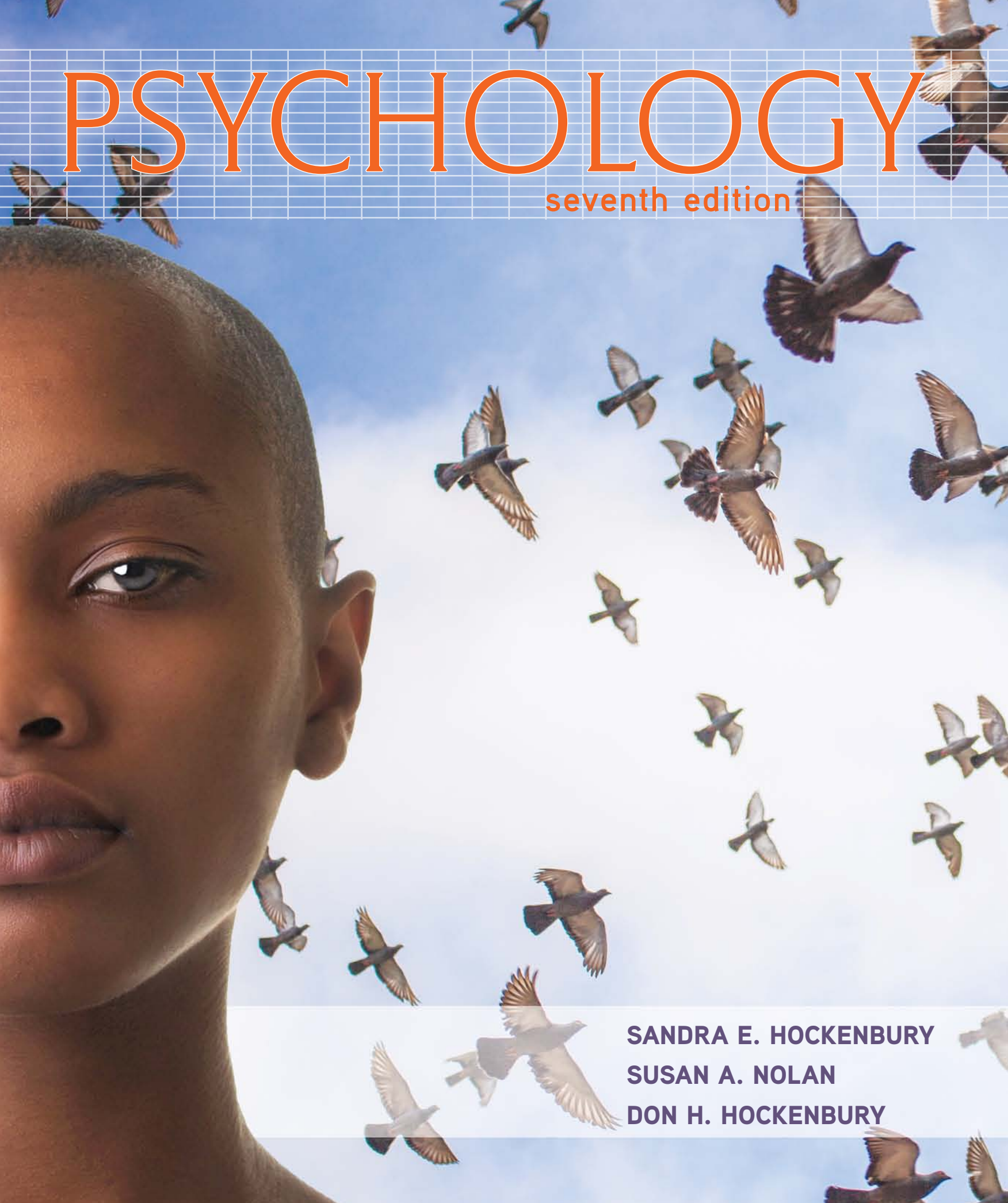
PSYCHOLOGY

seventh edition



SANDRA E. HOCKENBURY
SUSAN A. NOLAN
DON H. HOCKENBURY

this page left intentionally blank

PSYCHOLOGY

this page left intentionally blank

PSYCHOLOGY

SEVENTH EDITION

SANDRA E. HOCKENBURY

SUSAN A. NOLAN
Seton Hall University

DON H. HOCKENBURY

WORTH PUBLISHERS

A Macmillan Education Imprint

Publisher: Rachel Losh
Executive Acquisitions Editor: Daniel McDonough
Developmental Editor: Marna Miller
Marketing Manager: Lindsay Johnson
Marketing Assistant: Allison Greco
Media Editor: Lauren Samuelson
Editorial Assistant: Kimberly Morgan
Photo Editor: Christine Buese
Photo Researcher: Jacquelyn Wong
Director of Editing, Design, and Media Production: Tracey Kuehn
Managing Editor: Lisa Kinne
Project Editor: Betsy Draper, TSI evolve
Production Manager: Barbara Seixas
Art Director: Diana Blume
Design Manager: Vicki Tomaselli
Cover and Interior Designer: Charles Yuen
Art Manager: Matthew McAdams
Art Illustrators: Todd Buck, Anatomical Art; TSI evolve
Composition: TSI evolve
Printing and Binding: RR Donnelley
Cover Photos: Woman: Laurin Rinder/Shutterstock; Birds: Moment/Getty Images

Library of Congress Preassigned Control Number: 2014950381

ISBN-13: 978-1-4641-0880-8
ISBN-10: 1-4641-0880-3
ISBN-13: 978-1-4641-5535-2 (ppbk.)
ISBN-10: 1-4641-5535-6 (ppbk.)

© 2015, 2013, 2010, 2006 by Worth Publishers
All rights reserved.

Printed in the United States of America

First printing

Worth Publishers
41 Madison Avenue
New York, NY 10010
www.worthpublishers.com

To Laura, for the love and laughter
along the way—S.E.H.

For Ivan—S.A.N.

ABOUT THE AUTHORS

Sandra Hockenbury

Sandra E. Hockenbury is a science writer who specializes in psychology. Sandy received her B.A. from Shimer College and her M.A. from the University of Chicago, where she was also a research associate at the Institute of Social and Behavioral Pathology. Prior to co-authoring *Psychology* and *Discovering Psychology,* Sandy worked for several years as a psychology editor in both academic and college textbook publishing. Sandy has also taught as an adjunct faculty member at Tulsa Community College.

Sandy's areas of interest include positive psychology, cross-cultural psychology, and the intersection of Buddhist philosophy, neuroscience, and psychology. She is a member of the American Psychological Association (APA), the Association for Psychological Science (APS), and the American Association for the Advancement of Science (AAAS). An avid hiker, Sandy has twice served as a volunteer with Nomads Clinic, a nonprofit organization that brings medical care to remote areas in the Himalayan regions of Nepal and the Tibetan Plateau.

Ivan Bojanic

Susan A. Nolan is Professor of Psychology at Seton Hall University in New Jersey. Susan researches interpersonal consequences of mental illness, and the role of gender in science, technology, engineering, and mathematics fields. Her research has been funded by the National Science Foundation. Susan is the 2014-2015 President of the Eastern Psychological Association (EPA), and is a Fellow of both EPA and the American Psychological Association (APA). She holds an A.B. from the College of the Holy Cross and a Ph.D. from Northwestern University.

Susan is fascinated by the applications of psychology to the "real world," both locally and globally. She served as a representative from the APA to the United Nations for five years, and is the Vice President for Diversity and International Relations of the Society for the Teaching of Psychology. She also is an avid traveler. Susan uses the examples she encounters through these experiences in the classroom, in this textbook, and in the two statistics textbooks that she co-authors.

Don Hockenbury

Don H. Hockenbury recently retired after 36 years of teaching psychology at Tulsa Community College's Northeast Campus. As one of the founding faculty that opened the Northeast Campus in the fall of 1978, more than 10,000 students experienced Don's enthusiastic teaching style over the ensuing decades. Beginning in 1989, Don's classroom expanded to a national level as he and Sandy Hockenbury began the exciting—but daunting—task of writing the first edition of *Psychology.* Don and Sandy were committed to creating an introductory psychology text that actively engaged diverse students in much the same way that Don shared his passion for psychology in the classroom. After seven years of almost nonstop work, the first edition of Hockenbury & Hockenbury *Psychology* was published in December 1996, followed a year later by the first edition of *Discovering Psychology.* Don and Sandy co-authored the first six editions of *Psychology* and *Discovering Psychology,* which have been used by millions of students. Although Don is no longer actively involved in classroom teaching, his passion for teaching others about the most exciting science that exists remains as strong as ever.

BRIEF CONTENTS

To the Instructor xxi
To the Student: Learning from *Psychology* xlviii

SECTION 1 INTRODUCING PSYCHOLOGY
CHAPTER 1 Introduction and Research Methods lii

SECTION 2 PSYCHOBIOLOGICAL PROCESSES
CHAPTER 2 Neuroscience and Behavior 40
CHAPTER 3 Sensation and Perception 84
CHAPTER 4 Consciousness and Its Variations 132

SECTION 3 BASIC PSYCHOLOGICAL PROCESSES
CHAPTER 5 Learning 180
CHAPTER 6 Memory 226
CHAPTER 7 Thinking, Language, and Intelligence 270
CHAPTER 8 Motivation and Emotion 312

SECTION 4 THE DEVELOPMENT OF THE SELF
CHAPTER 9 Lifespan Development 350
CHAPTER 10 Gender and Sexuality 398
CHAPTER 11 Personality 440

SECTION 5 THE PERSON IN SOCIAL CONTEXT
CHAPTER 12 Social Psychology 482

SECTION 6 PSYCHOLOGICAL PROBLEMS, DISORDERS, AND TREATMENT
CHAPTER 13 Stress, Health, and Coping 528
CHAPTER 14 Psychological Disorders 564
CHAPTER 15 Therapies 616

APPENDIX A Statistics: Understanding Data A-1
APPENDIX B Industrial/Organizational Psychology B-1

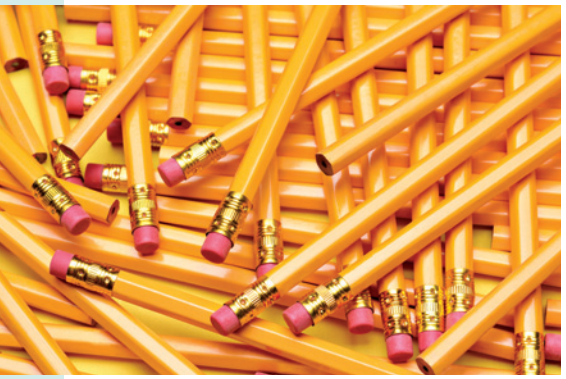
Glossary G-1
References R-1
Name Index NI-1
Subject Index SI-1

CONTENTS

xxi To the Instructor

xlviii To the Student: Learning from *Psychology*

1 Introduction and Research Methods



Steve Cukrov/Shutterstock

CULTURE AND HUMAN BEHAVIOR 13
What Is Cross-Cultural Psychology?

SCIENCE VERSUS PSEUDOSCIENCE 20
What Is a Pseudoscience?

CRITICAL THINKING 31
How to Think Like a Scientist

FOCUS ON NEUROSCIENCE 32
Psychological Research Using Brain Imaging

lii PROLOGUE: The First Exam

2 Introduction: What Is Psychology?
Psychology's Origins: The Influence of Philosophy and Physiology **3** ■ Wilhelm Wundt: The Founder of Psychology **4** ■ Edward B. Titchener: Structuralism **4** ■ William James: Functionalism **5** ■ Sigmund Freud: Psychoanalysis **7** ■ John B. Watson: Behaviorism **8** ■ Carl Rogers: Humanistic Psychology **9**

10 Contemporary Psychology
Major Perspectives in Psychology **10** ■ Specialty Areas in Psychology **14**

16 The Scientific Method
The Steps in the Scientific Method: Systematically Seeking Answers **16** ■ Building Theories: Integrating the Findings from Many Studies **20**

21 Descriptive Research
Naturalistic Observation: The Science of People- and Animal-Watching **22** ■ Case Studies: Details, Details, Details **22** ■ Surveys: (A) Always (B) Sometimes (C) Never (D) Huh? **23** ■ Correlational Studies: Looking at Relationships and Making Predictions: Can Eating Curly Fries Make You Smarter? **24**

26 Experimental Research
Experimental Design: Studying the Effects of Testing **26** ■ Experimental Controls **28** ■ Limitations of Experiments and Variations in Experimental Design **29**

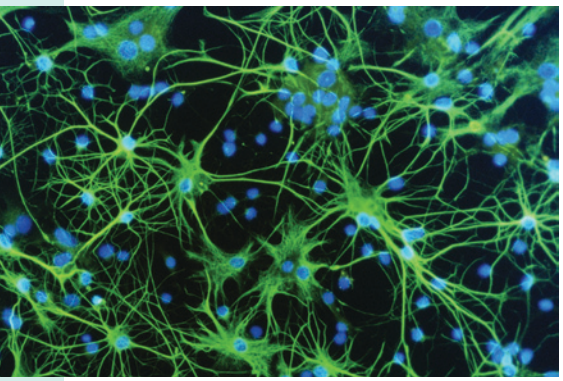
34 Ethics in Psychological Research

35 Closing Thoughts

36 Psych for Your Life: Successful Study Techniques

37 Chapter Review
Key Points **37** ■ Key Terms **39** ■ Key People **39**

2 Neuroscience and Behavior



N. Kedersha/Science Source

40 PROLOGUE: Asha's Story

42 Introduction: Neuroscience and Behavior

IN FOCUS 54
Traumatic Brain Injury: From Concussions to Chronic Traumatic Encephalopathy

SCIENCE VERSUS PSEUDOSCIENCE 61
Phrenology: The Bumpy Road to Scientific Progress

FOCUS ON NEUROSCIENCE 62
Mapping the Pathways of the Brain

FOCUS ON NEUROSCIENCE 63
Juggling and Brain Plasticity

CRITICAL THINKING 72
"His" and "Her" Brains?

