behavior and mental processes. Behavior is everything people do that can be directly observed. Mental processes are thoughts, feelings, and motives that each individual experiences. As a science, psychology uses systematic methods to observe, describe, predict, and explain behavior.
The Beginnings of Psychology as a Science	From Myth to Philosophy to Psychology Early Contributors	Myths gave way to the rational logic of philosophy, but the intellectual debate of philosophers did not yield much in the way of concrete, empirical answers. Wilhelm Wundt developed the first scientific laboratory of psychology in 1879 in Leipzig, Germany. Titchener, a student of Wundt's, developed structuralism, an early theory of psychology that emphasized the importance of conscious thought and classification of the mind's structures. William James, the first psychologist in the United States, emphasized the functions of the mind in adapting to the environment. His view was called functionalism.
Early and Contemporary Approaches	Behavioral	This approach emphasizes the scientific study of behavior and its environmental determinants. Pavlov and Skinner developed important behavioral approaches. Social cognitive theory argues that thought processes modify environment-behavior connections.
	Psychoanalytic	This approach stresses the unconscious aspects of mind, conflict between biological instincts and society's demands, and early childhood experiences. Freud was the main architect of psychoanalytic theory. Erikson presented an important revision of psychoanalytic theory.
	Humanistic	This approach emphasizes a person's capacity for personal growth, freedom to choose one's destiny, and positive qualities. Rogers and Maslow were the main developers of the humanistic approach.
	Cognitive	This approach places a premium on cognitive, or thought, processes. A person's mind is viewed as an active, aware problem-solving system. Information processing is the most widely adopted cognitive approach.
	Behavioral Neuroscience	This approach stresses that the brain and nervous system play important roles in understanding behavior and mental processes. Sperry conducted important research on the brain's two hemispheres.
	Evolutionary Psychology	This approach emphasizes the importance of adaptation, reproduction, and "survival of the fittest" in explaining behavior. Buss' ideas have ushered in a whole new wave of interest in evolution's role in explaining behavior.
Which Approach Is Best?	Sociocultural	This approach emphasizes that culture, ethnicity, and gender are essential to understanding behavior, thought, and emotion.
		No single theory offers all the answers; each contributes to the science of psychology. Some psychologists adopt a particular approach; others take a more eclectic approach.

Chapter 1 • What Is Psychology? 5

Cartoons

Students like cartoons—perhaps because learning works best when the learner is in a good mood. To that end, cartoons appear several times in each chapter.



PHOTO © copyright by permission of United Feature Syndicate, Inc.

These are but a few of the many different portraits of psychologists. As you read this book, you will discover that psychology is a diverse field and psychologists have heterogeneous interests. Let's now see how psychologists define their field.

Defining Psychology

To some extent, psychology's findings may strike you as being simple common sense, but studies often turn up the unexpected in human behavior. For example, it may seem obvious that couples who live together before marriage have a better chance of making the marriage last. After all, practice makes perfect, doesn't it? But researchers have found a higher success rate for couples who marry before living together (Teachman & Pollock, 1998). It might also seem obvious that we would experience more stress and be less happy if we had to function in many different roles than if we only functioned in a single role. However, women who engage in multiple roles (such as wife, mother, and career woman) report more satisfaction with their lives than do women who engage in a single or fewer roles (such as wife or wife and mother) (Cohen, 1991). As you can see, psychology doesn't accept assumptions about human nature at face value, however reasonable they may sound. It is a rigorous discipline that tests assumptions.

Psychology is the scientific study of behavior and mental processes. There are three aspects to this definition: science, behavior, and mental processes.

As a science, psychology uses systematic methods to observe, describe, predict, and explain behavior. Psychology's methods are not casual. They are carefully and precisely planned and conducted. They are often verified by checking to see if they describe the behavior of many different people, for example, researchers might construct a questionnaire on sexual attitudes and give it to 300 individuals. They might spend considerable time devising the questions and determining the background of the people who are chosen to participate in the survey. The researchers may try to predict the sexual activity of college students based on their liberal or conservative religious attitudes, or on their sexual knowledge, for example. After the psychologists analyze their data, they will also want to explain what they observe. If the researchers discover from their survey that college students are less sexually active than they were a decade ago, they seek to explain why this change has occurred. They might ask, Is it because of increased fear of sexually transmitted diseases? As can be seen, psychology is recognized as a scientific discipline.

Let's now examine what behavior and mental processes are. **Behavior** is everything we do that can be directly observed—two people kissing, a baby crying, a college student riding a motorcycle.

