

PSYCHOLOGY

Sixth Edition

CAROLE WADE

Dominican College of San Rafael

CAROL TAVRIS

Prentice Hall Upper Saddle River, NJ 07458

Library of Congress Cataloging-in-Publication

VP/Editorial Director: Laura Pearson

Executive Editor: Bill Webber

Editor in Chief of Development: Susanna Lesan

Development Editor: Lisa Pinto Editorial Assistant: Abigail Ruth

AVP/Director of Production and Manufacturing: Barbara Kittle

Managing Editor: Mary Rottino Project Manager: Maureen Richardson Manufacturing Manager: Nick Sklitsis

Prepress and Manufacturing Buyer: Tricia Kenny

Creative Design Director: Leslie Osher

Art Director and Designer: Ximena Tamvakopoulos

Design Assistance: Kathryn Foot

Director, Image Resource Center: Melinda Reo Manager, Rights and Permissions: Kay Dellosa

Image Specialist: Beth Boyd

Permission Coordinator: Nancy Seise Photo Research: Julie Tesser, Karen Pugliano

Line Art Coordinator: Guy Ruggiero

Electronic Art Creation: Titan Digital Limited, Mirella Signoretto

Copy Editor: Shari Dorantes Hatch Proofreader: Rainbow Graphics

Photo and text credits appear on pages C-1–C-5 which constitute a continuation of the copyright page.

This book was set in 10/12.5 Sabon by TSI Graphics, Effingham and was printed and bound by Von Hoffman Press. The cover was printed by The Lehigh Press, Inc.

© 2000 by Prentice-Hall, Inc. Upper Saddle River, NJ 07458

(Previous editions of this book were published by Addison Wesley Longman, Inc. and HarperCollins Publishers, Inc.)

All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission of the publisher.

Printed in the United States of America 10 9 8 7 6 5 4 3 2

ISBN 0-321-04931-4

Prentice-Hall International (UK) Limited, London
Prentice-Hall of Australia Pty. Limited, Sydney
Prentice-Hall Canada Inc., Toronto
Prentice-Hall Hispanoamericana, S.A., Mexico
Prentice-Hall of India Private Limited, New Delhi
Prentice-Hall of Japan, Inc., Tokyo
Pearson Education Asia Pte. Ltd., Singapore
Editora Prentice-Hall do Brasil. Ltda., Rio de Janiero

TO THE INSTRUCTOR

hen we began work on the first edition of this textbook in the mid-1980s, we had five goals, some of which then were considered quite daring: (1) to make critical thinking integral to the introductory psychology course; (2) to represent psychology as the study of *all* human beings by mainstreaming research on culture and gender; (3) to foster active learning, so that students would become involved with the material and see how it applies to their personal and social lives; (4) to keep "ahead of the curve" with research as psychology moves in new directions; and (5) to acknowledge forthrightly the many controversies in the field.

THINKING ABOUT CRITICAL AND CREATIVE THINKING

Our first ambition, unique to textbooks at the time, was to get students to reflect on what they were learning—to show them what it is like to think like a psychologist. Psychology is not just a body of knowledge; it is also a way of approaching and analyzing the world. From the beginning, therefore, our approach has been based on critical thinking: the understanding that knowledge is advanced when people resist leaping to conclusions on the basis of personal experience alone (so tempting in psychological matters), when they apply rigorous standards of evidence, and when they listen to competing views. Because many students equate the word "critical" with "negative" (as in "He was critical of her dress"), we later added an emphasis on the creative, forward-moving aspects of critical thinking—the importance of generating alternative explanations of events, asking questions, and using one's imagination.

In a textbook, true critical thinking cannot be reduced to a set of rhetorical questions or to a formula for analyzing studies; it is a process that must be woven seamlessly into the narrative. The primary way we "do" critical and creative thinking, therefore, is by modeling it in our evaluations of research and popular ideas. In this book, for example, we encourage critical thinking about concepts that many students approach uncritically, such as astrology, "premenstrual syndrome," and the "instinctive" nature of sexuality. And we also apply it to some ideas that many psychologists have accepted unquestioningly, such as the decisive importance of childhood to later life, Maslow's motivational hierarchy, and the disease model of



addiction. By probing beneath assumptions and presenting the most recent evidence, we hope to convey the excitement and open-ended nature of psychological research and inquiry.

The first chapter starts right off with an extended discussion of what critical thinking is and what it isn't, and why critical thought is particularly relevant to the study of psychology. This discussion introduces eight guidelines to critical thinking, guidelines that we draw on throughout the text as we evaluate research and popular ideas. (These guidelines are also listed and described briefly, with examples, on the inside front cover of this book.)

Many, though by no means all, of these critical discussions in the text

AVOID EMOTIONAL REASONING

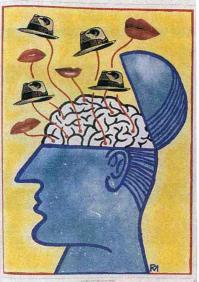
Many people get upset at the idea that their earliest experiences are lost to memory and angrily insist that memories from the first two years must be true. How can research help us think clearly about this issue?

Many, though by no means all, of these critical discussions in the text are signaled by the *critical-thinking lightbulb symbol* shown in the margin, along with marginal "signposts" containing provocative questions that alert students to the issues. We have explicitly identified the relevant guidelines in each signpost so that students can see more easily how the guidelines are actually applied. The questions in the signposts are *not*, in themselves, illustrations of critical thinking; rather, they serve as pointers to critical analyses in the text and invite the reader into the discussion.

MAINSTREAMING CULTURE AND GENDER

At the time of our first edition, some considered our goal of incorporating research on gender, ethnicity, and culture into introductory psychology to be quite radical—either a sop to political correctness or a fluffy and superficial fad. Today, the issue is no longer whether to include these topics, but how best to do it. From the beginning, our own answer has been to include studies of gender and culture in the main body of the text, wherever they are relevant to the larger discussion, rather than relegating these studies to separate chapters or boxed features. Thus, research on sex differences in the brain is critically evaluated in the brain chapter; cultural and gender influences on emotion are discussed in the emotion chapter; and cultural influences on childrearing practices and children's attachment styles are described in the development chapter.