SCIENCE VERSUS PSEUDOSCIENCE 77
Brain Myths

43 The Neuron: The Basic Unit of Communication
Characteristics of the Neuron **43** ■ Glial Cells **44** ■ Communication Within the Neuron: The Action Potential **45** ■ Communication Between Neurons: Bridging the Gap **47** ■ Neurotransmitters and Their Effects **49** ■ How Drugs Affect Synaptic Transmission **51**

53 The Nervous System and the Endocrine System: Communication Throughout the Body
The Central Nervous System **53** ■ The Peripheral Nervous System **55** ■ The Endocrine System **58**

60 A Guided Tour of the Brain
The Dynamic Brain: Plasticity and Neurogenesis **62** ■ The Brainstem: Hindbrain and Midbrain Structures **65** ■ The Forebrain **66**

71 Specialization in the Cerebral Hemispheres
Language and the Left Hemisphere: The Early Work of Broca and Wernicke **73** ■ Cutting the Corpus Callosum: The Split Brain **74**

78 Closing Thoughts

79 Psych for Your Life: Maximizing Your Brain's Potential

81 Chapter Review
Key Points **81** ■ Key Terms **82** ■ Key People **83**

hailin/Shutterstock

3 Sensation and Perception

SCIENCE VERSUS PSEUDOSCIENCE 89
Subliminal Perception

FOCUS ON NEUROSCIENCE 95
Vision, Experience, and the Brain

IN FOCUS 103
Do Pheromones Influence Human Behavior?

CRITICAL THINKING 112
ESP: Can Perception Occur Without Sensation?

CULTURE AND HUMAN BEHAVIOR 114
Ways of Seeing: Culture and Top-Down Processes

CULTURE AND HUMAN BEHAVIOR 126
Culture and the Müller-Lyer Illusion: The Carpentered-World Hypothesis

84 PROLOGUE: Learning To See

86 Introduction: What Are Sensation and Perception?
Basic Principles of Sensation **87**

90 Vision: From Light To Sight
What We See: The Nature of Light **90** ■ How We See: The Human Visual System **91** ■ Processing Visual Information **93** ■ Color Vision **94**

98 Hearing: From Vibration to Sound
What We Hear: The Nature of Sound **99** ■ How We Hear: The Path of Sound **99**

102 The Chemical and Body Senses: Smell, Taste, Touch, and Position
How We Smell (Don't Answer That!) **103** ■ Taste **105** ■ The Skin and Body Senses **106**

111 Perception
The Perception of Shape: What Is It? **113** ■ Depth Perception: How Far Away Is It? **117** ■ The Perception of Motion: Where Is It Going? **120** ■ Perceptual Constancies **121**

122 Perceptual Illusions
The Müller-Lyer Illusion **123** ■ The Moon Illusion **124**

125 The Effects of Experience on Perceptual Interpretations

127 Closing Thoughts

127 Psych for Your Life: Strategies To Control Pain

129 Chapter Review
Key Points **129** ■ Key Terms **130** ■ Key People **131**

4 Consciousness and Its Variations

Moment/Getty Images

132 PROLOGUE: A Knife in the Dark

134 Introduction: Consciousness: Experiencing the "Private I"
Attention: The Mind's Spotlight **135** ■ The Perils of Multi-Tasking **137**

137 Biological and Environmental "Clocks" that Regulate Consciousness
The Suprachiasmatic Nucleus: The Body's Clock **138**

139 Sleep
The Dawn of Modern Sleep Research **140** ■ The Onset of Sleep And Hypnagogic Hallucinations **140** ■ The First 90 Minutes of Sleep And Beyond **141** ■ Why Do We Sleep? **144**

147 Dreams and Mental Activity During Sleep
Dream Themes and Imagery **148** ■ The Significance of Dreams **149**

152 Sleep Disorders
Insomnia **153** ■ Obstructive Sleep Apnea: Blocked Breathing During Sleep **153** ■ Narcolepsy: Blurring the Boundaries Between Sleep and Wakefulness **153** ■ The Parasomnias: Undesired Arousal or Actions During Sleep **154**

156 Hypnosis
Effects Of Hypnosis **157** ■ Explaining Hypnosis: Consciousness Divided? **159**

160 Meditation
Scientific Studies of the Effects Of Meditation **161**

164 Psychoactive Drugs
Common Effects of Psychoactive Drugs **164** ■ The Depressants: Alcohol, Barbiturates, Inhalants, and Tranquilizers **166** ■ The Opioids: From Poppies to Demerol **169** ■ The Stimulants: Caffeine, Nicotine, Amphetamines, and Cocaine **170** ■ Psychedelic Drugs: Mescaline, LSD, and Marijuana **173** ■ Designer "Club" Drugs: Ecstasy and the Dissociative Anesthetic Drugs **174**

176 Closing Thoughts

IN FOCUS 141
What You Really Want to Know About Sleep

FOCUS ON NEUROSCIENCE 146
The Sleep-Deprived Emotional Brain

FOCUS ON NEUROSCIENCE 148
The Dreaming Brain

IN FOCUS 152
What You Really Want to Know About Dreams

CRITICAL THINKING 158
Is Hypnosis a Special State of Consciousness?

FOCUS ON NEUROSCIENCE 163
Meditation and the Brain

FOCUS ON NEUROSCIENCE 166
The Addicted Brain: Diminishing Rewards

FOCUS ON NEUROSCIENCE 173
How Methamphetamines Erode the Brain

176 Psych for Your Life: Overcoming Insomnia

177 Chapter Review
Key Points **177** ■ Key Terms **179** ■ Key People **179**

5 Learning

Gallery Stock

180 PROLOGUE: The Killer Attic

182 Introduction: What Is Learning?

183 Classical Conditioning: Associating Stimuli
Principles of Classical Conditioning **184** ■ Factors That Affect Conditioning **185** ■ From Pavlov to Watson: The Founding of Behaviorism **188** ■ Conditioned Emotional Reactions **188** ■ Other Classically Conditioned Responses **191**

192 Contemporary Views of Classical Conditioning
Cognitive Aspects of Classical Conditioning: Reliable Signals **192** ■ Evolutionary Aspects of Classical Conditioning: Biological Predispositions to Learn **193**

196 Operant Conditioning: Associating Behaviors and Consequences
Thorndike and the Law of Effect **196** ■ B. F. Skinner and the Search for "Order in Behavior" **197** ■ Reinforcement: Increasing Future Behavior **198** ■ Punishment: Using Aversive Consequences to Decrease Behavior **200** ■ Discriminative Stimuli: Setting the Occasion for Responding **203** ■ Shaping and Maintaining Behavior **206** ■ Applications of Operant Conditioning **209**

210 Contemporary Views of Classical Conditioning
Cognitive Aspects of Operant Conditioning: Rats! I Thought *You* Had The Map! **210** ■ Learned Helplessness: Expectations of Failure and Learning To Quit **212** ■ Operant Conditioning and Biological Predispositions: Misbehaving Chickens **213**

215 Observational Learning: Imitating The Actions of Others
Applications of Observational Learning **218**

221 Closing Thoughts

222 Psych for Your Life: Using Learning Principles to Improve Your Self-Control

223 Chapter Review
Key Points **223** ■ Key Terms **224** ■ Key People **225**

IN FOCUS 190
Watson, Classical Conditioning, and Advertising

IN FOCUS 195
Evolution, Biological Preparedness, and Conditioned Fears: What Gives You the Creeps?

IN FOCUS 202
Changing the Behavior of Others: Alternatives to Punishment

CRITICAL THINKING 204
Is Human Freedom Just an Illusion?

FOCUS ON NEUROSCIENCE 217
Mirror Neurons: Imitation in the Brain

CRITICAL THINKING 219
Does Exposure to Media Violence *Cause* Aggressive Behavior?

Purestock/Getty Images

CULTURE AND HUMAN BEHAVIOR 237
Culture's Effects on Early Memories

IN FOCUS 246
Déjà Vu Experiences: An Illusion of Memory?

CRITICAL THINKING 254
The Memory Wars: Recovered or False Memories?

FOCUS ON NEUROSCIENCE 258
Assembling Memories: Echoes and Reflections of Perception

IN FOCUS 262
H.M. and Famous People

FOCUS ON NEUROSCIENCE 264
Mapping Brain Changes in Alzheimer's Disease

6 Memory

226 PROLOGUE: The Drowning

228 Introduction: What Is Memory?
The Stage Model of Memory **228** ■ Sensory Memory: Fleeting Impressions of the World **229** ■ Short-Term, Working Memory: The Workshop of Consciousness **231** ■ Long-Term Memory **234**

238 Retrieval: Getting Information From Long-Term Memory
The Importance of Retrieval Cues **239** ■ The Encoding Specificity Principle **241** ■ Flashbulb Memories: Vivid Events, Accurate Memories? **242**

243 Forgetting: When Retrieval Fails
Hermann Ebbinghaus: The Forgetting Curve **243** ■ Why Do We Forget? **244**

248 Imperfect Memories: Errors, Distortions, and False Memories
Forming False Memories: From The Plausible To the Impossible **251**

256 The Search for the Biological Basis of Memory
The Search For The Elusive Memory Trace **256** ■ The Role of Neurons In Long-Term Memory **257** ■ Processing Memories In The Brain: Clues From Amnesia **260**

265 Closing Thoughts

266 Psych for Your Life: Ten Steps to Boost Your Memory

267 Chapter Review
Key Points **267** ■ Key Terms **269** ■ Key People **269**

Vasiliki Varvaki/Ocean/Corbis

7 Thinking, Language, and Intelligence

270 PROLOGUE: The Movie Moment

273 Introduction: Thinking, Language, and Intelligence
The Building Blocks of Thought: Mental Imagery and Concepts **273**

277 Solving Problems and Making Decisions
Problem-Solving Strategies **277** ■ Obstacles To Solving Problems: Thinking Outside The Box **280** ■ Decision-Making Strategies **281** ■ Decisions Involving Uncertainty: Estimating The Probability of Events **282**

284 Language and Thought
The Characteristics of Language **285** ■ The Bilingual Mind: Are Two Languages Better than One? **288** ■ Animal Communication and Cognition **288**

FOCUS ON NEUROSCIENCE 274
Seeing Faces and Places in the Mind's Eye

CRITICAL THINKING 284
The Persistence of Unwarranted Beliefs

CULTURE AND HUMAN BEHAVIOR 286
The Effect of Language on Perception

IN FOCUS 293
Does a High IQ Score Predict Success in Life?

IN FOCUS 298
Neurodiversity: Beyond IQ

CULTURE AND HUMAN BEHAVIOR 304
Performing with a Threat in the Air: How Stereotypes Undermine Performance

290 Measuring Intelligence
The Development Of Intelligence Tests **290** ■ Principles of Test Construction: What Makes a Good Test? **294**

295 The Nature of Intelligence
Theories of Intelligence **295** ■ The Roles of Genetics and Environment in Determining Intelligence **301** ■ Cross-Cultural Studies of Group Discrimination and IQ Differences **305**

307 Closing Thoughts

308 Psych for Your Life: A Workshop on Creativity

310 Chapter Review
Key Points **310** ■ Key Terms **311** ■ Key People **311**

8

Motivation and Emotion

312 PROLOGUE: One Step, One Breath

314 Introduction: Motivation and Emotion
Instinct Theories: Inborn Behaviors As Motivators **315** ■ Drive Theories: Biological Needs As Motivators **315** ■ Incentive Motivation: Goal Objects As Motivators **316** ■ Arousal Theory: Optimal Stimulation As a Motivator **316** ■ Humanistic Theory: Human Potential As a Motivator **317**

317 Hunger and Eating
Energy Homeostasis: Calories Consumed = Calories Expended **318** ■ Short-Term Signals That Regulate Eating **318** ■ Long-Term Signals That Regulate Body Weight **319** ■ Excess Weight and Obesity **321**

325 Psychological Needs as Motivators
Maslow's Hierarchy of Needs **325** ■ Deci and Ryan's Self-Determination Theory **327** ■ Competence and Achievement Motivation **328**

330 Emotion
The Functions of Emotion **330** ■ The Subjective Experience of Emotion **331** ■ The Neuroscience of Emotion **332** ■ The Expression of Emotion: Making Faces **337**

340 Theories Of Emotion: Explaining Emotion
The James–Lange Theory of Emotion: Do You Run Because You're Afraid? Or Are You Afraid Because You Run? **341** ■ Cognitive Theories of Emotion **344**

346 Closing Thoughts

346 Psych for Your Life: Turning Your Goals into Reality

347 Chapter Review
Key Points **347** ■ Key Terms **349** ■ Key People **349**

Championfoto/Shutterstock

CRITICAL THINKING 322
Has Evolution Programmed Us to Overeat?

FOCUS ON NEUROSCIENCE 324
Dopamine Receptors and Obesity

IN FOCUS 333
Detecting Lies

FOCUS ON NEUROSCIENCE 336
Emotions and the Brain

CRITICAL THINKING 338
Emotion in Nonhuman Animals: Laughing Rats, Silly Elephants, and Smiling Dolphins?

AVTG/Getty Images

CULTURE AND HUMAN BEHAVIOR 362
Where Does the Baby Sleep?

SCIENCE VERSUS PSEUDOSCIENCE 366
Can a DVD Program Your Baby to Be a Genius?