Mental processes are trickier to define than behavior; they are the thoughts, feelings, and motives that each of us experiences privately but that cannot be observed directly. Though we cannot directly see thoughts and feelings, they are nonetheless real. They include thinking about kissing someone, a baby's feelings when its mother



Explorations in Psychology

This feature addresses many controversial issues in psychology and science, asking the student to think critically and evaluate their own stance on these issues.

NEW! Key Terms

These are boldfaced in the text and their definition is italicized.

NEW! Cross-Linkage

This system, unique to this text and new in this edition, refers students to the primary discussion of all key concepts. A specific page reference appears in the text with a backward pointing arrow each time a key concept occurs in a chapter subsequent to its initial coverage.

NEW! McGraw-Hill Website

A website icon appearing in the margin next to content guides student to the *Psychology, 6e Website* where they will find connecting Internet links that provide them with additional information. The label for each Web icon corresponds to the same label on the Santrock web site.

EXPLORATIONS IN PSYCHOLOGY From Horoscopes to the Sex Lives of Tigers

OMG! Theorist expert Diane Halpern (in press) recently explained why she is concerned that so many people fail to use critical thinking. Approximately 75 percent of Americans read their horoscope and many of them believe that it is personally meant for them (Baker, 1992). Some people they psychics and pay exorbitant amounts they cannot afford for advice that ranges from how to invest their money to whether or not a loved one should be disconnected from life-support systems. They spend large sums of money on remedies for which there is no evidence that they work or are safe to take. In a survey of college students, virtually 100 percent believed in at least one of the following (Messer & Griggs, 1989):

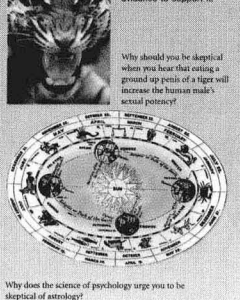
- channeling (the ability to enter a trance state and communicate with someone in another place and time, even centuries ago)
- clairvoyance (the ability to perceive remote events that are not visible to normal sight)
- precognition ("knowing" events before they occur)
- telepathy (the extraordinary transfer of thought from one person to another)
- psychic healing (performing miracle cures instantaneously through contact with a higher spiritual being)
- psychic surgery (a brand of faith healing where weight of hand is relied on to achieve a miracle, such as removing dead or diseased tissue)
- crystal power (use of quartz crystals for healing)
- psychokinesis (being able to move objects without actually touching them)
- astral travel
- levitation
- the Bermuda Triangle mystery
- unidentified flying objects (UFOs)
- plant consciousness
- auras
- phantasms

If you believe in any of these phenomena, psychologists urge you to be more skeptical. Remember that thinking like a scientist means that you demand to see the evidence for such phenomena as channeling, crystal power, and plant consciousness. There is no scientific evidence for the existence of any of the above listed phenomena, only personal anecdotes and coincidences, and those do not meet scientist's criteria of objectivity and public verifiability.

If you still aren't convinced that these phenomena don't exist, at least critically examine the vague language used in horoscopes and the erroneous rationale that time of birth significantly predicts an individual's personality, future events, or anything else. When astrologers' predictions are successful, it is because they are so vague that they are virtually guaranteed to happen (for example, "Money is likely to be a concern for you this month" or

"A tragic plane crash will occur in the southern United States this winter"). When astrologers make more specific predictions (such as "An unidentified flying object will land on the field during the halftime of the ABC Monday Night Football game on October 6, 2001"), they never hold up.

When you think like a scientist, you will be skeptical of astrology, channeling, crystal power, and anything else that claims access to wondrous powers and supernatural forces (Ward & Grashias, 1995). When something sounds like it's too good to be true, think through the claims logically and demand to see the evidence. A false use to think critically and demand scientific evidence often underlies our purchase and use of highly touted, ineffective health-care products (Halpern, in press). For example, there is a widespread belief around the world today that a man who ingests the ground penis of a tiger will have more sexual potency. This belief is so pervasive that it has resulted in poaching of rare wild tigers and other endangered species. Males who believe that this works think like this: "Tigers (presumably) have a great life; thus, eating a tiger's sexual organ will improve my sex life. You should be able to see what is wrong with this kind of thinking, especially in the absence of any evidence to support it."



Why does the science of psychology urge you to be skeptical of astrology?

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"If you ask me, he's come too far too fast."
© The New Yorker Collection 1998 Lee Correy
www.newyorker.com. All Rights Reserved.

The view that stresses **continuity of development** argues that development involves gradual, cumulative change from conception to death. A child's first word, while seemingly an abrupt, discrete event, is actually the result of months of growth and practice. Similarly, while puberty might seem to happen overnight, it is actually a gradual process that occurs over several years.

