

# Preface

Since I started teaching psychology in 1967, my motivation and love for introducing students to this relevant science have not wavered. This commitment to relevance and to science not only has been a foundation of my teaching, but it is also the heart of this book. In this edition, I've kept the theme of psychology as a relevant science and, in line with current trends in the discipline, increased the emphasis on the biological aspects of psychology and on the positive changes psychology can help us achieve in our lives. These themes, together with a stronger focus on the key ideas in psychology, are the main features of this revision of *Psychology*.

## Psychology: The Relevant Science

Many students come into the introductory psychology class asking why they should study psychology when their major is physics or computer science or French. To a psychologist the answer is obvious: It will help you to understand yourself and others better. Psychology is relevant to almost every aspect of daily life. What psychologists have learned from memory research, for example, can be used to study more effectively, no matter what the subject is. Principles of learning can be applied to change undesirable behavior in children. Knowledge of sensation and perception can be used to more effectively design computers. Research on stress, coping, and health can help people to live fuller, happier lives.

Writing the preface for the seventh edition of *Psychology*, I am convinced that the science of psychology is more relevant today than ever. After September 11, 2001, psychologists and psychiatrists were called on to counsel not only people whose lives were directly affected by the attacks on the World Trade Center and the Pentagon, but also students, teachers, parents, and others who were struggling to understand, as we were, what could trigger such hostility and violence toward Americans. Psychology teaches us about the roots of aggression and the influence of groups on individual behavior. It also suggests strategies for handling stress, whatever the source. Nothing is more relevant to contemporary life.

In addition to relevance, this edition continues to stress the scientific nature of the discipline. A hallmark of the book has always been its focus on research, the foundation of all sciences. Here the latest research findings are discussed, along with the classic studies that established psychology as an objective science. More than 600 citations come from

sources published since January 2000, including many from 2002. Also, numerous new graphs show students how scientific data can be presented visually.

## Neuroscience and Biological Influences on Behavior

The growing emphasis on neuroscience and genetics as the means to understand the effects of biology on behavior is also reflected in this edition. Evolutionary psychology, another area of increasing interest, receives increased attention as well. Knowing that students often have difficulty understanding why it is important to learn biology in a course on psychology, I've taken particular care to present these topics in a psychological context and to underscore the complex relationship between biology, environment, and behavior wherever appropriate. Neuroscientist Lawrence Cauller provided outstanding guidance for incorporating stronger biological neuroscience content in this edition.

## Positive Psychology

Currently, there is a movement in psychology to focus attention on the positive contributions psychology can make to everyday life. Proponents of positive psychology, notably Mihaly Csikszentmihalyi, share the belief that for much of the twentieth century the discipline concentrated on the negative aspects of life and that it's time to emphasize the positive side of psychology. Positive psychology offers all of us the opportunity to take control of our lives and find balance. For this edition, I have revised many of the chapter-opening vignettes and examples in the text to highlight positive outcomes and, with Csikszentmihalyi's expert guidance, incorporated material on positive psychology throughout the book.

## Focus on Key Ideas

The most significant instructional challenge facing introductory psychology teachers today is ensuring that students master the core content of the course. For students overwhelmed by information from lectures, textbooks, the Internet, and other media, it is more difficult than ever to find the main ideas in their courses. To address these challenges

and help students achieve the best possible outcome, I have developed a learning system for this edition that emphasizes basic concepts and ideas, encourages review, and promotes critical thinking. This system frames the presentation in the text *and* the supplements, providing a truly integrated package that reinforces learning and gives instructors the tools they need to assess students' grasp of core concepts and ideas.

The learning system has several components, all centered on three to six key ideas per chapter. These ideas are encapsulated in learning goals, which correspond with the chapter's main headings, as shown at the opening of each chapter. The learning goals reappear at several places in the chapter: as a question at the beginning of a new topic, in a guided review at the end of the section, and again in a summary at the end of the chapter. Content maps of the section and subsection headings accompany the learning goal question at the beginning of each major section. Together with a complete chapter map at the end of the chapter, the section maps provide a visual guide to the core concepts that support the learning goals.