FOCUS ON NEUROSCIENCE 376
The Adolescent Brain: A Work in Progress

CRITICAL THINKING 388
The Effects of Child Care on Attachment and Development

FOCUS ON NEUROSCIENCE 391
Boosting the Aging Brain

9 Lifespan Development

350 PROLOGUE: Future Plans

352 Introduction: Your Life Story

354 Genetic Contributions to Your Life Story
Your Unique Genotype **355** ■ From Genotype to Phenotype **355**

357 Prenatal Development
The Germinal and Embryonic Periods **357** ■ Prenatal Brain Development **358** ■ The Fetal Period **359**

359 Development During Infancy and Childhood
Physical Development **360** ■ Social and Personality Development **361** ■ Language Development **365** ■ Cognitive Development **368**

374 Adolescence
Physical and Sexual Development **375** ■ Social Development **378** ■ Identity Formation: Erikson's Theory of Psychosocial Development **379** ■ The Development of Moral Reasoning **381**

384 Adult Development
Emerging Adulthood **384** ■ Physical Changes in Adulthood **385** ■ Social Development in Adulthood **386**

389 Late Adulthood and Aging
Cognitive Changes **389** ■ Social Development **390**

392 The Final Chapter: Dying And Death

393 Closing Thoughts

393 Psych for Your Life: Raising Psychologically Healthy Children

395 Chapter Review
Key Points **395** ■ Key Terms **397** ■ Key People **397**

DAJ/Getty Images

10 Gender and Sexuality

398 PROLOGUE: People Are People

400 Introduction: Gender and Sexuality

401 Gender Stereotypes and Gender Roles
Gender-Related Differences: The *Opposite* Sex? **402**

CRITICAL THINKING 406
Gender Differences: Women in Science, Technology, Engineering, and Mathematics Fields

CULTURE AND HUMAN BEHAVIOR 414
The Outward Display of Gender

FOCUS ON NEUROSCIENCE 423
Romantic Love and the Brain

IN FOCUS 424
Everything You Wanted to Know About Sexual Fantasies

IN FOCUS 425
Hooking Up on Campus

408 Gender-Role Development: Blue Bears and Pink Bunnies
Gender Differences In Childhood Behavior: Spider-Man Versus Barbie **408** ■ Explaining Gender Differences: Contemporary Theories **410** ■ Beyond Male and Female: Variations In Gender Identity **413**

416 Human Sexuality
First Things First: The Stages of Human Sexual Response **416** ■ What Motivates Sexual Behavior? **417** ■ Sexual Orientation: The Elusive Search for an Explanation **419**

423 Sexual Behavior
How Many Sexual Partners Do People Have? **425** ■ How Often Do People Engage in Sexual Activity? **426** ■ Sex After Sixty? Seventy?! Eighty?!! **427**

428 Sexual Disorders and Problems
How Common Are Sexual Problems? **428** ■ Categories of Sexual Dysfunctions **428** ■ The Paraphilic Disorders: Unusual Sexual Fantasies, Urges, or Behaviors **429** ■ Sexually Transmitted Infections **430**

435 Closing Thoughts

435 Psych for Your Life: Reducing Conflict in Intimate Relationships

437 Chapter Review
Key Points **437** ■ Key Terms **438** ■ Key People **438**

Ella Boyd

CRITICAL THINKING 459
Freud Versus Rogers on Human Nature

CRITICAL THINKING 463
Freud Versus Bandura on Human Aggression

FOCUS ON NEUROSCIENCE 469
The Neuroscience of Personality: Brain Structure and the Big Five

IN FOCUS 470
Explaining Those Amazing Identical-Twin Similarities

SCIENCE VERSUS PSEUDOSCIENCE 473
Graphology: The "Write" Way to Assess Personality?

11 Personality

440 PROLOGUE: The Secret Twin

442 Introduction: What Is Personality?

443 The Psychoanalytic Perspective on Personality
The Life of Sigmund Freud **444** ■ Freud's Dynamic Theory of Personality **445** ■ Personality Development: The Psychosexual Stages **449** ■ The Neo-Freudians: Freud's Descendants and Dissenters **452** ■ Evaluating Freud and the Psychoanalytic Perspective on Personality **456**

457 The Humanistic Perspective on Personality
The Emergence of the "Third Force" **457** ■ Carl Rogers: On Becoming a Person **458** ■ Evaluating the Humanistic Perspective on Personality **461**

461 The Social Cognitive Perspective on Personality
Albert Bandura and Social Cognitive Theory **462** ■ Evaluating the Social Cognitive Perspective on Personality **464**

465 The Trait Perspective on Personality
Surface Traits and Source Traits **465** ■ Two Representative Trait Theories: Raymond Cattell and Hans Eysenck **466** ■ Sixteen Are Too Many, Three Are Too Few: The Five-Factor Model **467** ■ Personality Traits and Behavioral Genetics: Just A Chip Off The Old Block? **468** ■ Evaluating the Trait Perspective on Personality **471**

472 Assessing Personality: Psychological Tests
Projective Tests: Like Seeing Things In The Clouds **472** ■ Self-Report Inventories: Does Anyone Have An Eraser? **474**

477 Closing Thoughts

478 Psych for Your Life: Possible Selves: Imagine the Possibilities

479 Chapter Review
Key Points **479** ■ Key Terms **481** ■ Key People **481**

12 Social Psychology

482 PROLOGUE: The "Homeless" Man

484 Introduction: What Is Social Psychology?

484 Person Perception: Forming Impressions of Other People
Social Categorization: Using Mental Shortcuts In Person Perception **486**

488 Attribution: Explaining Behavior
The Self-Serving Bias: Using Explanations to Meet Our Needs **490**

491 The Social Psychology of Attitudes
The Effect of Attitudes on Behavior **492** ■ The Effect of Behavior on Attitudes: Fried Grasshoppers For Lunch?! **494**

495 Understanding Prejudice
From Stereotypes to Prejudice: In-Groups and Out-Groups **496** ■ Overcoming Prejudice **500**

502 Conformity: Following the Crowd
Factors Influencing Conformity **503** ■ Culture and Conformity **503**

504 Obedience: Just Following Orders
Milgram's Original Obedience Experiment **504** ■ The Results of Milgram's Original Experiment **506** ■ Making Sense of Milgram's Findings: Multiple Influences **506** ■ Conditions That Undermine Obedience: Variations On a Theme **508** ■ Asch, Milgram, and The Real World: Implications of The Classic Social Influence Studies **509**

Joe Iurato and Rubin415. Photo: Luna Park and Ad Hoc Art.

FOCUS ON NEUROSCIENCE 488
Brain Reward When Making Eye Contact with Attractive People

CULTURE AND HUMAN BEHAVIOR 490
Explaining Failure and Murder: Culture and Attributional Biases

IN FOCUS 493
Interpersonal Attraction and Liking

CRITICAL THINKING 510
Abuse at Abu Ghraib: Why Do Ordinary People Commit Evil Acts?

512 Altruism and Aggression: Helping and Hurting Behavior
Factors That Increase the Likelihood of Bystanders Helping **514** ■ Factors That Decrease the Likelihood of Bystanders Helping **515** ■ Aggression: Hurting Behavior **516**

520 The Influence of Groups on Individual Behavior
Social Loafing: When Individual Effort Is "Lost In The Crowd" **520** ■ Social Facilitation: Individual Performance In The Presence of Others **521** ■ Deindividuation: When Group Members Feel Anonymous **522**

523 Closing Thoughts

523 Psych for Your Life: The Persuasion Game

525 Chapter Review
Key Points **525** ■ Key Terms **527** ■ Key People **527**

13 Stress, Health, and Coping

528 PROLOGUE: Fire and Ash

531 Introduction: Stress and Health Psychology
Sources of Stress **533**

539 Physical Effects of Stress: The Mind–Body Connection
Stress and the Endocrine System **539** ■ Stress, Chromosomes, and Aging: The Telomere Story **541** ■ Stress and the Immune System **543**

546 Individual Factors That Influence the Response to Stress
Psychological Factors **546** ■ Social Factors: A Little Help From Your Friends **551**

554 Coping: How People Deal with Stress
Problem-Focused Coping Strategies: Changing the Stressor **554** ■ Emotion-Focused Coping Strategies: Changing Your Reaction To the Stressor **555** ■ Culture And Coping Strategies **558**

559 Closing Thoughts

560 Psych for Your Life: Minimizing the Effects of Stress

561 Chapter Review
Key Points **561** ■ Key Terms **562** ■ Key People **563**

Masson/Shutterstock

CULTURE AND HUMAN BEHAVIOR 538
The Stress of Adapting to a New Culture

FOCUS ON NEUROSCIENCE 544
The Mysterious Placebo Effect

CRITICAL THINKING 550
Do Personality Factors Cause Disease?

IN FOCUS 553
Providing Effective Social Support

IN FOCUS 557
Gender Differences in Responding to Stress: "Tend-and-Befriend" or "Fight-or-Flight"?

Mike Hill/Getty Images

CRITICAL THINKING 568
Are People with a Mental Illness as Violent as the Media Portray Them?

CRITICAL THINKING 588
Does Smoking Cause Major Depressive Disorder and Other Psychological Disorders?

CULTURE AND HUMAN BEHAVIOR 592
Culture-Bound Syndromes

FOCUS ON NEUROSCIENCE 602
The Hallucinating Brain

FOCUS ON NEUROSCIENCE 609
Schizophrenia: A Wildfire in the Brain

mrcmos/Shutterstock

14 Psychological Disorders

564 PROLOGUE: "I'm Flying! I've Escaped!"

566 Introduction: Understanding Psychological Disorders
What Is a Psychological Disorder? **567** ■ The Prevalence of Psychological Disorders: A 50–50 Chance? **570**

573 Fear and Trembling: Anxiety Disorders, Posttraumatic Stress Disorder, and Obsessive–Compulsive Disorder
Generalized Anxiety Disorder: Worrying About Anything and Everything **573** ■ Panic Attacks and Panic Disorders: Sudden Episodes of Extreme Anxiety **574** ■ The Phobias: Fear And Loathing **575** ■ Posttraumatic Stress Disorder and Obsessive–Compulsive Disorder: Anxiety And Intrusive Thoughts **578**

582 Depressive and Bipolar Disorders: Disordered Moods and Emotions
Major Depressive Disorder: More Than Ordinary Sadness **583** ■ Bipolar Disorder: An Emotional Roller Coaster **585** ■ Explaining Depressive Disorders and Bipolar Disorders **586**

590 Eating Disorders: Anorexia, Bulimia, and Binge-Eating Disorder

594 Personality Disorders: Maladaptive Traits
Antisocial Personality Disorder: Violating The Rights of Others—Without Guilt Or Remorse **595** ■ Borderline Personality Disorder: Chaos and Emptiness **597**

598 The Dissociative Disorders: Fragmentation of the Self
Dissociative Amnesia and Dissociative Fugue: Forgetting and Wandering **599** ■ Dissociative Identity Disorder: Multiple Personalities **599**

601 Schizophrenia: A Different Reality
Symptoms of Schizophrenia **602** ■ Schizophrenia Symptoms and Culture **604** ■ The Prevalence and Course of Schizophrenia **605** ■ Explaining Schizophrenia **605**

611 Closing Thoughts

612 Psych for Your Life: Understanding and Helping to Prevent Suicide

613 Chapter Review
Key Points **613** ■ Key Terms **615** ■ Key People **615**

15 Therapies

616 PROLOGUE: "A Clear Sense of Being Heard . . ."

618 Introduction: Psychotherapy and Biomedical Therapy

IN FOCUS 628
Using Virtual Reality to Treat Phobia and Posttraumatic Stress Disorder

IN FOCUS 638
Increasing Access: Meeting the Need for Mental Health Care

CULTURE AND HUMAN BEHAVIOR 645
Cultural Values and Psychotherapy

FOCUS ON NEUROSCIENCE 653
Psychotherapy and the Brain

CRITICAL THINKING 654
Do Antidepressants Work Better Than Placebos?

620 Psychoanalytic Therapy
Sigmund Freud and Psychoanalysis **620** ■ Short-Term Dynamic Therapies **621**

622 Humanistic Therapy
Carl Rogers and Client-Centered Therapy **623**

625 Behavior Therapy
Techniques Based on Classical Conditioning **626** ■ Techniques Based on Operant Conditioning **629**

631 Cognitive Therapies
Albert Ellis and Rational-Emotive Behavior Therapy **631** ■ Aaron Beck and Cognitive Therapy **633** ■ Cognitive-Behavioral Therapy and Mindfulness-Based Therapies **635**

637 Group and Family Therapy
Group Therapy **637** ■ Family and Couple Therapy **640**

641 Evaluating the Effectiveness of Psychotherapy
Is One Form of Psychotherapy Superior? **642** ■ What Factors Contribute to Effective Psychotherapy? **643**

646 Biomedical Therapies
Antipsychotic Medications **647** ■ Antianxiety Medications 649 ■ Lithium **650** ■ Antidepressant Medications **651** ■ Electroconvulsive Therapy **654**

657 Closing Thoughts

658 Psych for Your Life: What to Expect in Psychotherapy

659 Chapter Review
Key Points **659** ■ Key Terms **661** ■ Key People **661**

APPENDIX A

Statistics: Understanding Data

A-1 PROLOGUE: The Tables Are Turned: A Psychologist Becomes a Research Subject

A-2 Descriptive Statistics
Frequency Distribution **A-2** ■ Measures of Central Tendency **A-4** ■ Measures of Variability **A-5** ■ *z* Scores and the Normal Curve **A-7** ■ Correlation **A-8**

A-10 Inferential Statistics

A-12 Endnote

A-13 Appendix Review
Key Points **A-13** ■ Key Terms **A-14**

IN FOCUS B-10
Servant Leadership: When It's Not All About You

IN FOCUS B-11
Name, Title, Generation

APPENDIX B

Industrial/Organization Psychology

B-1 What Is Industrial/Organizational Psychology?

B-3 History of I/O Psychology

B-3 Industrial (Personnel) Psychology
Job Analysis **B-3** ■ A Closer Look at Personnel Selection **B-4**

B-7 Organizational Behavior
Job Satisfaction **B-7** ■ Leadership **B-8**

B-10 Workplace Trends and Issues
Workforce Diversity: Recruiting and Retaining Diverse Talent **B-10** ■ Telework and Telecommuting: The Best Retention Tool **B-11** ■ Internet Recruiting: Using the Web to Recruit Top Talent **B-12** ■ Work–Life Balance: Engaging and Retaining Employees with Families **B-12**

B-13 Employment Settings, Type of Training, Earnings, and Employment Outlook

B-14 Appendix Review
Key Points **B-14** ■ Key Terms **B-15**

G-1 Glossary

R-1 References

NI-1 Name Index

SI-1 Subject Index

TO THE INSTRUCTOR

Welcome to the seventh edition of *Psychology!*

We've been gratified by the enthusiastic response to the six previous editions of *Psychology.* We've especially enjoyed the e-mails and letters we've received from students who felt that our book was speaking directly to them. Students and faculty alike have told us how much they appreciated *Psychology*'s distinctive voice, its inviting learning environment, the engaging writing style, and the clarity of its explanations—qualities we've maintained in the seventh edition.