The view that stresses **discontinuity of development** argues that development involves distinct stages in the life span. In this view, each of us passes through a sequence of stages that are qualitatively, rather than quantitatively, different. As a caterpillar changes into a butterfly, it does not become more caterpillar; it becomes a different kind of organism. Its development is discontinuous. Similarly, a child who earlier could think only in concrete terms becomes capable of thinking abstractly about the world. This is a qualitative, discontinuous change in development, not a continuous, quantitative change.

Early and Later Experience The early-later experience issue has a long history and continues to be hotly debated among developmentalists (Carnes, 1998). In 1917, some believe that unless infants experience warm, nurturant caregiving in the first year or so of life, their development will never be optimal (Rowley, 1989). Plato was sure that infants who were reared frequently became better athletes. Nineteenth-century New England ministers told parents in Sunday sermons that the way they handled their infants would determine their children's future character. The emphasis on the importance of early experience rests on the belief that each life is an unbroken trail on which a psychological quality can be traced back to its origin (Kagan, 1992).

The early experience doctrine contrasts with the later experience view that, rather than a statistically permanent after change in infancy, development continues to be like the ebb and flow of a river. The later experience advocates argue that children are malleable throughout development and that later sensitive caregiving is just as important as earlier sensitive caregiving (Lewis, 1997). A number of life-span developmentalists, who focus on the entire life span rather than only on child development, stress that too little attention has been given to later experiences in development (Baltes, Lindenberger, & Staudinger, 1998). They argue that early experiences are important contributors to development, but no more important than later experiences.

Conclusions About Developmental Issues Most developmentalists do not take extreme positions on developmental issues. Development is not all nature or all nurture, not all continuity or all discontinuity, and not all early or later experience (Lerner, 1998; Santrock, 1999). Both nature and nurture, continuity and discontinuity, early experience and later experience characterize our development throughout the human life span. Regarding the nature-nurture issue, the key to development is the interaction of nature and nurture rather than either alone. For instance, an individual's cognitive development is the result of heredity-environment interaction, not heredity or environment alone.

Child Development

Many special things have taken place in your life since you were born. But imagine... at one time you were a microscopic organism floating around in a sea of fluid in your mother's womb. As nineteenth-century American poet, essayist Samuel Taylor Coleridge said, "The history of man for nine months preceding his birth is probably far more interesting and contains more stunning events than all the years that follow it."

Prenatal Development and Birth

Within a matter of hours after fertilization, a human egg divides, becomes a system of cells, and continues this mapping of cells at an astonishing rate. In a mere 9 months, there is a squalling bundle of energy that has its grandmother's nose, its father's eyes, and its mother's abundant hair.

Reproductive Health Resources

Thinking About Psychology and Life

This feature emphasizes the relevance of psychology to a student's everyday life through use of surveys and illustrative problems.

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THINKING ABOUT PSYCHOLOGY AND LIFE

The Candle, Nine-Dot, and Six-Matchstick Problems

The following three problems are often used to illustrate the concept of fixation in problem solving.

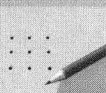
The Candle Problem

The problem here is how to mount a candle on a wall so that it won't drip wax on a table or floor while it is burning. How would you solve this problem?



The Nine-Dot Problem

Take out a piece of paper and copy the following arrangement of dots:



Without lifting your pencil, connect the dots using only four straight lines.

The Six-Matchstick Problem

The problem posed is: Given six matchsticks of equal length, arrange them to make four equilateral triangles, the sides of which are one stick long.



Solutions to the problems are presented at the end of the chapter.

writing a paper for a psychology course. What might be some subgoal strategies? One might be locating the right books and research journals on the problem you have decided to study. At the same time you are searching for the right books and journals, you will likely benefit from establishing some subgoals in terms of what you need to accomplish along the way to your goal of a polished psychology paper. If the paper is due in two months, you might set a subgoal of a first draft of the paper two weeks before it is due, another subgoal of completing reading for the paper a month before it is due, and yet another subgoal of starting library research tomorrow.

Notice that in establishing the subgoals, we worked backward. Working backward in establishing subgoals is a good strategy. You first create a subgoal that is closest to the final goal and then work backward to the subgoal that is closest to the beginning of the problem-solving effort.

Algorithms are strategies that guarantee a solution to a problem. Algorithms come in different forms, such as using a formula, following a set of directions, or trying out all possible solutions. We often use algorithms in solving math problems by applying formulas, and when we follow the instructions to put something together, like a lawn chair or a table.