Our Approach to Gender. You will find many gender differences covered in this book—in pain, sexual attitudes and motives, sexual coercion, body satisfaction, depression, eating disorders, antisocial personality disorder, children's play preferences, and ways of expressing love, intimacy, and emotion, to mention just a few. (Other topics are listed in the index.) In these discussions, we have tried to go beyond mere description of differences, by examining competing explanations for them: biological and evolutionary influences, social roles, gender socialization, gender schemas, and the power of current situations and experiences in shaping people's choices and lives.

"Mainstreaming gender," however, does not mean focusing exclusively on differences.

Many gender differences, though reliable, are trivial in terms of real-life importance. And gender similarities, though they are often overlooked, are every bit as important and interesting as the eternal search for differences. We therefore include findings on similarities, too-for example, that men and women do not, overall, differ in moral reasoning (Chapter 14), obedience to authority (Chapter 8), experiences with having had unwanted sex (Chapter 12), or mood swings in the course of an average month (Chapter 5).

Our Approach to Culture. Research on cultural and cross-cultural psychology is as important in our culturally diverse world, we believe, as is research on genetics or the brain. Culture is not merely a superficial gloss on human behavior; it has a profound influence on all aspects of life. However, the scientific study of human diversity is not synonymous with the popular movement called multiculturalism. The study of culture, in our view, should increase students' understanding of what culture means, and how and why ethnic and national groups differ.

Thus we raise empirical findings about culture and ethnicity as topics warrant, throughout the book-for example, in our discussions of addiction, anxiety symptoms, differing cultural norms (e.g., for cleanliness, risk, and conversational distance), emotional expression, group differences in IQ scores and academic achievement, motivational conflicts, personality, psychotherapy, rules about time, attitudes toward weight and the ideal body, and the effectiveness of medication. (Again, we refer you to) the index for a complete listing of topics.) In addition, Chapter 8 (Behavior in Social and Cultural Context) highlights the sociocultural perspective in psychology and includes extended discussions of ethnocentrism, prejudice, and cross-cultural relations. And Chapter 13 (Theories of Personality) includes a discussion of the personality "traits" that cultures may reward or discourage (see Table 13.1).

Instructors whose classes consist of students from diverse ethnic backgrounds may want, at the outset, to confront some sensitive issues evoked by the study of culture and cultural differences. One such issue is ethnocentrism. We have found that many students cannot read about group differences without assuming that one group (usually theirs) is being "trashed" for its typical way of doing things. They reason emotionally about cultural differences—as many people do!—and it is often difficult for them to separate a research finding from its emotional connotations. We encourage

TABLE 13.1

instructors to raise this issue in class if possible, to avoid student misunderstandings or unspoken resentments.

Another sensitive issue, reflecting the tension between minority groups' selfidentities and accommodation to the mainstream culture, is the touchy question of group labels. "Eskimo" and "Sioux" were labels given to these groups by the dominant culture; their own preferred names are Inuit and Lakota, respectively. The label Hispanic is used by the United States government to include all Spanish-speaking groups, but many "Hispanics" prefer nationalorigin labels such as Cuban or Cuban-American, Chicano or Chicana, Latino or Latina. Likewise, Koreans, Japanese,

Members of individualist cultures	Members of collectivist cultures	
Define the self as autonomous, independent of groups	Define the self as an interdependent part of groups	
Give priority to individual, personal goals	Give priority to the needs and goals of the in-group	

Some Average Differences Between Individualist

Value independence, leadership, achievement, Value group harmony, duty, obligation, "self-fulfillment" Give more weight to an individual's attitudes Give more weight to group norms than and preferences than to group norms as to individual attitudes as explanations explanations of behavior of behavior Attend to the benefits and costs of relationships: if costs exceed advantages, a person is likely to drop a relationship

and Collectivist Cultures

Attend to the needs of group members; if a relationship is beneficial to the group but costly to the individual, the individual is likely to stay in the relationship

Chinese, and Vietnamese are all Asian, but many individuals in these groups resent being lumped into a single category. Some African-Americans feel no kinship to Africa and prefer the term "black." And no one knows what to call "whites." European- or Anglo-American doesn't do it, as most white North Americans do not identify with any European nation and many are not from England or other European countries; "Caucasian" is out of favor as a race label, as "Negro" is. (In this book, we have used the admittedly vague term "white" simply because of general consensus on what that term refers to.) Finally, growing numbers of people of multiethnic backgrounds are irritated by society's efforts to squeeze them into only one category; they consider themselves "both" and sometimes "all of the above." Again, we recommend that instructors raise the question of ethnic labels at the outset, showing how these terms change in response to changing social conditions and are associated with ethnic self-identity.

APPLICATIONS AND ACTIVE LEARNING: GETTING INVOLVED

Throughout this book, we have kept in mind one of the soundest findings about learning: that it requires the active encoding of material. You can't just sit there

and expect it to happen. Several pedagogical features in particular encourage students to become actively involved in what they are reading.

What's Ahead, which is new to this edition, consists of a brief set of questions introducing each major section within a chapter. These questions are not merely rhetorical; they are intended to be provocative and intriguing enough to arouse students' curiosity about the material to follow:

> Why do some people get depressed even though they "have it all"? How are your beliefs about love affected by your income? Which part of the anatomy do psychologists think is the "sexiest sex organ"? What is the difference between ordinary techniques of persuasion and the coercive techniques used by cults?