But as you'll quickly see, this new edition is marked by exciting new changes: a fresh new look, a stronger and more explicit emphasis on scientific literacy, a digital experience that is more tightly integrated for both students and instructors, and—most important—a new co-author! More about these features later.

Before we wrote the first word of the first edition, we had a clear vision for this book: combine the scientific authority of psychology with a narrative that engages students and relates to their lives. Drawing from decades (yes, it really has been decades) of teaching experience, we've written a book that weaves cutting-edge psychological science with real-life stories that draw students of all kinds into the narrative.

While there is much that is new, this edition of *Psychology* reflects our continued commitment to the goals that have guided us as teachers and authors. Once again, we invite you to explore every page of the new edition of *Psychology,* so you can see firsthand how we:

- Communicate both the scientific rigor and the personal relevance of psychology
- Encourage and model critical and scientific thinking
- Show how classic psychological studies help set the stage for today's research
- Clearly explain psychological concepts and the relationships among them
- Present controversial topics in an impartial and evenhanded fashion
- Expand students' awareness of cultural and gender influences
- Create a student-friendly, personal learning environment
- Provide an effective pedagogical system that helps students develop more effective learning strategies

What's New in the Seventh Edition: Big Changes!

We began the revision process with the thoughtful recommendations and feedback we received from hundreds of faculty using the text, from reviewers, from colleagues, and from students. We also had face-to-face dialogues with our own students as well as groups of students across the country. As you'll quickly see, the seventh edition marks a major step in the evolution of *Psychology.* We'll begin by summarizing the biggest changes to this edition—starting with the most important: a new co-author!

Introducing . . . Susan Nolan

We are very excited and pleased to introduce **Susan A. Nolan** as our new co-author. When the time came to search for a new collaborator, we looked for someone who was an accomplished researcher, a dedicated teacher, and an engaging writer with a passion for communicating psychological science to a broad audience. A commitment to gender equality and cultural sensitivity, and, of course, a good sense of humor were also requirements, as were energy and enthusiasm. We found that rare individual in Susan A. Nolan, Professor of Psychology at Seton Hall University.

Susan made several valuable contributions to the sixth edition of *Psychology,* and the success of that collaboration prompted our decision to make her a full co-author with this new edition. Reflecting her expertise in clinical and social psychology, and her background in gender, culture, and diversity studies, Susan revised Chapter 10, Gender and Sexuality; Chapter 12, Social Psychology; Chapter 14, Psychological Disorders; and Chapter 15, Therapies. And, she participated fully in our text-wide decisions about design, photographs, art, and content. Beyond the text, she's been fully involved in the development of some exciting new digital resources for the new edition. But more on that below.

New Emphasis on Scientific Literacy

As psychology instructors well know, students come to psychology with many preconceived ideas, some absorbed from popular culture, about the human mind and behavior. These notions are often inaccurate. Complicating matters is the fact that for many students, introductory psychology may be their first college-level science course—meaning that students sometimes have only the vaguest notion of the nature of scientific methodology and evidence. Thus, one important goal for introductory psychology is to teach students how to distinguish fact from opinion, and research-based, empirical findings from something heard from friends or encountered on the Internet.

The importance of this objective is reinforced by the 2013 revision of the APA Guidelines for the Undergraduate Psychology Major. Scientific Literacy and Critical Thinking is identified as one of its five key goals. Psychology educators agree that the skills students learn in psychology can be as important as the content. Scientific literacy and critical thinking skills can help students in a variety of careers, a variety of majors, and can help ensure that students become critical consumers of scientific information in the world around them.

Since the first edition, a hallmark of *Psychology* and its sister publication, *Discovering Psychology,* has always been their emphasis on critical and scientific thinking. *Psychology* was the first introductory psychology textbook to formally discuss and define pseudosciences and to distinguish pseudoscience from science. Our trademark *Science Versus Pseudoscience* boxes, which take a critical look at the evidence for and against phenomena as diverse as graphology, educational videos for infants, and ESP research have proved very popular among instructors and students alike.

In this new edition, we decided to make the **scientific literacy** theme even more explicit. These new features are described below.

New *Think Like a Scientist* Model and Digital Feature

To help students learn to develop their scientific thinking skills and become critical consumers of information, a unique feature of the seventh edition is a set of **Think Like a Scientist** digital activities. Developed for *Psychology* by co-authors Susan Nolan and Sandy Hockenbury, each digital activity provides students with the opportunity to apply their critical thinking and scientific thinking skills. These active learning exercises combine video, audio, text, and assessment to help students hone and master scientific literacy skills they will use well beyond the introductory course. In these activities, students will be invited to critically explore questions they encounter in everyday life, such as "Can you learn to tell when someone is lying?" and "Are some people 'left-brained' and some people 'right-brained'?"

These activities employ a simple four-step model introduced in the new Critical Thinking box "How to Think Like a Scientist" in Chapter 1. These four steps include:

1. Identify the Claim
2. Evaluate the Evidence
3. Consider Alternative Explanations
4. Consider the Source of the Research or Claim

The *Think Like a Scientist* digital activities are designed to teach and develop a skill set that will persist long after the final exam grades are recorded. We hope to develop a set of transferable skills that can be applied to analyzing dubious claims in any subject area—from advertisements to politics. We think students will enjoy completing these activities—and instructors will value them. The seventh edition of *Psychology* includes the following Think Like a Scientist digital activities:

- Contagious Online Emotions (Chapter 1)
- The Right Brain Versus the Left Brain (Chapter 2)
- ESP (Chapter 3)
- Multi-Tasking (Chapter 4)
- Positive and Negative Reinforcement (Chapter 5)
- Eyewitness Testimony (Chapter 6)
- Brain Exercises (Chapter 7)
- Lie Detection (Chapter 8)
- Learning Environments (Chapter 9)
- Gender Stereotypes (Chapter 10)
- Employment-Related Personality Tests (Chapter 11)
- Online Dating (Chapter 12)
- Coping with Stress (Chapter 13)
- Tracking Mental Illness Online (Chapter 14)
- Ketamine (Chapter 15)

Think Like a SCIENTIST

Can you be classified as right-brained or left-brained? Go to LaunchPad: Resources to **Think Like a Scientist** about **The Right Brain Versus the Left Brain.**

LaunchPad

New *Myth or Science?* Feature

Students often come to the introductory psychology course with misperceptions about psychological science. Our new **Myth or Science?** feature will help dispel some of these popular but erroneous beliefs.

Each chapter begins with a list of "Is It True?" questions that reflect popular myths about human behavior. These statements were tested with market research to see what percentage of students actually endorsed them. In some cases, agreement reached astonishing levels. For example, in one survey, more than 85% of students agreed that "the right brain is creative and intuitive, and the left brain is analytic and logical" and that "some people are left-brained and some people are right-brained." More than 70% of students agreed that "flashbulb memories are more accurate than normal memories" and that "most psychologists agree with Freud's personality theory." And, more than 90% of surveyed students agreed that "dying people go through five predictable stages." Even frequently debunked statements like "you only use 10% of your brain" received a high rate of agreement.

After being posed at the beginning of the chapter, each question is answered in the body of the chapter. A margin note signals the student to find the explanation and indicates whether the statement is "myth" or "science."

MYTH ◀ SCIENCE

Is it true that multi-tasking is an efficient way to get things done?

New Data Presentation Program

Our new co-author Susan Nolan brought her expertise in data analysis and presentation to the fully revised graphic art program. We've redesigned our graphs more closely in line with graphing expert Edward Tufte's (1997) guidelines for clear, consistent data visualizations. Graphs are simpler than in previous editions. Most now use fewer colors per graph, and fewer and lighter background gridlines, to allow the representations of data—the bars, for example—to emerge as the most important element. We have used plain bar graphs whenever possible, starting the *y* axes at 0. When the variable is a percentage, we extended the *y* axis to 100% whenever possible. We hope that the simpler, more streamlined graphs will allow students to more readily "see" and accurately interpret data.

New Research Methods Section in Chapter 1

Introductory chapters have a reputation for being dry and boring. Instructors, though, know that there are few alternatives: history and methods need to be taught before plunging into content-heavy chapters. For this edition, the section on research methods has been completely rewritten to highlight *psychological science on the topic of student success*. New research examples—such as the impact of social media on well-being, the effect of multi-tasking on studying, the testing effect, and measures of student well-being—were chosen for their relevance to today's students' lives.

The new end-of-chapter application, **Psych for Your Life: Successful Study Techniques**, provides six research-based strategies to maximize student success. In other words, rather than waiting for the Learning or Memory chapters to introduce study skills tips, we've incorporated these important findings right into Chapter 1—and used them to demonstrate the relevance of psychological research in students' everyday lives and academic success. Along with demonstrating to students *how* psychological research can be used to improve everyday life, the new application gives them a solid foundation of research-based study skills and tips.

All-New Digitally Integrated Package

Today's college students are digital natives. They are accustomed to going online to seek answers and to connect with friends, fellow students, and their instructors. Past editions of *Psychology* provided a wealth of online resources for students, but the new seventh edition marks a step to a new level of digital integration with **LaunchPad**.

LaunchPad, our new course space, combines an interactive e-Book with high-quality multimedia content and ready-made assessment options, including LearningCurve adaptive quizzing. Pre-built, curated units are easy to assign or adapt with your own material, such as readings, videos, quizzes, discussion groups, and more. LaunchPad also provides access to a gradebook that offers a window into your students' performance—either individually or as a whole. While a streamlined interface helps students focus on what's due next, social commenting tools let them engage, make connections, and learn from each other. Use LaunchPad on its own or integrate it with your school's learning management system so your class is always on the same page.

The Latest Psychological Science

As was the case with previous editions, we have extensively updated every chapter with the latest research. We have pored over dozens of journals and clicked through thousands of Web sites to learn about the latest in psychological science. As a result, this new edition features hundreds of new references. Just to highlight a few additions, the seventh edition includes brand-new sections on scientific thinking and factors contributing to college success (Chapter 1); traumatic brain injury and concussion (Chapter 2); bilingualism (Chapter 7); evolutionary and interactionist theories of gender development, and transgender identity in multiple cultures (Chapter 10); aggression and violence (Chapter 12); and a critical look at the effectiveness of antidepressants compared to placebo treatments (Chapter 15). And, there are four new prologues (Chapters 1, 8, 10, and 14).

In addition, we have significantly updated coverage of neuroscience and expanded our coverage of culture, gender, and diversity throughout the text. DSM-5 terminology and criteria have been fully integrated into the new edition.

As of our last count, there are over 1,000 new references in the seventh edition of *Psychology,* more than half of which are from 2012 or later. These new citations reflect the many new and updated topics and discussions in the seventh edition of *Psychology*. From the effects of social media and multi-tasking on student success to the latest discoveries about oxytocin, aggression, women in STEM fields, stress and telomeres, or the effectiveness of meditation in controlling pain and improving attention, our goal is to present students with interesting, clear explanations of psychological science. Later in this preface, you'll find a list of the updates by chapter.

New Design, New Photos

Created with today's media-savvy students in mind, the clean, modern, new look of *Psychology* showcases the book's cutting-edge content and student-friendly style. Carefully chosen photographs—more than 60 percent of them new—apply psychological concepts and research to real-world situations. Accompanied by information-rich captions that expand upon the text, vivid and diverse photographs help make psychology concepts come alive, demonstrating psychology's relevance to today's students.

Connections to the American Psychological Association's Guidelines for the Undergraduate Psychology Major

The American Psychological Association has developed the *APA Guidelines for the Undergraduate Psychology Major: Version 2.0* to provide "optimal expectations for performance" by undergraduate psychology students. The *APA Guidelines* include five broad goals, which are summarized below. This table shows how Hockenbury, Nolan, and Hockenbury's *Psychology,* Seventh Edition, helps instructors and students achieve these goals.