In some cases an algorithmic strategy might take a long time. Consider a person who is working a crossword puzzle. She comes across *c _ _ _* and looks to see what hint is given. It says, "ill-tempered and quarrelsome." An algorithm for finding the correct word exists. She could try every possible alphabet combination in the six blank spaces and then check through a dictionary to see which one is correct. However, not many people would want to go through the more than 1 million steps in this algorithmic effort. Clearly, the algorithmic strategy of trying out all possible solutions should be applied to problems with a small number of possible solutions.

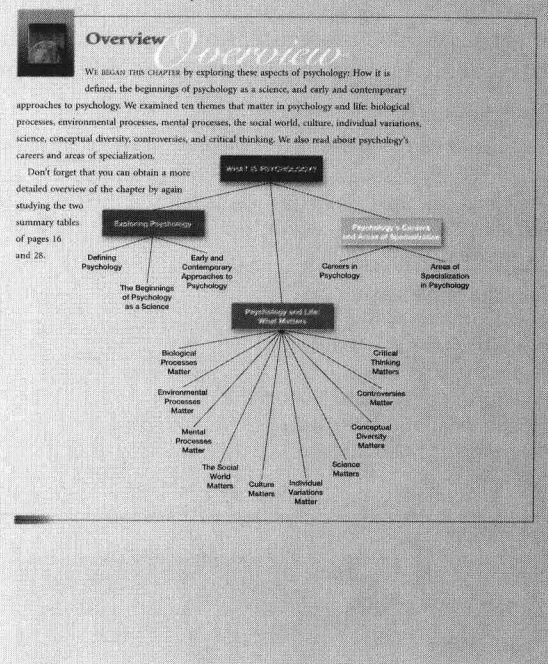
Instead of using an algorithm to solve this type of problem, most crossword puzzle enthusiasts use heuristics, which are strategies or rules of thumb that suggest a solution to a problem but do not guarantee an answer. Thus, we know that certain combinations of letters are more likely to work than others. For example, in our attempt to find the correct word in the crossword puzzle, we know we need a vowel between *c* and *s*, so *h*, *q*, and a lot of other letters won't work. We also know that combinations of letters like *an* are acceptable between the *c* and *s*. We also know that it helps to sound out some words at this point. We came up with "cantank" and "cantank." Then we get it: *cantankerous*.

In the real world, we are much more likely to face problems in which it is wise to use heuristics rather than algorithms. Heuristics help us narrow down the possible solutions to find the one that works.

(3) Evaluate Solutions Once we think we have solved a problem, we really won't know how effective our solution is until we find out if it actually works. It helps

Overview

This consists of 2 parts: (1) an overall cognitive map of the entire chapter, and (2) a brief summary of the chapter.



End of Chapter Key Terms

The key terms are listed and page-referenced to the chapter in addition to a comprehensive glossary at the end of the book.

NEW! Key People

The most important theorists and researchers in the chapter are listed and page-referenced.

NEW! Psychology Checklist

This checklist provides students with an opportunity to check their knowledge and understanding of the chapter's content.

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Key Terms

psychology 5
science 5
behavior 3
mental processes 5
natural selection 6
structuralism 7
functionalism 7
behavioral approach 8
social cognitive theory 8
psychoanalytic approach 10
humanistic approach 10

cognitive approach 11
information processing 11
behavioral neuroscience approach 11
evolutionary psychology approach 12
sociocultural approach 12
culture 13
ethnicity 13
gender 13
sex 13

eclectic approach 14
critical thinking 22
clinical and counseling psychology 24
psychiatry 25
community psychology 25
experimental psychology 25
behavioral neuroscience and comparative psychology 25
developmental psychology 25
social psychology 27

personality psychology 27
school and educational psychology 27
industrial/organizational psychology 27
cross-cultural psychology 27
health psychology 27
forensic psychology 27
sport psychology 28

Key People

Charles Darwin 6
Johnsnes Miller 6
Wilhelm Wundt 6
E. B. Titchener 7
William James 7

Immanuel Kant 8
B. F. Skinner 8
Albert Bandura 8
Sigmund Freud 9

Erk Fehsion 10
Carl Rogers 10
Abraham Maslow 11
Herbert Simon 11

Roger Sperry 12
David Rusk 12
Steven Pinker 12
Dane Hayslett 22



Psychology Checklist

How much have you learned since the beginning of the chapter? Use the following statements to help you review your knowledge and understanding of the chapter material. First, read the statement and mentally or briefly demonstrate on paper that you can outline and discuss the relevant information.

- _____ I know how to define psychology.
- _____ I can describe the beginnings of psychology as a science.
- _____ I can discuss psychology's seven main early and contemporary approaches.
- _____ I know what it means to take an eclectic approach in psychology.