> Looking Back, at the end of each chapter, lists all of the What's Ahead questions along with page numbers to show where the material for each question was covered. Students can check their retention and can easily review if they have trouble answering a question. This feature gives students a sense of how much they are learning about matters of personal and social importance, and helps them appreciate that psychology offers more than "common sense." Some instructors may want to turn some of the Looking Back questions into essay or short-answer test items or written assignments.

Get Involved exercises in each chapter make active learning entertaining. Some consist of quick demonstrations (e.g., clasping your hands together to find out if you are genetically a "right thumb over left" person or the reverse). Some are simple mini-studies (e.g., observing seating patterns in the school cafeteria). Some help students relate course

WHAT'S AHEAD

- Why does a note played on a flute sound different from the same note on an oboe?
- If you habitually listen to loud music through headphones, what kind of hearing impairment are you risking?
- To locate the source of a sound, why does it sometimes help to turn or tilt your head?

LOOKING BACK

- What kind of code in the nervous system helps explain why a pinprick and a kiss feel different? (p. 182)
- Why does your dog hear a "silent" doggie whistle when you can't? (p. 182)
- What kind of bias can influence whether you think you hear the phone ringing when you're in the shower? (p. 184)
- What happens when people are deprived of all external sensory stimulation? (p. 186)
- How does the eye differ from a camera? (p. 190)
- Why can we describe a color as bluish green but not as reddish green? (p. 193)
- If you were blind in one eye, why might you misjudge the distance of a painting on the wall but not of buildings a

- Why does a note played on a flute sound different from the same note on an oboe? (p. 201)
- If you habitually listen to loud music through headphones, what kind of hearing impairment are you risking? (p. 202)
- To locate the source of a sound, why does it sometimes help to turn or tilt your head? (p. 204)
- Why do saccharin and caffeine taste bitter to some people but not to others? (p. 205)
- Why do you have trouble tasting your food when you have a cold? (p. 206)
- Why do people often continue to "feel" limbs that have been amputated? (p. 209)
- Do babies see the world the way adults do? (p. 212)

GET -INVOLVED

THUMBS UP!

Ask the members of your family, one person at a time, to clasp their hands together. Include aunts and uncles, grandparents—as many of your biological relatives as possible. Which thumb does each person put on top?

About half of all people fold the left thumb over the right, and about half fold the right thumb over the left, and these responses tend to run in families. Do your own relatives show one tendency over the other? (If your family is an adoptive one, of course, there is less chance of finding a trend.) Try the same exercise with someone else's family; do you get the same results? Even for behavior as simple as thumb folding, the details of how genes exert their effect remain uncertain (Jones, 1994).

material to their own lives (e.g., if they drink, listing their own motives for doing so). Instructors may want to assign some of these exercises to the entire class and then discuss the results and what they might mean.

Conceptual graphics, most of them new to this edition, help students visualize material in order to understand and retain it better. By using these graphics, students can see at a glance, for example, the various types of attachment, distinctions between different types of memories, the difference between positive and negative reinforcement, and the elements of successful therapy. We have tried to keep these visual summaries simple, straightforward, and appealing.

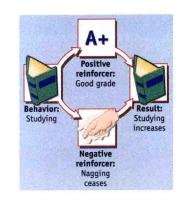
Review tables, which are new to this edition, summarize and contrast theories and approaches discussed in the text—for example, methods used in brain research, theories of dreaming, theories of personality, and approaches to psychotherapy. This feature helps students extract main points, organize what they have learned, and study for exams.

Quick Quizzes are periodic self-tests that encourage students to check their progress, and to go back and review if necessary. These quizzes do more than just test for memorization of definitions; they tell students whether they comprehend the issues. Mindful of the common tendency to skip quizzes or to peek at the answers, we have used various formats and have included engaging examples in order to motivate students to test themselves.

Many of the quizzes also include critical-thinking items, identified by the critical-thinking symbol. These items invite the student to reflect on the implications of findings and consider how psychological principles might illuminate real-life issues. For example: What kinds of questions should a critical thinker ask about a new drug for depression? How might a hypothetical study of testosterone and hostility be improved? How should a critical consumer evaluate someone's claim that health is entirely a matter of "mind over matter"? Although we offer some answers to these questions, students may have valid, well-reasoned answers that differ from our own.

Other pedagogical features designed to help students study and learn better include a running glossary that defines boldfaced technical terms on the pages where they occur for handy reference and study; a cumulative glossary at the back of the book; a list of key terms at the end of each chapter that includes page numbers so that students can find the sections where the terms are covered; chapter outlines; and chapter summaries in numbered paragraph form to help students review major concepts.

Taking Psychology with You, a feature that concludes each chapter, illustrates the practical implications of psychological research for individuals, groups, institutions, and society. This feature tackles topics of personal interest and relevance, such as living with pain (Chapter 6), improving study habits (Chapter 7), getting along with people from other cultures (Chapter 8), becoming more creative (Chapter 9), managing anger (Chapter 11), boosting motivation (Chapter 12), and choosing a therapist (Chapter 17).



	Perspective	Major Topics of Study	Sample Finding on Violence
	Biological	The nervous system, hormones, brain chemistry, heredity, evolutionary influences	Brain damage caused by birth complications or child abuse might incline some people toward violence.
	Learning	Environment and experience	
Math A	Behavioral	Environmental determinants of observable behavior	Violence increases when it pays off.
iffistory C	Social cognitive	Environmental influences, observation and imitation, beliefs and values	Violent role models can influence some children to behave aggressively.
?	Cognitive	Thinking, memory, language, problem solving, perceptions	Violent people are often quick to perceive provocation and insult.
	Sociocultural	Social and cultural contexts	
	Social psychology	Social rules and roles, groups, relationships	People are often more aggressive in a crowd than they would be on their own.
	Cultural psychology	Cultural norms, values, and expectations	Cultures based on herding rather than agriculture tend to train boys to be aggressive.
0,	Psychodynamic	Unconscious thoughts, desires, and conflicts	A man who murders prostitutes may have unconscious conflicts about his mother and about sexuality.