Goal 1: Knowledge Base in Psychology	
APA Learning Objectives: 1.1—Describe key concepts, principles, and overarching themes in psychology • *Psychology* covers the full range of psychology's subject areas: history of the field, biological psychology, experimental and cognitive psychology, developmental psychology, social psychology, personality and clinical psychology • Chapter 1, Introduction and Research Methods, provides an overview of the history and the scope of contemporary psychological science 1.2—Develop a working knowledge of psychology's content domains • *Psychology* provides a comprehensive, up-to-date survey of the full range of psychology's subject areas • Thousands of research citations, with more than 500 from research no older than 2012 • In Focus and Focus on Neuroscience boxes provide in-depth looks at particular topics • Chapter 1, Introduction and Research Methods	1.3—Describe applications of psychology • Psych for Your Life end-of-chapter sections (see full list of titles on pages xli–xlii) show students how they can apply psychological principles to improve their own lives • Specialty Areas in Psychology" in Chapter 1, Introduction and Research Methods • Appendix B: Industrial/Organizational Psychology
Goal 2: Scientific Inquiry and Critical Thinking	
APA Learning Objectives: 2.1—Use scientific reasoning to interpret psychological phenomena • Chapter 1, Introduction and Research Methods, especially the "How to Think Like a Scientist" model introduced on page 31 and discussion of pseudoscience characteristics on pages 20–21. • Critical Thinking boxes (see full list of titles on page xxxvii) • Science Versus Pseudoscience boxes (see full list of titles on pages xxxvi–xxxvii) • Myth or Science feature (see description on page xxiii) • Think Like a Scientist digital activities, accessible on LaunchPad • Focus on Neuroscience boxes (see full list on page xli) • PsychSim 6.0, Concept Practice, Video Activities, and Labs, accessible on LaunchPad 2.2—Demonstrate psychology information literacy • Chapter 1, Introduction and Research Methods • Appendix A: Statistics: Understanding Data • Box on Psychological Research Using Brain Imaging (pages 32–33) explains the utility and limitations of brain-imaging research • Focus on Neuroscience boxes show students how to evaluate research findings based on brain-imaging techniques • Science versus Pseudoscience boxes teach students how to critically evaluate media claims • Think Like a Scientist digital activities, accessible on LaunchPad • PsychSim 6.0, Concept Practice, Video Activities, and Labs, accessible on LaunchPad	2.3—Engage in innovative and integrative thinking and problem solving • "Solving Problems and Making Decisions" in Chapter 7, Thinking, Language, and Intelligence • Psych for Your Life feature "A Workshop on Creativity" • Think Like a Scientist digital activities, accessible on LaunchPad • PsychSim 6.0, Concept Practice, Video Activities, and Labs, accessible on LaunchPad 2.4—Interpret, design, and conduct basic psychological research • Chapter 1, Introduction and Research Methods, describes the range of psychological research strategies, including examples related to student success • Appendix A: Statistics: Understanding Data 2.5—Incorporate sociocultural factors in scientific inquiry • Multiple chapters include the impact of sociocultural factors on behavior and psychological processes, especially Chapter 9, Lifespan Development; Chapter 10, Gender and Sexuality; Chapter 12, Social Psychology; Chapter 13, Stress, Health and Coping; Chapter 14, Psychological Disorders; and Chapter 15, Therapies. • Culture and Human Behavior boxes (see full list of titles on pages xxxviii–xxxix) • See list of cultural coverage topics integrated within the main narrative on pages xxxviii–xxxix • See list of gender coverage topics integrated within the main narrative on page xl

(continued on next page)

Goal 3: Ethical and Social Responsibility in a Diverse World	
APA Learning Objectives: 3.1—Apply ethical standards to evaluate psychological science and practice • "Ethics in Psychological Research" in Chapter 1, Introduction and Research Methods • Discussions of obedience, conformity, the Stanford Prison Experiment, altruism, aggression, and deindividuation in Chapter 12, Social Psychology • Think Like a Scientist digital activity "Contagious Online Emotions," accessible on LaunchPad 3.2—Build and enhance interpersonal relationships • Psych for Your Life features "Raising Psychologically Healthy Children," "Reducing Conflict in Intimate Relationships," "Understanding and Helping to Prevent Suicide" • "Social Support" in Chapter 13, Stress, Health, and Coping • See list of gender coverage topics integrated within the main narrative on page xl • Culture and Human Behavior boxes (see full list of titles on pages xxxviii–xxxix)	3.3—Adopt values that build community at local, national, and global levels • Discussions of gender and sexism in Chapter 10, Gender and Sexuality; prejudice, obedience, conformity, the Stanford Prison Experiment, altruism, aggression, and deindividuation in Chapter 12, Social Psychology; stigma of obesity in Chapter 8, Motivation and Emotion; and of mental illness in Chapters 14, Psychological Disorders, and 15, Therapies • See list of cultural coverage topics integrated within the main narrative on pages xxxviii–xxxix • See list of gender coverage topics integrated within the main narrative on page xl • Culture and Human Behavior boxes (see full list of titles on pages xxxviii–xxxix)
Goal 4: Communication	
APA Learning Objectives: 4.1—Demonstrate effective writing for different purposes • "The Scientific Method" in Chapter 1 (Introduction and Research Methods) • Questions in Critical Thinking boxes (see full list of titles on page xxxvii) • Response features in Think Like a Scientist digital activities, accessible on LaunchPad • Essay questions in Test Bank, which is aligned with APA objectives	4.2—Exhibit effective presentation skills for different purposes • Instructor's Resource Manual with classroom activities that work to develop oral presentation skills, accessible on LaunchPad 4.3—Interact effectively with others • Psych for Your Life features "Raising Psychologically Healthy Children," "Reducing Conflict in Intimate Relationships," "The Persuasion Game," and "Understanding and Helping to Prevent Suicide" • Instructor's Resource Manual with classroom exercises that promote skills for working in a group, accessible on LaunchPad
Goal 5: Professional Development	
APA Learning Objectives: 5.1—Apply psychological content and skills to career goals • "Specialty Areas in Psychology" in Chapter 1, Introduction and Research Methods • Focus on psychological research on student success and study skills in Chapter 1, Introduction and Research Methods • Psych for Your Life features "Successful Study Techniques," and "Turning Your Goals into Reality" • Appendix B: Industrial/Organizational Psychology 5.2—Exhibit self-efficacy and self-regulation • "Introduction" and "Psychological Needs as Motivators" in Chapter 8 (Motivation and Emotion) • "Individual Factors That Influence the Response to Stress" and "Coping" in Chapter 13, Stress, Health, and Coping • Psych for Your Life features (see full list of titles on pages xli–xlii) • Think Like a Scientist digital features "Multi-Tasking," "Positive and Negative Reinforcement," accessible on LaunchPad	5.3—Refine project-management skills • "Solving Problems and Making Decisions" in Chapter 7, Thinking, Language, and Intelligence • Psych for Your Life features "A Workshop on Creativity" and "Turning Your Goals into Reality" • Appendix B: Industrial/Organizational Psychology 5.4—Enhance teamwork capacity • Appendix B: Industrial/Organizational Psychology

Major Chapter Revisions

As you page through our new edition, you will encounter new examples, boxes, photos, and illustrations in every chapter. Below are highlights of some of the most significant changes:

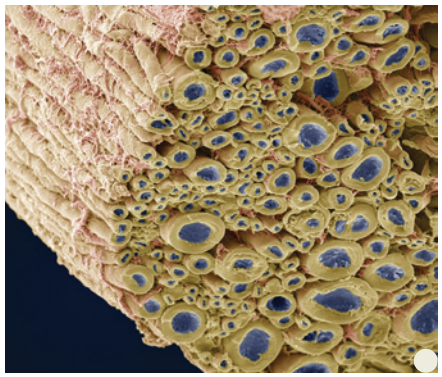
CHAPTER 1, INTRODUCTION AND RESEARCH METHODS

- New Prologue, "The First Exam," focusing on test experiences and student study strategies
- New chapter introduction incorporating psychology's goals
- New photo example of the topics that psychologists study
- New photo examples of the biological perspective and cross-cultural psychology

- New summary table and graphs showing specialty areas and employment settings for psychologists
- New student-focused research examples and photo illustrations of concepts in research methods, including forming a hypothesis, operational definitions, statistical significance, and meta-analysis
- New example of how to read a journal reference
- Revised and updated Science Versus Pseudoscience box
- New example of naturalistic observation
- New student-focused example of survey research using the National Survey of Student Engagement, including results comparing study habits of different majors
- New section on correlational studies, using research on student study behaviors and strategies to illustrate positive and negative correlations
- New explanation of experimental methods, using an experiment on the testing effect to illustrate the key terms and important concepts of experimental design
- New Critical Thinking box, "How to Think Like a Scientist," introducing a four-step model for scientific thinking that students can apply to any claim or belief
- Discussion of use of animals in research moved into main text
- Entirely new "Psych for Your Life" application that provides six research-based study techniques to enhance student success. Along with providing helpful information right at the beginning of the semester, the application demonstrates the value and relevance of psychological research.

CHAPTER 2, NEUROSCIENCE AND BEHAVIOR

- Added information in Figure 2.1 about the structure of sensory neurons
- New photo of neuron
- Streamlined discussions of communication within the neuron, the action potential, and communication between neurons
- Discussion of important neurotransmitters expanded to include glutamate, now a boldfaced key term
- Endorphins discussion integrated into main text and illustrated with photo rather than discussed in a separate Focus on Neuroscience box
- New photo examples of botox, dopamine, and Parkinson's Disease
- New In Focus box, "Traumatic Brain Injury: From Concussions to Chronic Traumatic Encephalopathy," exploring the causes and long-term implications of these injuries, with special reference to veterans and athletes
- Expanded discussion of oxytocin, now a boldfaced key term, with coverage of research on its diverse effects on social motivation and behavior
- Coverage of "The 10% Myth" now integrated into text
- Updated and streamlined discussion of plasticity and neurogenesis, now integrated into a single section and including 2013 research on carbon-14 dating of new neuron
- New photo and updated research on Phineas Gage's injury
- Expanded and updated coverage of the amygdala and its functions
- Updated and simplified Critical Thinking box, "'His' and 'Her' Brains?"
- Revised and updated Science Versus Pseudoscience box, "Brain Myths," includes new research on brain lateralization
- Updated research and new photo in Psych for Your Life: Maximizing Your Brain's Potential



Steve Gschmeissner/Science Source

Nerves and Neurons Are Not the Same
A cross section of a peripheral nerve is shown in this electron micrograph. The nerve is composed of bundles of axons (blue) wrapped in the myelin sheath (yellow). In the peripheral nervous system, myelin is formed by a type of glial cell called *Schwann cells,* shown here as a pinkish coating around the axons.

Life in View/Science Source

Restoring Hearing Cochlear implants are electronic devices that are surgically implanted behind the ear. A microphone picks up sounds from the environment, which are converted into electrical impulses that directly stimulate the auditory nerve via electrodes implanted in the cochlea. Cochlear implants do *not* restore normal hearing (Farris-Trimble & others, 2014). However, their use, especially when implanted in early childhood, can allow hearing-impaired individuals to perceive speech and other everyday sounds (Clark & others, 2013; O'Donoghue, 2013).

CHAPTER 3, SENSATION AND PERCEPTION

- Streamlined and updated box on subliminal perception
- New photo example of color blindness
- Revised figure clarifiing human auditory structures and process of hearing
- Added discussion of cochlear implants, with photo illustration
- Added information about the dangers of noise exposure in everyday life and from personal music players
- New example of how frogs without outer ears detect sound
- New 2014 cross-cultural research on the language of smell in non-Western groups
- Revised In Focus box "Do Pheromones Influence Human Behavior?" that includes new 2013 and 2014 research on human chemosignals
- New photo illustrating top-down subjective preconceptions on judgments of taste/quality
- New 2013 cross-cultural research on effects of ethnicity and culture on pain perception, illustrated with photo
- New drawings illustrating the Müller-Lyer illusion and the Shepard Tables illusion
- Dramatic new photos illustrating figure-ground camouflage in nature, Gestalt principles of organization, and the moon illusion
- Revised and updated Psych for Your Life, including new research on the effectiveness of acupuncture in pain control

CHAPTER 4, CONSCIOUSNESS AND ITS VARIATIONS

- Streamlined discussion of circadian rhythms and the suprachiasmatic nucleus
- Updated research on multi-tasking, including 2014 data on cell phone usage contributing to motor vehicle accidents
- New research on the effects of artificial light, including computer and tablet screens, on circadian rhythms
- Streamlined In Focus box, "What You Really Want to Know About Sleep"
- Revised section, "Why Do We Sleep?" includes new research on sleep and memory formation, the effects of sleep deprivation and sleep restriction, and the link between sleep restriction and weight gain
- Updated, reorganized, and streamlined discussion of Dreams and Mental Activity During Sleep
- Condensed Focus on Neuroscience, "The Dreaming Brain"
- Streamlined coverage of sleep disorders and hypnosis
- Updated and condensed Critical Thinking box on theories of hypnosis
- "Drug abuse" has been changed to "Substance Abuse Disorder" and definition has been revised to conform with DSM-5 language; requirement that legal problems be present has been dropped, and requirement that craving be present has been added
- Updated 2013 data noting that most overdose deaths are now due to legal prescription drugs rather than illegal drugs
- New photos of Amy Winehouse, illustrating the dangers of alcohol abuse; Cory Monteith, illustrating the dangers of depressant drugs; and Whitney Houston, illustrating the danger of cocaine use
- The term *opiates* replaced with the more accurate term *opioids*
- Added 2014 data on the deaths from the accidental overdose of prescription opioids
- Updated 2014 research on the therapeutic use of psychedelic drugs
- Updated information on the legal use of medical marijuana, including 2014 research on data showing fewer opioid overdose deaths in states with legal access to medical marijuana for pain treatment

- Revised and updated coverage of the effects of MDMA ("Ecstasy")
- New photo examples of psychoactive drug use around the world, cross-cultural examples of legal stimulant use, rave culture, and peyote-inspired visions

CHAPTER 5, LEARNING

- New photo examples of learning, Ivan Pavlov, primary and conditioned reinforcers, using reinforcement in the classroom, media response to Skinner's work, applications of operant conditioning, and observational learning
- Streamlined discussion of John B. Watson and introduction to behaviorism
- New contemporary photo example of classical conditioning in advertising
- Streamlined coverage of the "Little Albert" story
- 2014 research suggesting a second identification for the infant in the famous "Little Albert" study, Albert Barger Martin
- Condensed and simplified presentation of Robert Rescorla's classic research
- Revised section on taste aversions, including new example of using conditioned taste aversions to protect the endangered northern quoll in Australia
- Replaced reinforcement example of hitting a vending machine with pushing the coin-return lever
- In text and tables, replaced the terms "punishment by application" and "punishment by removal" with "positive punishment" and "negative punishment"
- Revised graphs showing schedules of reinforcement and response patterns
- New photo example showing how behavior modification is used to train helper animals
- New historical photo of Keller and Marian Breland
- Updated biographical information about Martin E. P. Seligman
- Streamlined and updated Focus on Neuroscience, "Mirror Neurons: Imitation in the Brain"
- New 2013 research example of observational learning in animals
- New 2014 research on media effects on behavior, identifying a correlational link between a decrease in teen birth rates and viewership of an MTV reality series showing the struggles of teenage parents
- New photo example of a Kenyan "education-entertainment" program based on Bandura's observational learning research

CHAPTER 6, MEMORY

- Revised art demonstrating Baddeley's model of working memory
- New tip-of-the-tongue examples
- Updated flashbulb memory examples and new photo illustration
- Revised graph showing the Ebbinghaus forgetting curve
- Updated In Focus box on déjà-vu experiences with 2012 research and new cartoon
- New photo examples of the serial position effect, "tip-of-the-fingers" experience, flashbulb memories, eyewitness misidentification, and motivated forgetting
- New research showing that pre-existing schemas can distort memories of events within seconds
- New 2013 research, conducted by the online magazine *Slate,* showing how faked news photographs can produce false memories about political events
- New photos of Eric Kandel, *Aplysia,* and David Snowden with an elderly participant in the Nun Study of Aging and Alzheimer's Disease

Motivated Forgetting Car accidents, serious illnesses, surgeries, and other traumatic events are painful to relive in memory. Some researchers believe that by voluntarily directing our attention away from memories of such traumatic events, we can eventually *suppress* our memory of the experiences, making them difficult or impossible to consciously retrieve (Anderson & others, 2011).