- _____ I can describe the ten main themes that were examined in regard to what matters in psychology.
- _____ I can discuss careers in psychology.
- _____ I can profile the main areas of specialization in psychology.

For any items that you did not check off, go back and locate the relevant material in the chapter. Review the material until you feel you can check off the item. You may want to use this checklist later in preparing for an exam.

Taking It to the Net

1. The American Psychological Association requires that clinical psychologists have either a PhD or PsyD. Although both study clinical issues and techniques, PhD programs are generally more research oriented, while PsyD programs are more applied. Are you interested in research? Do you think it is important for a clinician to be involved in research in psychology? What kinds of things do researchers in clinical psychology study?
2. Evolutionary psychology emphasizes the role of adaptation and survival of the fittest in explaining behavior. For example, rating locally food is a behavior that results in looking and feeling better, which results in more opportunities to procreate and pass on your genes. In your opinion, what adaptive problem is solved by behaviors such as anxiety and depression? Furthermore, can you think of how these behaviors will continue to evolve in the future?



Resources for Psychology and Life

American Psychological Association
750 First Street, NE
Washington, DC 20002-4242
202.336.5500

<http://www.apa.org/>

The American Psychological Association is the largest organization of psychologists in the United States. It publishes a number of journals on different psychological topics and has a number of books and brochures available, including the free booklet *Careers in Psychology*, which describes a wide range of career opportunities in psychology. Undergraduate students are welcome to join the APA.

American Psychological Society

1010 Vermont Avenue, NW, Suite 1100
Washington, DC 20005
202.783.2077
<http://www.psychologicalscience.org/>

The American Psychological Society promotes and advances research and applications in psychology. Student affiliate memberships are available.

How to Think Like a Psychologist (1996)

by Donald McBurney
Upper Saddle River, NJ: Prentice Hall
This book focuses on misconceptions and impediments to understanding psychology. Using a question-answer format, it evaluates such questions as why do psychologists have so many theories, why do I have to learn about so many methods, why do I have to learn

Chapter 1 • What Is Psychology? 31

NEW! Taking It To The Net

Students are presented with questions to explore on the Internet, related to the chapter. From the *Psychology, 6e Website* under Taking It To The Net, students will find links to other Websites providing information that will help them to think more deeply about the questions posed.

Resources for Psychology and Life

Here, students will find information about both academic and practical resources, including books, phone numbers, agencies, research journals, and psychological organizations.

Illustration Program


The illustrations in introductory psychology texts have, in theory, always been important—but as almost any student will tell you, it is rare that the majority of photographs and figures are consistently relevant in a pedagogical context. This is usually because the authors and publishers place a far greater emphasis on the narrative content. However as more and more students become visual learners, the illustrative half of this equation must be accorded more attention. Failure to do so will result in texts that are unnecessarily more difficult for some students.

In this edition, we worked hard to give the illustration manuscript more relevance than the usual facelift would produce. Each photograph and figure was carefully selected and/or developed for its pedagogical significance, including those that open each chapter. Virtually every two-page spread contains one or more illustrations, providing visual interest and reinforcement for all key concepts. Many of the photo captions now contain critical thinking questions designed to encourage students to think more thoroughly about and apply the topic of the illustration to their own lives or related events.

Critical Thinking Questions

Many of the photos are now accompanied by critical thinking questions, designed to encourage students to think more thoroughly about topics and apply the material to their own lives.


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Ten-year-old Alexandra Nychita is a gifted child in the domain of art. What are some characteristics of gifted children?

Through the Eyes of Psychologists
Teresa Amabile, Brandeis University

"Creative thinking skills include the ability to turn things over in your mind, like trying to make the strange familiar and the familiar strange."



Creativity

In the Images section at the beginning of this chapter we described Howard Gardner's view that, like intelligence, creativity is domain specific. Keep this important idea in mind as you read about creativity.

What Is Creativity? Creativity is the ability to think about something in novel and unusual ways and come up with unique solutions to problems. Thus, intelligence and creativity are not the same thing (Michard, 1999). This was recognized in Sternberg's account of intelligence and also by J. P. Guilford (1967). He distinguished between **convergent thinking**, which produces one correct answer and is characterized by the kind of thinking required on conventional intelligence tests, and **divergent thinking**, which produces many answers to the same question and is more characteristic of creativity. For example, a typical item on a conventional intelligence test is, "How many quarters will you get in return for 60 dimes?" By contrast, the following question has many possible answers. What image comes to mind when you hear the phrase "sitting alone in a dark room" or "Can you think of some unique uses for a paper clip?"