QUICK QUIZ

Is all this information about eating making you hungry for knowledge:

- 1. True or false: Emotional problems explain why fat people are heavy.
- 2. Falling and rising levels of leptin help the brain regulate _ to maintain a person's genetically influenced _
- 3. Rising rates of obesity can best be explained by (a) genetic changes over the past few decades, (b) a lack of will power, (c) an abundance of high-fat food and sedentary lifestyles, (d) the increase in eating disorders.
- 4. Bill, who is thin, reads in the newspaper that genes set the range of body weight and shape. "Oh, good," he exclaims, "now I can eat all the junk food I want; I was born to be skinny What's wrong with Bill's conclusion?

1. false 2. appetite, set point 3. c 4. Bill is right to recognise that there may be limits to how heavy he can become. But he may slob doe veverimplifying and jumping to conclusions. Even people who have a set point for leanness will gain some weight on farty foods and excess caloness, especially if they don't exercise; also, rich junk food is unheelthy for reasons that have nothing to be with overweelent.

TAKING PSYCHOLOGY WITH YOU

FOOD FOR THOUGHT: DIET AND NEUROTRANSMITTERS

vitamin improves sex! Mineral boosts brainpower! Chocolate chases the blues! Claims such as these have long given nutritional theories of behavior a bad reputation. In the late 1960s, when Nobel laureate Linus Pauling proposed that some mental disorders be treated with massive doses of vitamins, few researchers listened. Mainstream medical authorities

classified Pauling's vitamin therapy with such infamous cure-alls as snake oil and leeches.

Today, most mental-health professionals remain skeptical of nutritional cures for mental illness. But the underlying premise of nutritional treatments, that diet affects the brain and therefore behavior, is getting a second look. Claims that sugar or common

food additives lead to undesirable behavior in otherwise normal people remain doubtful, but in some cases of disturbance, dier may make a difference. In one double-blind study, researchers asked depressed patients to abstain from refined sugar and caffeine. Over a three-month period, these patients showed significantly more improvement in their symptoms The final "Taking Psychology with You" in the book is an Epilogue, a unique effort to show students that the vast number of seemingly disparate studies and points of view they have just read about are related. The Epilogue contains a typical problem that everyone can be expected to encounter: conflicts in a close relationship. We show how topics discussed in previous

chapters can be applied to understanding and coping with such conflicts. Many instructors have told us that they find the Epilogue a useful tool for helping students integrate the diverse approaches of contemporary psychology. Asking students to come up with research findings that might apply to other problems also makes for a good term-paper assignment.

REFLECTING NEW DIRECTIONS AND RESEARCH IN THE FIELD

Psychology is an expanding, constantly evolving enterprise. New areas of interest emerge, and suddenly research on a topic that was previously overlooked explodes into prominence. Accordingly, this edition includes prominent coverage of three rapidly growing fields: evolutionary psychology (Chapter 3), behavioral genetics (Chapters 3 and 13), and cultural psychology (throughout the book). We have also added up-to-date research in every chapter, including some astonishing findings on neuronal growth throughout life (Chapters 4 and 14), the limits of parental influence on children's personality and behavior (Chapters 13 and 14), and the continuing mysteries of pain (Chapter 6), memory (Chapter 10), and dreaming (Chapter 5).

FACING THE CONTROVERSIES

Psychology has always been full of lively, sometimes angry, debates, and we feel that students should not be sheltered from them. They are what make psychology so interesting! Sociobiologists and feminist psychologists often differ strongly in their analyses of gender relations (Chapters 3 and 12). Psychodynamic clinicians and experimental psychologists differ strongly in their assumptions about memory, child development, and trauma; these differences have heated repercussions for, among other things, "recovered memory" therapy and the questioning of children as eyewitnesses (Chapter 10). The "scientist-practitioner" gap between researchers and psychodynamic psychotherapists is continuing to widen (Chapters 13 and 17). Developmental psychologists are hotly debating the extent and limits of parental influence on children (Chapter 14). And psychologists continue to argue among themselves about the genetic and cultural origins of addiction, in a debate that has profound importance for reducing and treating drug abuse (Chapters 5 and 16). In this book we candidly address these and other controversies, try to show why they are occurring, and suggest the kinds of questions that might lead to useful answers in each case.

A NOTE TO USERS OF PREVIOUS EDITIONS

In response to suggestions from users of earlier editions of *Psychology*, we have made a special effort to reduce the "density" of the narrative, by reducing the level of detail in many discussions, resisting the temptation to digress, and keeping the focus on main points. Expert reviewers, of course, tend to want students to appreciate all the

In 1998, in the operation shown here, surgeons attempted for the first time to treat a stroke victim by injecting specially prepared precursor cells into her brain. Scientists will soon learn how effective



complexities of their particular area of research. However, while acknowledging areas of debate and trying to make sure that the research we cite is absolutely current, we have worked hard to keep the student's focus on the fundamental points and conclusions. In addition, we have reorganized some sections to make them clearer and easier to study and teach.

A detailed explanation of all deletions, additions, and changes in the sixth edition is available to adopters of the fifth edition, so that no one will have to guess why we made particular changes. We hope this support will make the transition from one edition to the next as painless for instructors as possible. You can obtain this description from your Prentice Hall representative or by writing to: Marketing Manager, Psychology, Prentice Hall Publishers, One Lake Street, Saddle River, New Jersey 07458.

SUPPLEMENTS PACKAGE

Psychology, Sixth Edition, is supported by a complete teaching and learning package.

For the Instructor

Instructor's Resource Manual. We believe that you will find a wealth of help-ful information and teaching resources in the Instructor's Resource Manual, developed by Barbara Brown of Georgia Perimeter College. Professor Brown brings a number of innovative ideas to the IRM, which includes learning objectives, chapter outlines, lecture supplements, classroom demonstrations, and critical-thinking exercises, mini-experiments, self-test exercises and suggestions for additional readings, and an extensive guide to audiovisual materials.