Taxi/Getty Images

- New photos of Suzanne Corkin, Henry Molaison (the famous "H.M."), and of a virtual model of H.M.'s damaged brain based on new 2014 research
- Fully revised Psych for Your Life application, "Ten Steps to Boost Your Memory" and new photo of memory superstar and journalist Josh Foer

CHAPTER 7, THINKING, LANGUAGE, AND INTELLIGENCE

- The new term *autism spectrum disorder* has replaced *autism* and *Asperger's syndrome* in the Prologue and throughout the chapter to conform to the DSM-5 classification
- The term *intellectual disability* has replaced *mental retardation* in the In Focus box "Neurodiversity: Beyond IQ" to conform to new DSM-5 terminology
- Updated research on problem-solving strategies
- New extended example of functional fixedness—repurposing plastic bags and bottles into useful objects—illustrated with new photo
- Confirmation bias introduced as a boldfaced term
- New photo examples of American Sign Language and Gardner's theory of multiple intelligences
- Entirely new section on bilingualism and its cognitive benefits
- Streamlined discussion of the roles of genetics and environment in determining intelligence, and updated research on the Flynn Effect
- Updated discussion of stereotype threat
- New photo example of creativity: Steve Jobs

CHAPTER 8, MOTIVATION AND EMOTION

- New prologue, "One Step, One Breath," about one of the authors' experiences as a volunteer trekking through a remote region of the Himalayas
- Revised, condensed, and streamlined introduction to motivational theories
- New photo examples of sensation seekers, achievement motivation, emotion, arousal and intense emotion, the facial feedback hypothesis, and appraisal and emotion
- Condensed, simplified, and updated section on hunger and eating
- New examples of how culture shapes food choices
- New information about body mass index and alternative measures of obesity
- New data on the role that globalization plays in the increase in obesity in developing countries worldwide
- Updated Critical Thinking box "Has Evolution Programmed Us to Overeat?" including 2014 research on stigma associated with obesity
- 2014 research on the decrease in physical activity levels in the United States over the past decade
- Revised introduction to Psychological Needs as Motivators section
- New example of achievement motivation
- Updated research on self-determination theory
- Updated research on the functions of emotion and emotional intelligence
- Streamlined and updated discussion of the subjective experience of emotion and the neuroscience of emotion, including new photo example
- New figure based on 2014 cross-cultural research on the association of different emotions with specific physical sensations
- New photo of William James
- Updated research on cognitive theories of emotion

Sandy Hockenbury

The Many Functions of Emotion
Two friends share news, smiles, and laughter as they patiently wait their turns at the medical clinic in an isolated village in Tsum Valley, Nepal. Emotions play an important role in relationships and social communication.

CHAPTER 9, LIFESPAN DEVELOPMENT

- Revised introduction, with new discussion of longitudinal and cross-sectional research designs; longitudinal design and cross-sectional design are new key terms
- New photo of X and Y chromosomes
- Expanded and updated discussion of research on the epigenetic effects of early life stress in human subjects
- New photo and discussion of Harry Harlow's classic "contact comfort" research and its role in attachment
- New photos of Mary Ainsworth and Erik Erikson
- Streamlined section on language development
- New photo examples of cognitive development and Piagetian stages
- New material on adolescent social development explores peer influence and romantic and sexual relationships
- Expanded discussion of moral development, including new photo example
- Entirely new section, "Emerging Adulthood," introduces the period from the late teens until the mid- to late-twenties as a distinct stage of the lifespan
- New discussion of the myth of the mid-life crisis
- Thoroughly revised section on social development in adulthood
- Updated statistics on U.S. households, including changes in family structure
- New discussion of the effect of parenthood on marital satisfaction, including research about the so-called empty-nest syndrome and the new phenomenon of "boomerang kids"

CHAPTER 10, GENDER AND SEXUALITY

- New prologue about a young transgender man, Jamie, growing up in a small town in rural New York
- Revised introduction
- Fully revised and updated discussion of gender differences in emotionality, now placed within the main text
- Entirely new discussion of leadership and gender
- Updated discussion of gender differences in math and science performance, including 2013 cross-cultural research
- New Critical Thinking box, "Gender Differences: Women in Science, Technology, Engineering, and Mathematics Fields"
- Fully revised section on theories of gender-role development now includes evolutionary and interactionist theories
- New photo examples of gender-stereotyped toys
- Variations in gender identity now covered within the main text, with expanded coverage of transgender development
- New Culture and Human Behavior box, "The Outward Display of Gender"
- New photo of Masters and Johnson
- Evolution and mate preferences now covered within the main text
- Updated research in Focus on Neuroscience, "Romantic Love and the Brain"
- Updated coverage of sexual attitudes
- Updated and expanded In Focus box, "Hooking Up on Campus"
- New photo examples of gender-role stereotypes, color-coding and gender, transgender individuals, famous gay couples, sexual fantasies, primate sexual behavior
- Revised section on sexual disorders and problems, incorporating DSM-5 updates and terminology

Challenging Expectations What makes weight lifting a "male" activity? Evstyukhina Nadezda, a world champion weight lifter from Russia, engages in athletic pursuits that many might not expect for a woman. Are biological constraints a factor here?

BERTRAND GUAY/AFP/Getty Images

Jose Luis Pelaez Inc/age fotostock

Establishing the Superego As children, we learn many rules and values from parents and other authorities. The internalization of such values is what Freud called the superego—the inner voice that is our conscience. When we fail to live up to its moral ideals, the superego imposes feelings of guilt, shame, and inferiority.

- New figures and information on rates of HIV infections in the United States and globally
- Revised Psych for Your Life application, "Reducing Conflict in Intimate Relationships"

CHAPTER 11, PERSONALITY

- New photos of Carl Jung and Carl Rogers
- Updated discussion of Alfred Adler's theory of personality
- Many new photo examples, including mandalas in diverse cultures, Freud's influence on popular culture, unconditional positive regard, the TAT, and self-efficacy
- New cross-cultural photo illustration for Critical Thinking box, "Freud Versus Rogers on Human Nature"
- Updated discussion of the humanistic perspective
- Streamlined discussion of self-efficacy with new student-centered example
- New cross-cultural research on the universality of the five-factor model of personality

CHAPTER 12, SOCIAL PSYCHOLOGY

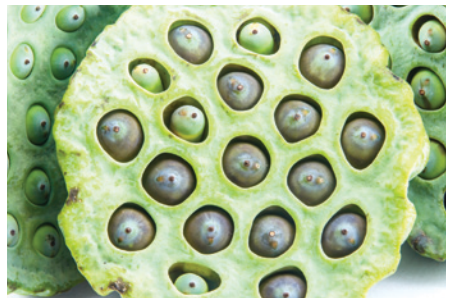
- Discussion of person perception updated with new research on the role of person perception in social media
- Condensed introduction to attribution
- New photo example of blaming the victim—the story of Elizabeth Smart
- Revised discussion of cognitive dissonance, with new examples and research on cognitive dissonance in preschoolers and capuchin monkeys
- Updated discussion of physical attractiveness
- Updated In Focus box, "Interpersonal Attraction and Liking"
- New cross-cultural research on in-group bias
- Expanded and updated discussion of prejudice, incorporating new 2013 research and neuroscience evidence
- New discussion of contemporary replication of Milgram's obedience study
- New information on conditions that undermine obedience
- Condensed Critical Thinking box, "Abuse at Abu Ghraib"
- New section, "Altruism and Aggression," includes expanded coverage of Latané and Darley's research on bystander intervention, additional factors that increase the likelihood of bystanders helping, and entirely new section on aggression
- New figures on aggression and the brain, and the influence of sociocultural factors on aggression
- New photos and captions provide contemporary examples of the self-serving bias, the effect of attitudes on behavior, research linking prejudice and negative emotion, destructive obedience of authority, blaming the victim bias, road rage, social loafing, and deindividuation

CHAPTER 13, STRESS, HEALTH, AND COPING

- New photo examples of stress and appraisal, major life events and stress, daily hassles, explanatory style, Type A behavior pattern, providing social support, the role of personal control in the response to stress, the benefits of social support
- Updated discussion of posttraumatic stress disorder to incorporate DSM-5 criteria
- "Stress, Chromosomes, and Aging" updated with 2014 research
- New prologue example in the In Focus box, "Providing Effective Social Support"
- New cross-cultural photo examples of major life events, daily hassles and stress, daily hassles, the benefits of social support, and problem-focused coping

CHAPTER 14, PSYCHOLOGICAL DISORDERS

- New Prologue about the psychotic break and successful life of a woman with schizophrenia—Elyn Saks
- Expanded coverage of the DSM-5, presenting a history of the manual, including critiques
- New coverage of the World Health Organization's *International Classification of Diseases*
- Critical Thinking box updated with new research on violence and mental illness
- Revised table displaying prevalence data for the most common psychological disorders
- Updated cross-cultural research on prevalence of psychological disorders and treatment rates in developing countries
- Revised Table of Key Diagnostic Categories, incorporating DSM-5 terminology and criteria
- Revised introduction to "Anxiety Disorders," incorporating DSM-5 criteria for PTSD and OCD
- New evolutionary discussion of phobias
- New phobia example—Oprah Winfrey's fear of chewing gum
- Updated discussion of posttraumatic stress disorder to incorporate DSM-5 criteria
- Section on social phobia relabeled Social Anxiety Disorder to conform to DSM-5 terminology, and criteria updated with new research, including cross-cultural research
- Reorganized sections on Posttraumatic Stress Disorder and Obsessive–Compulsive Disorder
- New cross-cultural research on posttraumatic stress disorder in children living in the Middle East
- New research on how PTSD symptoms can be triggered by reports in the news media and by events unrelated to the original trauma
- Updated research on the role played by pre-existing vulnerability in the development of PTSD
- Section on "Mood Disorders" retitled as "Disordered Moods and Emotions: Depressive Disorder and Bipolar Disorder" to conform to new DSM-5 terminology
- New discussion of DSM-5's controversial removal of "the bereavement exclusion" that excluded symptoms caused by bereavement as criteria for depression
- New photo example of major depressive disorder, featuring J. K. Rowling and her fictional "dementors"
- Updated longitudinal research on the prevalence and recurrence of major depressive disorder over the lifespan
- Section on major depressive disorder updated with 2014 research
- New research on the roles of stress in major depressive disorder
- New example to introduce bipolar disorder
- Updated 2013 and 2014 research on the causes of depressive and bipolar disorders
- Updated Critical Thinking box "Does Smoking Cause Depression and Other Psychological Disorders?" includes revised graph
- Eating Disorders section expanded and updated to incorporate DSM-5 terminology and criteria, including a new section on the newly described disorder "binge-eating disorder"
- New Culture and Human Behavior box, "Culture-Bound Syndromes"
- Updated discussion of personality disorders introduces second approach to classification



ilovezion/Shutterstock

John Arnold/Shutterstock

An Evolutionary Fear of Holes Some people are afraid of a certain pattern of holes like those you might see in a chocolate bar, in soap bubbles, or on a lotus seed head like the one shown here. This condition is called trypophobia. Researchers Geoff Cole and Arnold Wilkins (2013) found striking similarities between the visual pattern that triggers fear in trypophobics and the markings on poisonous animals, like certain snakes or the poison dart frog shown here. They speculate that an ability to quickly notice a poisonous creature gave people an evolutionary advantage, even if it sometimes led them to fear harmless objects.

- New discussion of the differences among *psychopath, sociopath*, and *antisocial personality disorder,* with new photo examples
- Updated research on borderline personality disorder
- Updated 2014 research on the controversy surrounding the authenticity of dissociative identity disorder
- Fully revised section on schizophrenia, including new examples, extended coverage of variations of symptoms across cultures, and a cross-cultural look at prevalence
- New photo example of the Truman Show delusion as a culturally-specific symptom of schizophrenia
- New photo examples of people with depression, bipolar disorder, and, schizophrenia
- Psych for Your Life application on understanding and helping to prevent suicide updated with new statistics

CHAPTER 15, THERAPIES

- Terminology revised throughout to reflect DSM-5 criteria and diagnostic labels
- Streamlined discussion of short-term dynamic therapies
- Updated In Focus box on virtual reality therapy for phobias and posttraumatic stress disorder
- Discussion of EMDR and exposure therapies moved into main text, in retitled section "Systematic Desensitization and Exposure Therapies"
- Updated 2013 and 2014 research on token economies and contingency management therapies
- Discussion of Albert Ellis's work updated to note "rational-emotive therapy" now renamed "rational-emotive behavior therapy"
- Updated coverage of cognitive therapy
- Updated section "Cognitive-Behavioral Therapy and Mindfulness-Based Therapies," including 2014 research on the use of cognitive-behavioral therapy with clients with schizophrenia to help treat psychotic symptoms
- New In Focus box, "Increasing Access: Meeting the Need for Mental Health Care," introduces the role of paraprofessionals and lay counselors worldwide, plus technology-driven solutions
- Expanded and updated discussion, "Evaluating the Effectiveness of Psychotherapy," includes criteria to evaluate new therapies
- Updated research on antipsychotic medications
- New Critical Thinking box, "Do Antidepressants Work Better Than Placebos?", examines the effectiveness of antidepressants
- New discussions of the experimental use of MDMA to treat anxiety disorders and PTSD and of ketamine to treat major depressive disorder, incorporating 2014 research
- All-new Focus on Neuroscience, "Psychotherapy and the Brain," presents research comparing the effect of antidepressant and psychotherapy treatment on brain activity in people with major depressive disorder
- Updated research on electroconvulsive therapy
- Expanded Psych for Your Life application, "What to Expect in Psychotherapy," including helpful guidance on how to find a qualified psychotherapist
- New photo examples of Native American healing, transcranial magnetic stimulation, mindfulness-based stress reduction, and technology-based solutions to expanding access to mental health care

JOE SONGER/AL.COM/Landov

Transcranial Magnetic Stimulation
Tammy, an Alabama woman suffering from depression, receives Transcranial Magnetic Stimulation (TMS) under the oversight of a nurse. TMS involves stimulating brain regions with magnetic pulses. Tammy is able to receive this noninvasive treatment in her doctor's office as opposed to in a hospital.