To encourage students to apply what they've learned, and increase the likelihood that they will remember the material, the learning system includes critical thinking questions keyed to the learning goals in the "Review and Sharpen Your Thinking" sections. Additionally, "What Do You Think?" exercises accompany each of the new Critical Controversy boxes and at least three critical thinking exercises follow the review section at the end of each chapter in a section titled, "Apply Your Knowledge." For students who have access to the Web, the end-of-chapter exercises include at least one Web-based activity.

To help students make the best use of the student supplements, notes in the margins of the text remind students where to go to check their grasp of key concepts and ideas or to find practice quizzes, weekly news updates, and links to additional resources. Incorporating the learning goals and maps in the student supplements reinforces the lessons from the text and eliminates the confusion many students have about how to use the supplements to boost their performance in the course.

## Changes in Coverage

Instructors who have used previous editions of this text will find much in the seventh edition that's different and much that hasn't changed. In addition to increased emphasis on neuroscience, genetics, evolutionary psychology, and positive psychology, the seventh edition contains increased coverage of diversity, controversies, and careers in psychology. This material is presented where appropriate throughout the book.

The table of contents and chapter sequence remain the same as in the sixth edition, except that human development now falls closer to the beginning of the book (Chapter 4). With this change, instructors can cover a topic of high student

interest early in the course, while the principles of genetics (Chapter 3) are still fresh in students' minds, and later incorporate the material in their discussions of learning, cognition, and language.

Although the number of chapters and their topics are unchanged, the substance and presentation in each chapter have been revised thoroughly. Some of the detail that is less relevant today than it once was has been pruned to make room for cutting-edge research and some of the presentation was reconceptualized to focus on the key ideas reflected in the learning goals. Although there isn't enough space here to list all of the changes in this edition, here are the highlights:

### CHAPTER 1 What Is Psychology?

- Expanded, updated coverage of the evolutionary psychology approach and a new section on positive approaches to psychology, including the humanistic movement and the positive psychology movement
- Expanded treatment of psychology's careers including descriptions of the work that different types of psychologists do
- New section added on how to get the most out of psychology focusing on study habits and skills

### CHAPTER 2 Psychology's Scientific Methods

- New opening discussion of attitudes central to the scientific approach and on collaboration in science
- Introduction of James Pennebaker's research as an extended example of the scientific method and positive psychology
- Reorganized section on research methods focusing on descriptive, correlational, and experimental research and including new coverage of positive and negative correlations and their interpretation, and recent research on bias and the placebo effect
- New introduction to data analysis and interpretation with explanation of descriptive statistics and inferential statistics

### CHAPTER 3 Biological Foundations of Behavior

- Reorganized chapter now starts with a discussion of the characteristics of the nervous system, focusing on complexity, integration, adaptability, and electrochemical transmission
- Revised presentation of neuron structure and function, including new material on drugs, neurotransmitters, and neural networks
- Updated coverage of functioning in the left and right hemispheres of the brain and many new drawings of the brain
- Separate section on the endocrine system
- Expanded and updated discussion of neurogenesis
- New section on genetics and evolution

**CHAPTER 4 Human Development**

- Nature and nurture section now includes a discussion of genotype and phenotype, as well as a subsection on optimal experiences
- Added coverage on the brain and how it changes from infancy to adulthood
- Revised discussion of socioemotional development in childhood includes the effects of divorce, positive parenting, ethnic and cultural differences, and gender development
- New sections on positive psychology and development in childhood, adolescence, and adulthood
- Expanded discussion of biological aspects of aging, including new figures on telomeres and aging, and updated information on Alzheimer's disease
- Updated coverage of cognitive changes and aging, including new figures on longitudinal changes in six intellectual abilities and on the relation of age to reaction time
- Discussion of John Gottman's work on what makes a successful marriage, and of Laura Carstensen's research on emotion, social networks, and aging, including new figures on aging and remembering emotional material