Test Banks I and II. Scott Johnson of John Wood Community College and Steve Charlton of Kwantlen College designed these excellent test banks. Each contains over 2500 multiple-choice, true-false, short-answer, and essay questions that test factual, applied, and conceptual knowledge. Items are referenced by learning objectives, cognitive type, topic, and skill.

Prentice Hall Test Manager. Psychology, Sixth Edition, is now accompanied by the best-selling test-generating software on the market. The software runs on IBM (Windows), Macintosh and Apple IIE. It contains the following modules:

- GRADE: Gradebook
- GUIDE: Tutoring system
- PAINT: Creates graphical artwork and illustrations
- On-Line Network Testing

Tests are created through the custom-test software, administered through the Online Testing module, and then transferred to the gradebook for evaluation.

Prentice Hall Transparencies for Introductory Psychology, Series V. You can add visual impact to the study of psychology with Prentice Hall's collection of four-color transparencies. Designed in a large-type format for lecture settings, many of these quality illustrations are not found in the text and offer a wealth of additional resources to enhance lectures and reinforce student learning.

Powerpoint Slides and Electronic Text Art. A set of Powerpoint Slides and nearly all of the line art found in the text is available on a CD-ROM and can also be downloaded from the Faculty Section of the Psychology Interactive Center.

Teaching Psychology, 2/E by Fred W. Whitford, Montana State University, is an excellent guide for new instructors or teaching assistants who want to learn to manage the myriad tasks required to teach effectively from the start.



ABC News/Prentice Hall Video Library. Prentice Hall has assembled a collection of feature segments from award-winning news programs. The following libraries are currently available to qualified adopters:

- ABC News Videos for Introductory Psychology Series III consists of segments from such programs as Nightline, 20/20, Prime Time Live, and The Health Show. A summary and questions, designed to stimulate critical thinking for each segment, are included in the Instructor's Resource Manual.
- The Alliance Series: The Annenberg/CPB Collection. The Alliance Series is the most extensive collection of professionally produced videos available with any introductory psychology textbook. Selections include videos in the following Annenberg series: The Brain, the Brain Teaching Modules, Discovering Psychology, The Mind, and The Mind Teaching Modules. Available to qualified adopters. Please contact your local Prentice Hall representative for more information.

On-Line Course Management. For instructors interested in distance learning, Prentice Hall and Pearson Education offer a fully customizable, on-line course with World Wide Web links, on-line testing, and many other course management tools. See your local Prentice Hall representative or visit Prentice Hall's special Demonstration Central website at http://www.prenhall.com/demo for more information.

For the Instructor and the Student

Multimedia, Internet, and World Wide Web Materials: The Psychology Interactive Center. Prentice Hall and Peregrine Publishers have melded two acclaimed interactive learning resources: Prentice Hall's Companion Website with Peregrine's The Psychology Place. Available at http://www.prenhall.com/wade, the Companion Website portion of this new center was developed by Professor Kenneth Carter of the Oxford College of Emory University. It provides materials to help students review chapter content and test their knowledge of what they have read. It also provides exciting World Wide Web destinations where students can find related information that expands on material found in their text. Chat rooms and Message Boards allow students to share their ideas about psychology with students from their own classroom or from colleges across the country.

The Psychology Interactive Center provides a jumping-off point for students to explore the more than 200 articles, demonstrations, frequently asked questions, and interactive exercises from The Psychology Place, which has been customized for the sixth edition of *Psychology* to provide extra information for motivated students.

Both the Instructor's Resource Manual and the new Media Users Guide inform instructors and students on how to get the most out of this unique resource.

For the Student

Practice Test and Review Manual. Prepared by Professor Tina Stern of Georgia Perimeter College, this manual has been extensively updated to reflect the new coverage in the Sixth Edition. It includes learning objectives, chapter outlines, critical-thinking questions on important concepts in the text, practice tests with suggested answers, key-term reviews, and a "How to Study" section.

"Psychobabble and Biobunk" by Carol Tavris. This expanded and updated collection of opinion essays, written for the Los Angeles Times and the New York Times by Carol Tavris, applies psychological research to current issues in the news. These essays may be used to encourage debate in the classroom or as a basis for student papers. Using them as models, students can write or present their own points of view on a topic, drawing on evidence from the textbook, lectures, or independent research to support their conclusions.

Media User's Guide. The Media User's Guide is provided to students at no charge with the purchase of a new text. Students who use this guide should have no trouble taking advantage of everything the web has to offer for their introductory psychology experience. The guide includes:

- Written explanations and navigational instructions for using the Psychology Interactive Center (see above description under Multimedia, Internet, and the World Wide Web).
- Summaries of the content of every article, demonstration and exercise found in The Psychology Place.
- A hands-on Internet Tutorial that features web sites related to psychology.

The New York Times Supplement. The core subject matter provided in the text is supplemented by a collection of timely articles from one of the world's most distinguished newspapers, the New York Times. Also included are discussion and critical thinking questions that relate psychological perspectives and topics in the text to issues in the articles.



SUPPLEMENTAL TEXTS AVAILABLE FOR PACKAGING WITH THE SIXTH EDITION

Several Prentice Hall textbooks are available, at reduced prices, for packaging with *Psychology, Sixth Edition*, to enhance your students' experience:

The Psychology Major: Careers and Strategies for Success by Eric Landrum (Boise State University), Stephen Davis (Emporia State University), and Terri Landrum (Boise State University). This 160-page paperback provides valuable information on career options available to psychology majors, tips for improving academic performance, and a guide to the APA style of research reporting.

Forty Studies that Changed Psychology, Third Edition by Roger Hock (Mendocino College). Presenting the seminal research studies that have shaped modern psychological study, this brief supplement provides an overview of the environment that gave rise to each study, its experimental design, its findings, and its impact on current thinking in the discipline.