APPENDIX B: INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

- New photo examples of matching job and applicant, differing work styles, and teleworking

Features of *Psychology*

For all that is new in the seventh edition, we were careful to maintain the unique elements that have been so well received in the previous editions. Every feature and element in our text was carefully developed and serves a specific purpose. From comprehensive surveys, input from reviewers, and our many discussions with faculty and students, we learned what elements people wanted in a text and why they thought those features were important tools that enhanced the learning process. We also surveyed the research literature on text comprehension, student learning, and memory. In the process, we acquired many valuable insights from the work of cognitive and educational psychologists. Described below are the main features of *Psychology* and a discussion of how these features enhance the learning process.

The Narrative Approach

As you'll quickly discover, our book has a very distinctive voice. From the very first page of this text, the reader comes to know us as people and teachers through carefully selected stories and anecdotes. Some of our friends and relatives have also graciously allowed us to share stories about their lives. The stories are quite varied—some are funny, others are dramatic, and some are deeply personal. All of them are true.

The stories we tell reflect one of the most effective teaching methods: the *narrative approach*. In addition to engaging the reader, each story serves as a pedagogical springboard to illustrating important concepts and ideas. Every story is used to connect new ideas, terms, and ways of looking at behavior to information with which the student is already familiar.

> Associate the new with the old in some natural and telling way, so that the interest, being shed along from point to point, fully suffuses the entire system of objects. . . . Anecdotes and reminiscences [should] abound in [your] talk; and the shuttle of interest will shoot backward and forward, weaving the new and the old together in a lively and entertaining way.
>
> *—William James, Talks to Teachers (1899)*

Prologues

As part of the narrative approach, every chapter begins with a **Prologue,** a true story about ordinary people with whom most students can readily identify. The Prologue stories range from the experiences of a teenager with Asperger's Syndrome to people struggling with the aftereffects of a devastating wildfire to the story of a man who regained his sight after decades of blindness. Each Prologue effectively introduces the chapter's themes and lays the groundwork for explaining why the topics treated by the chapter are important. The Prologue establishes a link between familiar experiences and new information—a key ingredient in facilitating learning. Later in the chapter, we return to the people and stories introduced in the Prologue, further reinforcing the link between familiar experiences and new ways of conceptualizing them.

Logical Organization, Continuity, and Clarity

As you read the chapters in *Psychology,* you'll see that each one tells the story of a major topic in a logical way that flows continually from beginning to end. Themes are clearly established in the first pages of the chapter. Throughout the chapter, we come back to those themes as we present subtopics and specific research studies. Chapters are thoughtfully organized so that students can easily see how ideas are connected. The writing is carefully paced to maximize student interest and comprehension. Rather than simply mentioning terms and findings, we explain concepts clearly. And we use concrete analogies and everyday examples, rather than vague or flowery metaphors, to help students grasp abstract concepts and ideas.

Paradoxically, one of the ways that we maintain narrative continuity throughout each chapter is through the use of in-text boxes. The boxes provide an opportunity to explore a particular topic in depth without losing the narrative thread of the chapter. The **In Focus** boxes do just that—they focus on interesting topics in more depth than the chapter's organization would allow. These boxes highlight interesting research, answer questions that students commonly ask, or show students how

psychological research can be applied in their own lives. The seventh edition of *Psychology* includes the following In Focus boxes:

- Traumatic Brain Injury: From Concussions to Chronic Traumatic Encephalopathy, p. 54
- Do Pheromones Influence Human Behavior?, p. 103
- What You Really Want to Know About Sleep, p. 141
- What You Really Want to Know About Dreams, p. 152
- Watson, Classical Conditioning, and Advertising, p. 190
- Evolution, Biological Preparedness, and Conditioned Fears: What Gives You the Creeps?, p. 195
- Changing the Behavior of Others: Alternatives to Punishment, p. 202
- Déjà-Vu Experiences: An Illusion of Memory?, p. 246
- H.M. and Famous People, p. 262
- Does a High IQ Score Predict Success in Life?, p. 293
- Neurodiversity: Beyond IQ, p. 298
- Detecting Lies, p. 333
- Everything You Wanted to Know About Sexual Fantasies, p. 424
- Hooking Up on Campus, p. 425
- Explaining Those Amazing Identical-Twin Similarities, p. 470
- Interpersonal Attraction and Liking, p. 493
- Providing Effective Social Support, p. 553
- Gender Differences in Responding to Stress: "Tend-and-Befriend" or "Fight-or-Flight?", p. 557
- Using Virtual Reality to Treat Phobia and Posttraumatic Stress Disorder, p. 628
- Increasing Access: Meeting the Need for Mental Health Care, p. 638
- Servant Leadership: When It's Not All About You, p. B-10
- Name, Title, Generation, p. B-11

Scientific Emphasis

Many first-time psychology students walk into the classroom operating on the assumption that psychology is nothing more than common sense or a collection of personal opinions. Clearly, students need to walk away from an introductory psychology course with a solid understanding of the scientific nature of the discipline. To help you achieve that goal, in every chapter we show students how the scientific method has been applied to help answer different kinds of questions about behavior and mental processes.

Because we carefully guide students through the details of specific experiments and studies, they develop a solid understanding of how scientific evidence is gathered and the interplay between theory and research. And because we rely on original rather than secondary sources, students get an accurate presentation of both classic and contemporary psychological studies.

One unique way that we highlight the scientific method in *Psychology* is with our trademark **Science Versus Pseudoscience** boxes. In these boxes, students see the importance of subjecting various claims to the standards of scientific evidence. These boxes promote and encourage scientific thinking by focusing on topics that students frequently ask about in class. The seventh edition of *Psychology* includes the following Science Versus Pseudoscience boxes:

- What Is a Pseudoscience?, p. 20
- Phrenology: The Bumpy Road to Scientific Progress, p. 61
- Brain Myths, p. 77
- Subliminal Perception, p. 89
- Can a DVD Program Your Baby to Be a Genius?, p. 366
- Graphology: The "Write" Way to Assess Personality?, p. 473

Critical Thinking Emphasis

Another important goal of *Psychology* is to encourage the development of critical thinking skills. To that end, we do not present psychology as a series of terms, definitions, and facts to be skimmed and memorized. Rather, we try to give students an understanding of how particular topics evolve. In doing so, we also demonstrate the process of challenging preconceptions, evaluating evidence, and revising theories based on new evidence. In short, every chapter shows the process of psychological research—and the important role played by critical thinking in that enterprise.

Because we do not shrink from discussing the implications of psychological findings, students come to understand that many important issues in contemporary psychology are far from being settled. Even when research results are consistent, how to interpret those results can sometimes be the subject of considerable debate. As the authors of the text, we very deliberately try to be evenhanded and fair in presenting both sides of controversial issues. In encouraging students to join these debates, we often challenge them to be aware of how their own preconceptions and opinions can shape their evaluation of the evidence.

Beyond discussions in the text proper, every chapter includes one or more **Critical Thinking** boxes. These boxes are carefully designed to encourage students to think about the broader implications of psychological research—to strengthen and refine their critical thinking skills by developing their own positions on questions and issues that don't always have simple answers. Each Critical Thinking box ends with two or three questions that you can use as a written assignment or for classroom discussion. The seventh edition of *Psychology* includes the following Critical Thinking boxes:

- How to Think Like a Scientist, p. 31
- "His" and "Her" Brains?, p. 72
- ESP: Can Perception Occur Without Sensation?, p. 112
- Is Hypnosis a Special State of Consciousness?, p. 158
- Is Human Freedom Just an Illusion?, p. 204
- Does Exposure to Media Violence *Cause* Aggressive Behavior?, p. 219
- The Memory Wars: Recovered or False Memories?, p. 254
- The Persistence of Unwarranted Beliefs, p. 284
- Has Evolution Programmed Us to Overeat?, p. 322
- Emotion in Nonhuman Animals: Laughing Rats, Silly Elephants, and Smiling Dolphins?, p. 338
- The Effects of Child Care on Attachment and Development, p. 388
- Gender Differences: Women in Science, Technology, Engineering, and Mathematics Fields, p. 406
- Freud Versus Rogers on Human Nature, p. 459
- Freud Versus Bandura on Human Aggression, p. 463
- Abuse at Abu Ghraib: Why Do Ordinary People Commit Evil Acts?, p. 510
- Do Personality Factors Cause Disease?, p. 550
- Are People with a Mental Illness as Violent as the Media Portray Them?, p. 568
- Does Smoking Cause Major Depressive Disorder and Other Psychological Disorders?, p. 588
- Do Antidepressants Work Better Than Placebos?, p. 654

F. Carter Smith/Bloomberg via Getty Images

Pursuing Equality in Science An international study found no overall difference in science abilities between boys and girls. Despite this, fewer women than men pursue careers in science. Scientist Hayat Sindi is working to change that. Born in Saudi Arabia, Hayat Sindi earned a doctorate in biotechnology from the University of Cambridge in the United Kingdom. She co-founded a company, Diagnostics for All, that aims to introduce inexpensive technologies to diagnose diseases in the developing world. And she works toward equality in science by empowering women and Arabs through another organization she founded, the Institute for Imagination and Ingenuity (Broomhall, 2012).

Cultural Coverage

As you can see in Table 1 on the following page, we weave cultural coverage throughout many discussions in the text. But because students are usually unfamiliar with cross-cultural psychology, we also highlight specific topics in **Culture and Human Behavior** boxes. These boxes increase student awareness of the importance of culture in many areas of human experience. They are unique in that they go beyond simply describing cultural differences in behavior. They show students how

TABLE 1

Integrated Cultural Coverage

In addition to the topics covered in the Culture and Human Behavior boxes, cultural influences are addressed in the following discussions.

Page(s)	Topic	Page(s)	Topic
12	Cross-cultural perspective in contemporary psychology	301	IQ and cross-cultural comparison of educational differences
12	Culture, social loafing, and social striving	304–305	Rapid gains in IQ scores in different nations
51	Effect of traditional Chinese acupuncture on endorphins	305–306	Cross-cultural studies of group discrimination and IQ
102	Cross-cultural research on the language of smell in non-Western groups	307	Role of culture in tests and test-taking behavior
108	Cross-cultural research on effects of ethnicity and culture on pain perception	317–318	Culture's effect on food preference and eating behavior
127–128	Use of acupuncture in traditional Chinese medicine for pain relief	321	Role of globalization in the increase of obesity in developing countries worldwide
160–162	Meditation in different cultures	322	Rates of sedentary lifestyles worldwide
162	Research collaboration between Tibetan Buddhist monks and Western neuroscientists	323	Obesity rates in cultures with different levels of economic development
165	Racial and ethnic differences in drug metabolism rate	329	Culture and achievement motivation
165	Cultural norms and patterns of drug use	331	Culturally universal emotions
165	Differences in alcohol use by U.S. ethnic groups	331–332	Culture and emotional experience
170–171	Tobacco and caffeine use in different cultures	331–332	Cross-cultural research on gender and emotional expressiveness
173	Peyote use in religious ceremonies in other cultures	334	Cross-cultural studies of psychological arousal associated with emotions
174	Medicinal use of marijuana in ancient China, Egypt, India, and Greece	334	Cross-cultural research on association of different emotions with different physical sensations
174–175	Rave culture and drug use in Great Britain and Europe	338–340	Universal facial expressions
204	Clash of B. F. Skinner's philosophy with American cultural ideals and individualistic orientation	338–340	Culture, cultural display rules, and emotional expression
218–220	Cross-cultural application of observational learning principles in entertainment-education programming in Mexico, Latin America, Asia, and Africa	362	Cross-cultural research on co-sleeping
239–240	Cross-cultural research on the tip-of-the-tongue phenomenon	363	Cultural influences on temperament
287	Spontaneous development of sign languages in a Nicaraguan school and a Bedouin village as cross-cultural evidence of innate human predisposition to develop language	363	Cross-cultural studies of attachment
288	Estimated rate of bilingualism worldwide	365	Native language and infant language development
291–292	Historical misuse of IQ tests to evaluate immigrants	365	Cross-cultural research on infant-directed speech
292	Wechsler's recognition of the importance of culture and ethnicity in developing the WAIS intelligence test	365	Culture and patterns of language development
296–297	Role of culture in Gardner's definition and theory of intelligence	373	Influence of culture on cognitive development
297–300	Role of culture in Sternberg's definition and theory of intelligence	379	Cultural influences on timing of adolescent romantic relationships

cultural influences shape behavior and attitudes, including the students' own behavior and attitudes. The seventh edition of *Psychology* includes the following Culture and Human Behavior boxes:

- What Is Cross-Cultural Psychology?, p. 13
- Ways of Seeing: Culture and Top-Down Processes, p. 114
- Culture and the Müller-Lyer Illusion: The Carpentered-World Hypothesis, p. 126
- Culture's Effects on Early Memories, p. 237
- The Effect of Language on Perception, p. 286
- Performing with a Threat in the Air: How Stereotypes Undermine Performance, p. 304
- Where Does the Baby Sleep?, p. 362