**CHAPTER 5 Sensation and Perception**

- Completely revised discussion of how we sense and perceive the world now includes transduction, bottom-up and top-down processing, new examples of signal detection theory, and selective attention
- New coverage on parallel processing in the visual cortex and on the process of binding in neural pathways and how it functions in visual perception
- Cochlear implants and sound localization added to discussion of the auditory system
- Discussion of parallel processing in touch
- Expanded coverage of pain including new discussion of the "fast" and "slow" pain pathways, plus pain control and treatment
- New section on human factors and perception, including recent research of Susan Lederman and Roberta Klatsky, and of Robert McCann at NASA

**CHAPTER 6 States of Consciousness**

- Neuroscience coverage incorporated in sections on consciousness, stages of sleep, and psychoactive drugs
- Greater coverage of circadian rhythms, including the suprachiasmatic nucleus
- New coverage of the role of sleep in the storage and maintenance of long-term memory
- Addition of recent research on sleep deprivation in adolescents and older adults
- New section on sleep and disease

- Inclusion of new research on dream content across cultures
- Expanded and updated material on the activation-synthesis theory of dreaming
- Most recent data on trends in adolescent drug use (Johnston, O'Malley, & Bachman, 2001)

**CHAPTER 7 Learning**

- Expanded and clarified discussion of classical conditioning, including new examples such as fear of the dentist and how it varies across cultures, a new section on the role of classical conditioning in health problems, and applications to consumer psychology
- Expanded, improved, easier-to-understand examples of positive and negative reinforcement
- Expanded and easier-to-understand examples in comparing punishment and negative reinforcement
- Expanded applications of operant conditioning, including the use of shaping and behavior modification in the classroom

**CHAPTER 8 Memory**

- Revised coverage of memory encoding includes the effects of divided attention
- New discussion of recent research on how verbal working memory can be impaired by negative emotion, and on how writing about negative emotional events can improve working memory
- Revised coverage of memory storage includes new sections on prospective memory and on connectionist networks and memory, plus a discussion of long-term potentiation
- Revised discussion of forgetting includes Ebbinghaus' Forgetting Curve, decay and transience, and a new section on motivated forgetting
- Complete reorganization of memory and study strategy section to correspond to organization of the section on memory

**CHAPTER 9 Thinking and Language**

- Expanded coverage of concepts, including new sections on the functions and structures of concepts
- New section on expertise, including four ways that experts solve problems differently than novices do
- Earlier discussion of the link between cognition and language
- Revised section on language acquisition and development includes material on the level of maternal speech to infants and its effects on vocabulary development in infants, a new figure on language milestones, a discussion of how young children find the boundaries between words, and recent research on how long it takes to become competent at a second language

**CHAPTER 10 Intelligence**

- Intelligence testing now cohesively discussed in opening section
- New section on neuroscience and intelligence with subsections on head and brain size, information-processing speed, electrical activity in the brain, and energy consumption in the brain
- Added sections on theories of multiple and emotional intelligence, including a comparison of Gardner's, Sternberg's, and Mayer/Salovy theories of intelligence
- New section on the influence of heredity and environment includes the research of Craig Ramey and colleagues, as well as gender and cultural comparisons

**CHAPTER 11 Motivation and Emotion**

- Section on motivation theory now includes the evolutionary approach to motivation, arousal and sensation seeking, expanded coverage of intrinsic and extrinsic motivation, and a discussion of the importance of self-generated goals
- Hunger section includes expanded and updated discussion of blood chemistry and the role of leptin in obesity, new material on neurotransmitters in the section on brain processes and hunger, new data on obesity in the U. S., and more coverage of anorexia nervosa and bulimia nervosa
- Social cognitive motivation section now includes a cross-cultural comparison of math achievement in the United States, Japan, and Taiwan, achievement applications in the workplace and in sports, and discussions of the motivation for affiliation and well-being
- Section on emotion includes a new discussion of the roles of neural circuits and neurotransmitters, including Joseph LeDoux's concept of direct and indirect pathways for fear in the brain, and of the links between emotion and the brain's hemispheres
- New focus on positive emotions, including Barbara Frederickson's research on how they might enhance people's well-being and David Buss's ideas on the evolved mechanisms that can produce a deep sense of happiness