Are intelligence and creativity related? Although most creative people are quite intelligent, the reverse is not necessarily true. Many highly intelligent people (as measured by high scores on conventional tests of intelligence) are not very creative. And, if Sternberg had his way, creative thinking would become part of a broader definition of intelligence.

Chapter 10 • Human Development 325

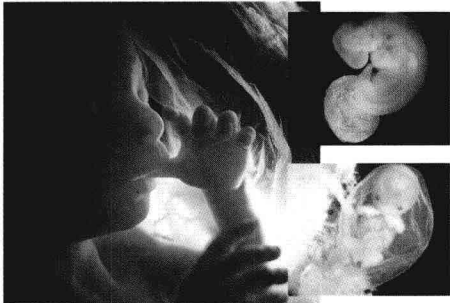


Figure 10.3
Embryonic Period

(a) Embryo at 4 weeks. At about 4 weeks, an embryo is about 0.2 inches in length. The head, eyes, and ears begin to show. The head and neck are half the body length; the shoulders will be located where the whitish arm buds are attached.

(b) Embryo at 8 weeks. At 8 weeks and 4 centimeters (1.6 inches), the developing individual is no longer an embryo, but a fetus. Everything that will be found in the fully developed human being has now begun to form. The final stage is a period of growth and perfection of detail. The heart has been beating for a month, and the muscles have just begun their first exercises. (c) Fetus at 4 months. At 4 months, the fetus is about 16 cm (just over 7 inches). When the thumb comes close to the mouth, the head may turn, and lips and tongue begin their sucking motions—a reflex for survival.

The Course of Prenatal Development Conception occurs when a single sperm cell from the male penetrates the female's ovum (egg). This process also is called fertilization. A **zygote** is a fertilized egg. It receives one-half of its chromosomes from the mother, the other half from the father. The zygote begins as a single cell. After 1 week and many cell divisions, the zygote is made up of 100 to 150 cells. By the end of 2 weeks, the mass of cells attaches to the uterine wall. The **germinal period** is these first 2 weeks after conception.

During the **embryonic period**, weeks 3 through 8 after conception, some remarkable developments unfold (see figure 10.3). Before most women even know they are pregnant, the rate of cell differentiation intensifies, support systems for the cells form, and the beginnings of organs appear. In the third week the neural tube that eventually becomes the spinal cord is forming. At about 21 days, eyes begin to appear, and by 24 days the cells of the heart begin to differentiate. During the fourth week, arm and leg buds emerge. At 5 to 8 weeks, arms and legs become more differentiated, the face starts to form, and the intestinal tract appears. All of this is happening in an organism that by 8 weeks weighs only 1 ounce and is just over 1 inch long.

The **fetal period** begins 2 months after conception and lasts, on the average, for 7 months. Growth and development continue their dramatic course, and organs mature to

Relevance

Each of the figures and photos are carefully selected for their pedagogical significance to the topic.

FOR THE STUDENT

Student Study Guide (as prepared by Gregory Cutler, Bay de NOC Community College)

All answers and explanations provided

Guided Review

Fill-in-the-blanks chapter review.

The Big Picture

Invitation to and brief overview of the main chapter points.

Learning Objectives

Identical to those that appear in the IM and TIF.

Chapter 1 - What is Psychology?

The Big Picture: Chapter Overview

Psychologists define their field as the scientific study of behavior and mental processes and rely upon systematic methods to observe, describe, predict, and explain behavior. The history of psychology is rooted in philosophy, biology, and physiology. The first scientific psychology laboratory was developed by Wundt in 1879. Working in his laboratory in Germany, Wundt studied consciousness with Titchener expanding Wundt's work. Their approach, which emphasized the importance of conscious thought and classification of the mind's structures, was called structuralism. William James, the first psychologist in the United States, emphasized the functions of the mind in adapting to a changing world; his approach was called functionalism.

There are seven main contemporary approaches in psychology. The behavioral approach focuses on using science to study how the environment influences behavior. In the social cognitive theory, behavior is seen as determined by environmental conditions and how thoughts affect the impact of those conditions on behavior. The unconscious mind, conflict between biological instincts and society's demands, and early family experiences characterize the psychoanalytic approach. In the humanistic approach, people are seen as having the capacity for personal growth, freedom to choose their own destiny, and as possessing positive qualities. The cognitive approach focuses on mental processes such as attention, perception, memory, thinking, and problem-solving. The brain and nervous system and their relationship to behavior, thought, and emotion are the areas of interest in the behavioral neuroscience approach. The evolutionary psychology approach argues for the importance of adaptation, reproduction, and survival of the fittest in explaining behavior. The newest perspective, the sociocultural approach, emphasizes that culture, ethnicity, and gender are necessary to understanding behavior, thought, and emotion. Most psychologists take an eclectic approach, selecting and using the best in each approach.