How to Think Like a Psychologist by Donald McBurney (University of Pittsburgh). This unique supplementary text uses a question-answer format to explore some of the most common questions students ask about psychology.

Experiencing Psychology by Gary Brannigan (State University of New York at Plattesburgh). This hands-on activity book contains 39 active-learning experiences corresponding to major topics in psychology to provide students with hands-on experience in "doing" psychology.

ACKNOWLEDGMENTS

Like any other cooperative effort, writing a textbook requires a support team. We are indebted to the following reviewers and consultants, who made many valuable suggestions during the development of this and previous editions of *Psychology*. (Please note that affiliations of some individuals may have changed since they reviewed our book.)

Benton E. Allen, Mt. San Antonio College

Susan M. Andersen, University of California, Santa Barbara

Lynn R. Anderson, Wayne State University

Emir Andrews, Memorial University of Newfoundland

Richard Anglin, Oklahoma City Community College

Alan Auerbach, Wilfrid Laurier University

Lynn Haller Augsbach, Morehead State University

Harold Babb, Binghamton University

Brian C. Babbitt, Missouri Southern State College

MaryAnn Baenninger, Trenton State College

Patricia Barker, Schenectady County Community College

Ronald K. Barrett, Loyola Marymount University

Allan Basbaum, University of California, San Francisco

Carol Batt, Sacred Heart University

William M. Baum, University of New Hampshire

Gordon Bear, Ramapo College of New Jersey

Peter A. Beckett, Youngstown State University

Bill E. Beckwith, University of North Dakota

Helen Bee, Madison, Wisconsin

David F. Berger, SUNY at Cortland

Michael Bergmire, Jefferson College

Philip J. Bersh, Temple University

Randolph Blake, Vanderbilt University

Richard Bowen, Loyola University of Chicago

Laura L. Bowman, Kent State University

Edward N. Brady, Belleville Area College

Ann Brandt-Williams, Glendale Community College

John R. Braun, University of Bridgeport

Sharon S. Brehm, SUNY at Binghamton

Sylvester Briggs, Kent State University

Gwen Briscoe, College of Mt. St. Joseph

Barbara L. Brown, Georgia Perimeter College

Robert C. Brown, Jr., Georgia State University

Linda L. Brunton, Columbia State Community College

Stephen R. Buchanan, University of South Carolina, Union

Peter R. Burzvnski, Vincennes University

Frank Calabrese, Community College of Philadelphia

Jean Caplan, Concordia University

Bernardo J. Carducci, Indiana University Southeast

Sally S. Carr, Lakeland Community College

Michael Catchpole, North Island College

Paul Chance, Seaford, DE

Herbert H. Clark, Stanford University

Job B. Clément, Daytona Beach Community College

Samuel Clement, Marianopolis College

Eva Conrad, San Bernardino Valley College

Richard L. Cook, University of Colorado

Robert Cormack, New Mexico Institute of Mining and Technology

Wendi Cross, Ohio University

Gaylen Davidson-Podgorny, Santa Rosa Junior College

Robert M. Davis, Purdue University School of Science, IUPUI

Michael William Decker, University of California, Irvine

Geri Anne Dino, Frostburg State University

Susan H. Evans, University of Southern California

Fred Fahringer, Southwest Texas State University

Ronald Finke, SUNY at Stony Brook

Deborah Finkel, Indiana University Southeast

John H. Flowers, University of Nebraska-Lincoln

William F. Ford, Bucks County Community College

Donald G. Forgays, University of Vermont

Sheila Francis, Creighton University

Charles A. Fuller, University of California, Davis

Grace Galliano, Kennesaw State College

Mary Gauvain, Oregon State University

Ron Gerrard, SUNY at Oswego

David Gersh, Houston Community College

Jessica B. Gillooly, Glendale Community College

Margaret Gittis, Youngstown State University

Carlos Goldberg, Indiana University-Purdue University at Indianapolis

Carol Grams, Orange Coast College

Patricia Greenfield, University of California, Los Angeles

Richard A. Griggs, University of Florida

Sarmi Gulgoz, Auburn University

Jimmy G. Hale, McLennan Community College

Pryor Hale, Piedmont Virginia Community College

Len Hamilton, Rutgers University

George Hampton, University of Houston

Algea Harrison, Oakland University

Neil Helgeson, The University of Texas at San Antonio

John E. Hesson, Metropolitan State College

Robert Higgins, Oakland Community College

John P. Hostetler, Albion College

Kenneth I. Howard, Northwestern University

John Hunsley, University of Ottawa

William G. Iacono, University of Minnesota

David E. Irwin, University of Illinois

James Johnson, University of North Carolina at Wilmington Robert D. Johnson, Arkansas State University

Timothy P. Johnston, University of North Carolina at Greensboro

Susan Joslyn, University of Washington

Chadwick Karr, Portland State University

Yoshito Kawahara, San Diego Mesa College

Michael C. Kennedy, Allegheny University

Geoffrey Keppel, University of California, Berkeley

Harold O. Kiess, Framingham State College

Gary King, Rose State College

Jack Kirschenbaum, Fullerton College

Donald Kline, University of Calgary

Stephen M. Kosslyn, Harvard University

Janet E. Keubli, St. Louis University

Michael J. Lambert, Brigham Young University

George S. Larimer, West Liberty State College

Herbert Leff, University of Vermont

Patricia Lefler, Lexington Community College

S. David Leonard, University of Georgia

Robert Levy, Indiana State University

Lewis Lieberman, Columbus College

R. Martin Lobdell, Pierce College

Walter J. Lonner, Western Washington University

Nina Lott, National University

Bonnie Lustigman, Montclair State College

Debra Moehle McCallum, University of Alabama at Birmingham

D. F. McCoy, University of Kentucky

C. Sue McCullough, Texas Woman's University

Elizabeth McDonel, University of Alabama

Susanne Wicks McKenzie, Dawson College

Mark B. McKinley, Lorain County Community College

Ronald K. McLaughlin, Juniata College

Frances K. McSweeney, Washington State University

James E. Maddux, George Mason University

Marc Marschark, University of North Carolina at Greensboro

Monique Martin, Champlain Regional College

Maty Jo Meadow, Mankato State University

Linda Mealey, College of St. Benedict

Ronald Melzack, McGill University

Dorothy Mercer, Eastern Kentucky University

Laura J. Metallo, Five Towns College

Denis Mitchell, University of Southern California

Timothy H. Monk, University of Pittsburgh Medical Center

Maribel Montgomery, Linn-Benton Community College

Douglas G. Mook, University of Virginia

T. Mark Morey, SUNY College at Oswego

Joel Morgovsky, Brookdale Community College (NJ)