**CHAPTER 12 Personality**

- Issues in the study of personality now at beginning of chapter
- Social cognitive theory section revised to include discussions of personal control, locus of control, and optimism
- New figure showing the link between self-efficacy and smoking cessation
- New discussion of changes in self-esteem across the life span, including new figure based on 2002 research study

- Section on personality assessment expanded to include discussion of the big five factors, locus of control, and the selection of employees

**CHAPTER 13 Psychological Disorders**

- The multiaxial system in *DSM-IV* covered in greater depth, including a new figure on the major categories of psychological disorders, organized according to Axis I and Axis II
- Introduction of concept of etiology, new discussion of the etiology of anxiety disorders, and expanded discussion of post-traumatic stress disorder
- Added material on the hidden observer concept applied to dissociative disorders
- Updated discussion of mood disorders, including new coverage on neurobiological abnormalities, new material on the depressive realism view of depression, and several new figures
- New section on suicide, including coverage of suicide rates across cultures
- Expanded discussion of schizophrenia, including recent information about heredity and schizophrenia as well as neurobiological factors and case studies

**CHAPTER 14 Therapies**

- Substantially reorganized chapter with biological therapies now covered in the first section
- Updated discussion and figures on the effects of drug therapies, including Prozac and Risperdal
- New sections on cognitive behavior therapy and using cognitive therapy to treat psychological disorders
- New section on sociocultural approaches and issues, including new coverage of the community mental health movement

**CHAPTER 15 Stress, Coping, and Health**

- Reorganization of stress discussion to focus on sources—including the workplace—and responses—including gender differences with a new section on stress and illness includes coverage of the link between positive emotions and health
- New section on coping strategies with new coverage of problem-focused and emotion-focused coping, optimism, and positive thinking, and the role of religion in helping people cope with stress
- Section on healthful living updated with new coverage of the role of the antidepressant Zyban in helping people quit smoking, as well as the effective rates of other approaches, such as nicotine patches

## CHAPTER 16 Social Psychology

- Revised social influence section with expanded discussion of symptoms of groupthink and strategies for avoiding groupthink, as well as a discussion of leadership styles in women and men
- Expanded, updated discussion of prejudice focusing on the reasons people develop prejudice
- Updated section on social interaction, including discussion of neurotransmitters and aggression, recent information on children's TV viewing habits and possible links to aggression, and updated coverage of trends in altruism among U.S. college students
- In relationships section addition of recent research on gender and relationships, new research on loneliness, stress, and health, and new discussion of loneliness and technology

## Print and Media Supplements

### For the Student

**PowerWeb** This unique online tool provides students with current articles, curriculum-based materials, weekly updates with assessment, informative and timely world news, Web links, research tools, study tools, and interactive exercises. A PowerWeb access card is packaged FREE with each new copy of the text.

**Making the Grade Student CD-ROM** Packaged FREE with the text, this user-friendly CD-ROM gives students an opportunity to test their comprehension of the course material in a manner that is comfortable and beneficial. The CD-ROM opens with a Learning Style/Study Skills questionnaire that students can use to identify the best way for them to study. Also included are practice tests that cover topics in the introductory psychology course, an Internet primer, and a statistics primer.

**New In-Psych Student CD-ROM** In-Psych sets a new standard for introductory psychology multimedia. The CD-ROM is organized according to the text chapter outlines and features more than sixty interactive exercises chosen to illustrate especially difficult core introductory psychology concepts. Each exercise showcases one of three types of media assets: an audio clip, a video clip, or a simulation lab. In-Psych also includes a pre-test, follow-up assignments, Web resources, chapter quizzes, a student research guide, and an interactive timeline that puts events, key figures, and psychology research in historical perspective. (Available in December 2002)

**Student Study Guide** Designed to reinforce the key ideas in the text, the student study guide contains the following features for each chapter of the text: chapter

overview, learning objectives, guided review (for each section), three practice tests, essay questions, crossword puzzle, learning goal checklist, and diagram labeling exercises.

**Psych On-Line** This supplement is designed to help students get the most out of the Internet for psychology research and provides general resource locations. Psychology sites are grouped by topic with a brief explanation of each site. Included in this booklet are a number of general resource sites for students seeking help.