There are several principles and themes that exert great influence on our lives and on psychology. Biological processes, like those of the brain, have powerful influences on behavior. Repeated experiences acting as environment processes can wire or rewire the brain. Mental processes matter since they allow us to remember, make decisions, plan, set goals, and be creative. Other people and our relationships to them matter in the social world.

Learning Objectives

When you have studied the material in this chapter, you should be able to:

1. define psychology.
2. identify the two disciplines from which psychology emerged.
3. distinguish among the following early psychologists and their approaches to psychology: Wundt and Titchener (structuralism) and William James (functionalism).
4. distinguish among the seven contemporary approaches to psychology and identify contributions to each approach:
 - behavioral
 - psychoanalytic
 - humanistic
 - cognitive
 - neurobiological
 - evolutionary
 - sociocultural
5. explain what is meant by an eclectic approach.

Guided Review

Exploring Psychology

Psychology is the _____ of behavior and mental processes. The term _____ refers to everything that we do that can be directly _____ . Mental processes refer to the thoughts, feelings, and motives that are not directly observable. Because psychology is a _____ , it uses systematic methods to observe, describe, predict, and explain behavior. Influenced by the field of _____ , psychology emerged as a science in the nineteenth century. _____ Darwin developed the concept of _____ . In 1879, _____ developed the first scientific laboratory in psychology. His work was popularized in the United States by _____ . Their approach emphasized the importance of conscious thoughts and a classification of the mind's structure and became known as _____ . William James, meanwhile, examined the mind's ability to adapt to the environment, in an approach called _____ . Pavlov and Watson emphasized measuring overt behavior as they rejected inferences about the conscious mind in the approach called _____ approach. In this approach, behavior is influenced by the _____ determinants. Social cognitive theory stresses that _____ modifies the impact of the environment on behavior. According to this perspective, _____ is an important process by which we learn about the world.

Freud believed that the key to understanding mind and behavior rested in the _____ part of the mind. Freud's approach is known as the _____ approach. In explaining behavior, Freud argued that people were heavily influenced by _____ and _____ instincts. These instincts conflicted with the demands of _____ . Contemporary psychoanalytic theories place more emphasis on _____ experiences. Another approach in contemporary psychology stresses a person's capacity for personal growth, freedom of choice and the positive qualities of people, which is called _____ approach. These psychologists believe individuals _____ their own lives. Two psychologists who influenced this approach are _____ and _____. In the _____ approach, there is an emphasis on mental processes involved in knowing. This type of psychologist views the mind as a(n) _____ and aware problem-solving system. Within this approach, there is a perspective that studies how individuals _____ information. It compares the human mind with a _____. An approach that gives the brain the central nervous system primary roles in understanding behavior, thoughts, and emotions is called behavioral _____. This approach examines the conditions that allow individuals to survive or to fail. According to this approach, the mind has _____ in such a way to increase the chance of survival. The _____ approach to psychology stresses the importance of culture, ethnicity, and gender. The term _____ refers to the behavior

scientific study - p. 5
behavior - p. 5
observed - p. 5
science - p. 5
philosophy - p. 6
natural selection - p. 6
Wundt - p. 6
Titchener - p. 7
structuralism - p. 7
functionalism - p. 7
behavioral - p. 8
environmental - p. 8
thinking - p. 8
imitation - p. 8

unconscious - p. 9
psychoanalytic - p. 10
sexual - p. 10
aggressive - p. 10
society - p. 10
cultural - p. 10

humanistic - p. 10
choose - p. 10
Rogers/Maslow - p. 10
cognitive - p. 11

active - p. 11
process - p. 11
computer - p. 11

neuroscience - p. 11
Evolutionary - p. 12
evolved - p. 12
sociocultural - p. 12
culture - p. 13

In Your Own Words (5–10 per chapter)

Students are promoted to paraphrase what they've learned in the chapter, fostering independent thinking rather than memorization of details.

Correcting the Incorrect (15–20 per chapter)

Identify the factual error and correct accordingly.

In Your Own Words

To respond to the questions and exercises presented in this section, please write your thoughts, perspectives, and reactions on a separate piece of paper.