Micah Mukabi, Essex County College (NJ)

Sarah Murray, Kwantlen University College, Vancouver, BC

James S. Nairne, University of Texas at Arlington

Michael Nash, University of Tennessee-Knoxville

Douglas Navarick, California State University, Fullerton

Robert A. Neimever, Memphis State University

Todd Nelson, California State University, Stanislaus

Nora Newcombe, Temple University

Linda Noble, Kennesaw State College

Keith Oatley, Ontario Institute for Studies in Education. Toronto

Peter Oliver, University of Hartford

Patricia Owen-Smith, Oxford College

Elizabeth Weiss Ozorak, Allegheny College

David Page, Nazareth College

M. Carr Payne, Jr., Georgia Institute of Technology

Dan G. Perkins, Richland College

Gregory Pezzetti, Rancho Santiago Community College

Wayne Poniewaz, University of Arkansas, Monticello

Debra Poole, Central Michigan University

Paula M. Popovich, Ohio University

Lyman Porter, University of California, Irvine

Robert Prochnow, St. Cloud State University

Janet Proctor, Purdue University

Eric Ravussin, Obesity Research & Clinical Investigation, Lilly Research Laboratories

Reginald L. Razzi, Upsala College

Sheena Rogers, University of Wisconsin-Madison

Jayne Rose, Augustana State College

Gary Ross-Reynolds, Nicholls State University

Peter J. Rowe, College of Charleston

Gerald Rubin, Central Virginia Community College

Joe Rubinstein, Purdue University

Karen P. Saenz, Houston Community College, Southeast

Nancy Sauerman, Kirkwood Community College

H. R. Schiffman, Rutgers University

Lael Schooler, Indiana University

David A. Schroeder, University of Arkansas

Marvin Schwartz, University of Cincinnati

Shelley Schwartz, Vanier College

Joyce Segreto, Youngstown State University

Kimron Shapiro, University of Calgary

Phillip R. Shaver, University of California, Davis

Susan A. Shodahl, San Bernardino Valley College

Dale Simmons, Oregon State University

Art Skibbe, Appalachian State University

William P. Smotherman, SUNY at Binghamton

Samuel Snyder, North Carolina State University

Barbara A. Spellman, University of Texas at Austin

Larry R. Squire, University of California, San Diego

Granville L. Sydnor, San Jacinto College North

Tina Stern, Georgia Perimeter College

A. Stirling, John Abbott College

Milton E. Strauss, Johns Hopkins University

Judith Sugar, Colorado State University

xxviii To the Instructor

Shelley E. Taylor, University of California, Los Angeles Dennis C. Turk, University of Washington
Barbara Turpin, Southwest Missouri State University
Ronald J. Venhorst, Kean College of New Jersey
Wayne A. Viney, Colorado State University
Benjamin Wallace, Cleveland State University
Phyllis Walrad, Macomb Community College
Charles R. Walsmith, Bellevue Community College
Phillip Wann, Missouri Western State College

Thomas J. Weatherly, DeKalb College-Central Campus Mary Wellman, Rhode Island University
Gary L. Wells, University of Alberta
Warner Wilson, Wright State University
Loren Wingblade, Jackson Community College
Judith K. Winters, DeKalb College
Rita S. Wolpert, Caldwell College
James M. Wood, University of Texas at El Paso
Phyllis Zee, Northwestern University Medical School

We are grateful to the many talented and hardworking people who were involved in planning and producing this edition of *Psychology*. We thank Psychology Editor Rebecca Pascal and Developmental Director Lisa Pinto for their many insightful editorial suggestions in launching this revision; and editorial assistant Abigail Ruth for so accurately and efficiently coordinating the book's many elements through its early stages. We are also grateful to Donna DeBenedictis and Rubina Yeh for their excellent contributions to the early stages of production and design.

We are beholden to the editorial and production team at Prentice Hall for handling the transition of this book into their capable hands with such professionalism, energy, and good humor. Our special thanks go to Executive Editor Bill Webber, Senior Project Manager Maureen Richardson, Managing Editor Mary Rottino, and Editor in Chief of Development Susanna Lesan, for all the long hours they put in, the wonderful suggestions they made, and their unflagging commitment to the quality of the book. We also thank Senior Marketing Manager Sharon Cosgrove for her innovative and enthusiastic contributions to the launching of this edition.

The art team who gave *Psychology, Sixth Edition*, its clear and inviting new look have all been a delight to work with: Art Director Ximena Tamvakopolous, who created the fresh, elegant, and readable design; Shanti Marlar, who suggested the many delightful conceptual ideas for rendering graphics and tables; Rose Turner at Titan Digital Limited, the artist who executed Shanti's ideas so brilliantly; and Mirella Signoretto, who made necessary corrections to the line art. Photo researcher Julie Tesser did a superb job of selecting photographs and cartoons. And our special kudos to Connie Blacker and her formatting team at TSI Graphics, who did the layouts with unsurpassed care and attention to quality.

Finally, our thanks and affection to Jennifer Bass, daughter of the late Saul Bass, for permission to use the stunning cover image created by her father, who had designed the award-winning covers of our first four editions.