**Online Learning Center for Students** The official website for the text contains chapter outlines, practice quizzes that can be emailed to the professor, key term flashcards, interactive exercises, internet activities, Web links to relevant psychology sites, drag-and-drop labeling exercises, Internet primer, career appendix, and a statistics primer. [www.mhhe.com/Santrockp7](http://www.mhhe.com/Santrockp7)

### For the Instructor

**Instructor's Manual** This manual provides many useful tools to enhance your teaching. In each chapter you will find teaching objectives, chapter overviews, key terms, Teaching the Chapter, lecture/discussion suggestions, goal reinforcement classroom activities, Experiencing Psychology boxed feature, critical thinking questions, video/media suggestions, and references and sources of bibliographical information.

**Test Item Files** Two Test Item Files provide instructors with the widest variety of questions to last the life of this edition. The questions in the Test Item Files are also available on *Brownstone*, a powerful but accessible test-generating program that McGraw-Hill offers on a hybrid CD-ROM. With *Brownstone*, instructors can easily select questions and print tests and answer keys. Instructors can also customize questions, headings, and instructions; add or import their own questions; and print tests in a choice of printer-supported fonts.

**In-Class Activities Manual** By Patricia A. Jarvis, Cynthia R. Nordstrom, and Karen B. Williams, Illinois State University. Geared to instructors of large introductory psychology courses, this activities manual covers every major topic in the course. Nineteen chapters include fifty-eight separate activities, all of which have been used successfully in the authors' classes. Each activity includes a short description of the demonstration, the approximate time needed to complete the activity, the materials needed, step-by-step procedures, practical tips, and suggested readings related to the activity. The manual also includes teaching tips for the novice and experienced instructor on how to prepare an effective syllabus, what to consider when structuring a large section, how to select and manage a teaching assistant, and other key topics.

**PowerPoint Lectures** Available on the Internet, these presentations cover the key points of the chapter and include charts and graphs from the text. Helpful lecture guidelines are provided in the Notes section for each slide. These presentations can be used as they are, or can be modified to meet your needs.

**Overhead Transparencies** More than seventy key images from the text are available to the instructor upon adoption. A separate package, *Introductory Psychology Transparency Set*, provides more than one hundred additional images illustrating key concepts in general psychology.

**Online Learning Center for Instructors** The password-protected instructor side of the text website contains the Instructor's Manual, a sample chapter from the text, PowerPoint Presentations, Web links, and other teaching resources. [www.mhhe.com/Santrockp7](http://www.mhhe.com/Santrockp7)

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**Instructor's Resource CD-ROM** This comprehensive CD-ROM includes the contents of the Instructor's Manual, Test Item Files, an image gallery, and PowerPoint slides. The Presentation Manager provides an easy-to-use interface for the design and delivery of multimedia classroom presentations.

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## In-Depth Reviewers of the Seventh Edition

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## Reviewers of the Seventh Edition

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### Reviewers of Previous Editions

The following psychologists shared their comments and ideas or contributed content for previous editions of *Psychology*: Valerie Ahl, University of Wisconsin-Madison; Susan Amato, Boise State University; Jim Backlund, Kirtland Community College; James Bartlett, University of Texas-Dallas; Jackson Beatty, UCLA; Ludy Benjamin, Texas A&M; John Best, Eastern Illinois University; Michelle Boyer-Pennington, Middle Tennessee State University; Charles Brewer, Clemson University; Richard Brislin, University of Hawaii; David Buss, University of Texas, Austin; James Calhoun, University of Georgia; Lillian Comas-Diaz, Transcultural Mental Health Institute; Mihaly Csikszentmihalyi, Claremont Graduate University; Florence Denmark, Pace University; Ellen Dennehy, University of Texas, Dallas; Kim Dielmann, University of Central Arkansas; G. William Domhoff, University of California, Santa Cruz; James Francis, San Jacinto College; Stanley Gaines, Pomona College; Robert Gifford, University of Victoria; James Greer, Louisiana State University; Jean Berko Gleason, Boston University; Richard Halgin, University of Massachusetts, Amherst; John Harvey, University of Iowa;

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