Critical Thinking Exercises

- ✓ Put the definition of psychology into your own words.
- ✓ What are some examples of mental processes that you have experienced in the last 10 minutes?
- ✓ List some things about you that have been influenced by the culture in which you live. (Hint: Don't overlook the obvious.)
- ✓ Thinking about how individual variations matter, list some things about you that are unique.
- ✓ Based on your experiences and what you've learned so far in this course, what about people fascinates you the most?
- ✓ Imagine that you work for an advertising agency. Your team is creating television commercials for each of the perspectives. Your part of the project is to write a catchy jingle or slogan for each perspective.
- ✓ Make up a title of a fictitious book that could have been written by Wundt, James, Freud, Skinner, Simon, and Sperry. Try writing a book title for a book on clinical psychology, developmental psychology, forensic psychology, and the psychology of women. The title should reflect the perspective or specialization. Be creative!
- ✓ Chapter One discusses several specializations of psychology. Which one sounds most appealing to you? If you could create a new specialization in psychology, what would it be?

Correcting the Incorrect

Carefully read each statement. Determine if the statement is correct or incorrect. If the statement is incorrect, make the necessary changes to correct it. Then look directly under the statement for the correct statement and page reference in the textbook.

1. Psychology is the scientific study of people's psychological problems and how to help those people.
a. Psychology is the scientific study of behavior and mental processes. (p. 5)
2. Mental processes include thoughts, feelings, and motives that cannot be observed directly.
a. Mental processes include thoughts, feelings, and motives that cannot be observed directly. (p. 5)
3. Since mental processes are not directly observable, they are actually not real.
a. Mental processes are not directly observable, but they are nonetheless real. (p. 5)
4. As a philosophy, psychology uses systematic methods to observe, describe, predict, and explain behavior.
a. As a science, psychology uses systematic methods to observe, describe, predict, and explain behavior. (p. 5)
5. Charles Darwin established the first psychological laboratory.
a. (p. 6)
6. Wundt and Titchener developed an approach called functionalism.
a. Wundt and Titchener developed an approach called structuralism. (p. 7)
7. The first psychologist in the United States was William James.
a. The first psychologist in the United States was William James. (p. 7)
8. Behaviorists, like Freud and Rogers, would say that the environment determines behavior.
a. Behaviorists, like Watson and Skinner, would say that the environment determines behavior. (p. 8)
9. Social cognitive theory focuses on unconscious motives.
a. Social cognitive theory focuses on how thoughts modify the impact of environment on behavior. (p. 8)
10. B. F. Skinner suggested psychology should study the mind.
a. B. F. Skinner suggested psychology should not study the mind. (p. 8)

Explorations in Psychology: From Horoscopes to the Sex Lives of Tigers

- What does the word "skepticism" mean to you? Does it have a bad connotation to you?
- Have you ever had an experience with one of the phenomena listed in this section?
- If so, how might a person who practices skepticism explain your experience?
- What does a belief in horoscopes give people?
- What would you say to a person who has totally bought into one of the phenomena listed in this section?

Practice Test

1. Psychology is best defined as the
 - a. study of perception and memory.
 - b. investigation of the human psyche.
 - c. scientific study of conscious and unconscious processes.
 - d. scientific study of behavior and mental processes.

a. no; psychology is more than the study of just perception and memory
b. sorry this is not the best definition
c. even though psychology does study conscious and unconscious processes, this is not the best answer
d. THAT'S CORRECT; psychology is best defined as the scientific study of behavior and mental processes
2. As you read the definition of psychology you begin to think about examples. Of the following, which one is the best example of behavior?
 - a. planning your weekend activities
 - b. adding two numbers in your head
 - c. a two-year-old boy coloring a picture
 - d. thinking about this question

a. planning is an example of a mental process since it cannot be directly observed
b. adding is an example of a mental process since it cannot be directly observed
c. CORRECT; coloring a picture is behavior since it can be directly observed
d. thinking is an example of a mental process since it cannot be directly observed
3. A team of researchers wants to study aggressive behavior in adolescents. The researchers plan to use observations to describe, make predictions about, and explain adolescents' aggressive behavior. Which of the following best describes what these researchers are doing?
 - a. They are trying to define mental processes.
 - b. They are identifying environmental determinants of behavior.
 - c. They are studying peer pressure.
 - d. They are following the scientific method.

a. aggression is behavior, not a mental process
b. no, observations in description, predictions, and explanation are part of the scientific method
c. the researchers might be studying peer pressure, but this is not the best answer
d. CORRECT; this option best describes what the researchers are doing
4. The definition of psychology is made up of several parts. Which part refers to "thoughts, feelings, and motives"?
 - a. scientific study
 - b. behavior

Explorations in Psychology (4–6 per chapter)

Thought-provoking questions related to chapter features.

Practice Tests

15–20 composed by author; 15 selected from TIF. Multiple-choice items followed by immediate feedback and explanations.