Most of all, we thank Howard Williams and Ronan O'Casey, who from the first edition to this one have bolstered us with their love, humor, and good cheer, not to mention an endless supply of freshly brewed coffee.

We have enjoyed writing this book, and we hope you will enjoy reading and using it. Your questions, comments, and reactions on earlier editions helped us make many improvements. Please let us hear from you.

Carole Wade Carol Tavris

TO THE STUDENT

If you are reading this introduction, you are starting your introductory psychology course on the right foot. It is always a good idea to get a general picture of what you are about to read before charging forward.

Our goal in writing this book is to guide you to think critically and imaginatively about psychological issues, and to help you apply what you learn to your own life and the world around you. We ourselves have never gotten over our initial excitement about psychology, and we have done everything we can think of to make the field as absorbing for you as it is for us. However, what you bring to this book is as important as what we have written—we can pitch ideas to you, but you have to step up to the plate to connect with them. This text will remain only a collection of pages with ink on them unless you choose to read actively.

GETTING INVOLVED

To encourage you to read and study actively, we have included some special features. In the first chapter, we will introduce you to the basic guidelines of critical and creative thinking—the principles we hope will help you learn the difference between unsupported claims or "psychobabble" and good, scientific reasoning. The identifying symbol for critical thinking is a lightbulb, like the one in the margin. Throughout the book, some (but not all) of our critical-thinking discussions are signaled in the text by a "signpost" in the margin that includes this lightbulb and one of the critical-thinking guidelines. We will be telling you about many lively and passionate debates in psychology—over gender differences, psychotherapy, memory, multiple personality disorder, and many other topics—and we hope our coverage of these debates will

Before each major section in a chapter, a feature called What's Ahead lists some preview questions designed to stir your curiosity and give you an overview of what the section will cover. For example: Why does paying children for good grades sometimes backfire? Do people remember better when they're hypnotized? Do men and women differ in the ability to love? When you finish the chapter, you will encounter these questions again, under the heading Looking Back. Use this list as a self-test; if you can't answer a question, you can go to the page indicated after the question and review the material.

increase your involvement with the ongoing discoveries of psychology.

Each chapter also contains several **Get Involved** exercises, entertaining little experiments or explorations you can do that relate to what you are reading about. In Chapter 3, for instance, you can find out immediately whether you are genetically disposed to cross your right thumb over your left or vice versa when you clasp your hands together; and in Chapter 11 you can find out how your own thoughts affect your emotions. Some of these exercises take only a minute; others are "mini-studies" that you can do by observing or interviewing others.

Every chapter contains several Quick Quizzes that permit you to test your understanding and retention of what you have just read and give you practice in applying the material to examples. Do not let the word "quiz" give you a sinking feeling. These quizzes are for your practical use and, we hope, for your enjoyment. When you have trouble with a question, do not go on; pause right then and there, review what you have read, and then try again.

Some of the Quick Quizzes contain a *critical-thinking item*, denoted by the light-bulb symbol. The answers we give for these items are only suggestions; feel free to come up with different ones. Quick Quizzes containing critical-thinking questions



are not really so quick, because they ask you to reflect on what you have read and to apply the guidelines to critical thinking that are introduced in Chapter 1. But if you take the time to respond thoughtfully to them, we think you will learn more and become a more sophisticated user of psychology.

At the end of each chapter, a feature called **Taking Psychology with You** draws on research to suggest ways you can apply what you have learned to everyday problems and concerns, such as how to boost your motivation, improve your memory, and get a better night's sleep, as well as more urgent ones, such as how to live with chronic pain or help a friend who seems suicidal. The very last "Taking Psychology with You," at the end of the book, is an **Epilogue** that shows how you might integrate and use the findings and theories you have read about to solve problems in your own relationships.

HOW TO STUDY

In our years of teaching, we have found that certain study strategies can vastly improve learning, and so we offer the following suggestions. (Reading Chapter 7, on learning, and Chapter 10, on memory, will also be helpful!)

Before you even start the book, we suggest you read the Table of Contents to get an overall view of the book's organization and coverage. Likewise, before starting a chapter, read the chapter title and outline to get an idea of what is in store. Browse through the chapter, looking at the pictures and reading the headings.

Do not try to read the text the same way you might read a novel, taking in large chunks at a sitting. To get the most from your studying, we recommend that you read only a part of each chapter at a time.

Instead of simply reading silently, nodding along saying "hmmmm" to yourself, try to restate what you have read in your own words at the end of each major section. Some people find it helpful to write down main points on a piece of paper or on index cards. Others prefer to recite main points aloud to someone else—or even to a patient pet. Do not count on getting by with just one reading of a chapter. Most people need to go through the material at least twice, and then revisit the main points several times before an exam. Special tables called **Reviews** will help you summarize, integrate, and compare psychological theories and approaches discussed in the chapter.

When you have finished a chapter, read the Summary. (Some students find it useful to write down their own summary first, then compare it with the book's.) Use the list of key terms at the end of each chapter as a checklist. Try to define and discuss each term to see how well you understand and remember it. If you need to check your recall, the page number that follows each term refers you to the term's first mention in the chapter. Finally, go over the Looking Back questions to be sure you can answer them.

Important new terms in this textbook are printed in **boldface** and are defined in the margin of the page on which they appear, or on the facing page. The **marginal glossary** permits you to find all key terms and concepts easily, and will help you when you study for exams. A complete glossary appears at the end of the book.

The Study Guide for this book, available at your bookstore, is an excellent resource. It contains review material, exercises, and practice tests to help you understand and apply the concepts in the book.

If you are assigned a term project or a report, you may need to track down some references we provide or do further reading. Throughout the book, all studies and theories include *citations* in parentheses, like this: (Aardvark and Zebra, 2000). A citation tells you who the authors of a book, article, or paper are and when the work