Page(s)	Topic
383	Culture and moral reasoning
394	Cultural differences in the effectiveness of different parenting styles
402	Culture's influence on gender and gender roles
402	Gender stereotypes in different cultures
404–405	Cross-cultural research on gender differences in emotional expression
406	Cross-cultural research on cognitive differences between the sexes
411–412	Cultural differences in mate preferences
414	Role of culture in the expression of gender
431–434	Prevalence rates of AIDS among different ethnic and racial groups in the United States and in different societies worldwide
443–445	Freud's impact on Western culture
444–445	Cultural influences on Freud's psychoanalytic theory
453–454	Cultural influences on Jung's personality theory
454	Jung on archetypal images, including mandalas, in different cultures
454–455	Cultural influences on the development of Horney's personality theory
459	Rogers on cultural factors in the development of antisocial behavior
467	Cross-cultural research on the universality of the five-factor model of personality
486–487	Cultural conditioning and the "what is beautiful is good" myth
490	Attributional biases in individualistic versus collectivistic cultures
493	Cultural differences in interpersonal attraction
496–499	Stereotypes, prejudice, and group identity
500	Use of IAT to study social preferences and stereotypes worldwide
501	Application of lessons from Robbers Cave and jigsaw classroom to reduce prejudice and conflict among ethnic and religious groups worldwide
509	Cross-cultural comparisons of destructive social influence
510–511	Role of cultural differences in abuse at Abu Ghraib prison in Iraq
518–519	Culture and aggression
521	Cultural influences on social loafing and social striving
534	Cross-cultural research on life events and stress
537–538	Cultural differences as source of stress
547	Cross-cultural research on the benefits of perceived control
558–559	Effect of culture on coping strategies
567	Role of culture in distinguishing between normal and abnormal behavior
569	Description of the World Health Organization's *International Classification of Diseases*
570–571	Global rates of mental illness
571	Cultural differences in rates of mental health treatment
575	Cultural variants of panic disorder
576	Taijin kyofusho, a culture-specific disorder related to social phobia
578–579	PTSD in children living in a war zone in the Middle East and in child soldiers in Uganda and Congo
581	Cultural influences in obsessions and compulsions
592–593	Culture-bound syndromes
592	Western cultural ideals of beauty and prevalence rates of eating disorders
597	Cultural differences in rates of borderline personality disorder
598	Role of culture in dissociative experiences
604–605	Cultural variations in schizophrenia symptoms
605	Prevalence and differences in outcome of schizophrenia in different cultures
610–611	Findings from the Finnish Adoptive Family Study of Schizophrenia
622	Use of interpersonal therapy to treat depression in Uganda
638–639	Mechanisms for increasing access to mental health care worldwide
644–645	Impact of cultural differences on effectiveness of psychotherapy
647	Efficacy of traditional herbal treatment for psychotic symptoms in India

- The Outward Display of Gender, p. 414
- Explaining Failure and Murder: Culture and Attributional Biases, p. 490
- The Stress of Adapting to a New Culture, p. 538
- Culture-Bound Syndromes, p. 592
- Cultural Values and Psychotherapy, p. 645

Gender Coverage

Gender influences and gender differences are described in many chapters. Table 2 on the following page shows the integrated coverage of gender-related issues and topics in *Psychology*. To help identify the contributions made by female researchers, the full

TABLE 2

Integrated Gender Coverage

Page(s)	Topic	Page(s)	Topic
4–5	Titchener's inclusion of female graduate students in his psychology program in the late 1800s	406-407	Women in science, technology, engineering, and mathematics fields
6	Contributions of Mary Whiton Calkins to psychology	407	Gender differences in sexual attitudes and behaviors
6–7	Contributions of Margaret Floy Washburn to psychology	408–410	Gender differences in childhood behavior
58–59	Endocrine system and effects of sex hormones	410–413	Development of gender identity and gender roles
72	Sex differences and the brain	410–413	Theories of gender-role development
97	Gender differences in incidence of color blindness	410–415	Gender-identity development in Freud's psychoanalytic theory
103	Gender differences in responses to human chemosignals (pheromones)	417	Sex differences in the pattern of human sexual response
107	Gender differences in the perception of pain	417–418	Sex differences in hormonal influences on sexual motivation
148	Gender differences in dream content	424	Gender differences in sexual fantasies
149	Gender and nightmare frequency	425–427	Gender differences in sexual behavior
152	Gender differences in driving while sleepy and traffic accidents related to sleepiness	428	Gender differences in rates of sexual problems
153–155	Gender differences in incidence of insomnia and other sleep disorders	450–451	Freud's contention of gender differences in resolving the Oedipus complex
167	Gender and rate of metabolism of alcohol	453	Sexual archetypes (anima, animus) in Jung's personality theory
167	Gender and binge drinking among college students	454–455	Horney's critique of Freud's view of female psychosexual development
184	Women as research assistants in Pavlov's laboratories	457	Critique of sexism in Freud's theory
305	Test performance and the influence of gender stereotypes	493	Gender similarities and differences in interpersonal attraction
304–305	Language, gender stereotypes, and gender bias	496	Misleading effect of gender stereotypes
322	Gender differences in sedentary lifestyles	506–507	Gender similarities in results of Milgram's obedience studies
323	Gender differences in metabolism	518–519	Gender and aggression
332	Gender and emotional experience	535–536	Gender differences in frequency and source of daily hassles
340	Gender similarities and differences in experience and expression of emotion	552–553	Gender differences in susceptibility to the stress contagion effect
340	Gender differences in cultural display rules and emotional expression	552–553	Gender differences in providing social support and effects of social support
355	Sex differences in genetic transmission of recessive characteristics	557	Gender differences in responding to stress—the "tend-and-befriend" response
375–376	Gender differences in timing of the development of primary and secondary sex characteristics	570	Gender bias as one critique of DSM-5
377	Gender and accelerated puberty in father-absent homes	573	Gender differences in prevalence of anxiety, posttraumatic stress, and obsessive-compulsive disorders
378	Gender differences in effects of early and late maturation	576	Gender differences in prevalence of specific phobias
383	Gender differences in moral reasoning	576	Gender differences in prevalence of social phobias
385	Average age of first marriage and higher education attainment	578	Gender differences in prevalence of posttraumatic stress disorder
386	Gender differences in single-parent, head-of-household status	584	Gender differences in prevalence of major depressive disorder
386	Gender differences in response to end of reproductive capabilities	586	Lack of gender differences in prevalence of bipolar disorder
386–389	Gender and patterns of career development and parenting responsibilities	590	Gender differences in prevalence of eating disorders
389	Gender differences in life expectancy	596	Gender differences in incidence of antisocial personality disorder
401	Definitions of gender and gender role	597	Gender differences in incidence of borderline personality disorder
401–407	Gender stereotypes and gender roles	607	Paternal age and incidence of schizophrenia
404	Gender differences in personality	612	Gender differences in number of suicide attempts and in number of suicide deaths
404	Gender differences in emotionality	659	Gender differences in sexual contact between therapists and clients
405-406	Cognitive differences in males and females	B-12	Gender differences in reasons for wanting to telecommute

names of researchers are provided in the References section at the end of the text. When researchers are identified using initials instead of first names (as APA style recommends), many students automatically assume that the researchers are male.

Neuroscience Coverage

Psychology and neuroscience have become intricately intertwined. Especially in the last decade, the scientific understanding of the brain and its relation to human behavior has grown dramatically. The imaging techniques of brain science—PET scans, MRIs, and functional MRIs—have become familiar terminology to many students, even if they don't completely understand the differences between them. To reflect that growing trend, we have increased our neuroscience coverage to show students how understanding the brain can help explain the complete range of human behavior, from the ordinary to the severely disturbed. Each chapter contains one or more **Focus on Neuroscience** discussions that are designed to complement the broader chapter discussion. Here is a complete list of the Focus on Neuroscience features in the seventh edition:

- Psychological Research Using Brain Imaging, p. 32
- Mapping the Pathways of the Brain, p. 62
- Juggling and Brain Plasticity, p. 63
- Vision, Experience, and the Brain, p. 95
- The Sleep-Deprived Emotional Brain, p. 146
- The Dreaming Brain, p. 148
- Meditation and the Brain, p. 163
- The Addicted Brain: Diminishing Rewards, p. 166
- How Methamphetamines Erode the Brain, p. 173
- Mirror Neurons: Imitation in the Brain, p. 217
- Assembling Memories: Echoes and Reflections of Perception, p. 258
- Mapping Brain Changes in Alzheimer's Disease, p. 264
- Seeing Faces and Places in the Mind's Eye, p. 274
- Dopamine Receptors and Obesity, p. 324
- Emotions and the Brain, p. 336
- The Adolescent Brain: A Work in Progress, p. 376
- Boosting the Aging Brain, p. 391
- Romantic Love and the Brain, p. 423
- The Neuroscience of Personality: Brain Structure and the Big Five, p. 469
- Brain Reward When Making Eye Contact with Attractive People, p. 488
- The Mysterious Placebo Effect, p. 544
- The Hallucinating Brain, p. 602
- Schizophrenia: A Wildfire in the Brain, p. 609
- Psychotherapy and the Brain, p. 653

Tom Barrick, Chris Clark, SGHMS/Science Source

Psych for Your Life

Among all the sciences, psychology is unique in the degree to which it speaks to our daily lives and applies to everyday problems and concerns. The **Psych for Your Life** feature at the end of each chapter presents the findings from psychological research that address a wide variety of problems and concerns. In each of these features, we present research-based information in a form that students can use to enhance everyday functioning. As you can see in the following list, topics range from improving self-control to overcoming insomnia:

- Successful Study Techniques, p. 36
- Maximizing Your Brain's Potential, p. 79

- Strategies to Control Pain, p. 127
- Overcoming Insomnia, p. 176
- Using Learning Principles to Improve Your Self-Control, p. 222
- Ten Steps to Boost Your Memory, p. 266
- A Workshop on Creativity, p. 308
- Turning Your Goals into Reality, p. 346
- Raising Psychologically Healthy Children, p. 393
- Reducing Conflict in Intimate Relationships, p. 438
- Possible Selves: Imagine the Possibilities, p. 478
- The Persuasion Game, p. 523
- Minimizing the Effects of Stress, p. 560
- Understanding and Helping to Prevent Suicide, p. 612
- What to Expect in Psychotherapy, p. 658

The Pedagogical System

The pedagogical system in *Psychology* was carefully designed to help students identify important information, test for retention, and learn how to learn. It is easily adaptable to an SQ3R approach, for those instructors who have had success with that technique. As described in the following discussion, the different elements of this text form a pedagogical system that is very student-friendly, straightforward, and effective.

We've found that it appeals to diverse students with varying academic and study skills, enhancing the learning process without being gimmicky or condescending. A special student preface titled **To the Student** on pages xlviii to li, immediately before Chapter 1, describes the complete pedagogical system and demonstrates how students can make the most of it.

The pedagogical system has four main components: (1) Advance Organizers, (2) Concept Reviews, (3) Chapter Reviews, and (4) LaunchPad for *Psychology,* Seventh Edition. Major sections are introduced by an **Advance Organizer** that identifies the section's *Key Theme* followed by a bulleted list of *Key Questions*. Each Advance Organizer mentally primes the student for the important information that is to follow and does so in a way that encourages active learning. Students often struggle with trying to determine what's important to learn in a particular section or chapter. As a pedagogical technique, the Advance Organizer provides a guide that directs the student toward the most important ideas, concepts, and information in the section. It helps students identify main ideas and distinguish them from supporting evidence and examples.

The **Concept Reviews** encourage students to review and check their learning at appropriate points in the chapter. As you look through the text, you'll see that the Concept Reviews vary in format. They include multiple-choice, matching, short-answer, and true-false questions. Many of the Concept Reviews are interactive exercises that help students transfer their learning to new situations or examples.

Several other in-chapter pedagogical aids support the Advance Organizers and Concept Reviews. A clearly identified **Chapter Outline** provides an overview of topics and organization. Within the chapter, **key terms** are set in boldface type and defined in the margin. *Pronunciation guides* are included for difficult or unfamiliar words. Because students often have trouble identifying the most important theorists and researchers, names of **key people** are set in boldface type within the chapter. We also provide a page-referenced list of key people and key terms at the end of each chapter.

Multimedia to Support Teaching and Learning

LaunchPad with LearningCurve Quizzing

A comprehensive Web resource for teaching and learning psychology, LaunchPad combines Worth Publishers' awarding-winning media with an innovative platform for easy navigation. For students, it is the ultimate online study guide with rich interactive tutorials, videos, e-Book, and the LearningCurve adaptive quizzing system. For instructors, LaunchPad is a full-course space where class documents can be posted, quizzes are easily assigned and graded, and students' progress can be assessed and recorded. Whether you are looking for the most effective study tools or a robust platform for an online course, LaunchPad is a powerful way to enhance your class. You can preview LaunchPad to accompany *Psychology* at www.launchpadworks.com

Psychology and LaunchPad can be ordered together with ISBN-10: 1-319-01709-6
ISBN-13: 978-1-319-01709-5

LaunchPad for *Psychology* includes all the following resources:

- The **LearningCurve** quizzing system was designed based on the latest findings from learning and memory research. It combines adaptive question selection, immediate and valuable feedback, and a game-like interface to engage students in a learning experience that is unique to them. Each LearningCurve quiz is fully integrated with other resources in LaunchPad through the Personalized Study Plan, so students will be able to review with Worth's extensive library of videos and activities. And state-of-the-art question-analysis reports allow instructors to track the progress of individual students as well as their class as a whole.
- The **interactive e-Book** allows students to highlight and bookmark the text, and to make their own notes, just as they would with a consumable printed textbook.
- **Think Like a Scientist** activities, authored by Susan Nolan and Sandy Hockenbury, place students in real-world scenarios, asking them to think critically about scientific claims in the world around them. These active learning exercises combine video, audio, text, and assessment to help students hone and develop the scientific literacy skills they will use well beyond the introductory course.
- **Concept Practice,** created by award-winning multimedia author Thomas Ludwig (Hope College), helps students solidify their understanding of key concepts. With these in-depth tutorials, students explore a variety of important topics, often in an experimental context in the role of either researcher or subject. Tutorials combine animations, video, illustrations, and self-assessment.
- **PsychSim 6.0,** thoroughly re-imagined and retooled for the mobile web, is the new release of *PsychSim* by Thomas Ludwig (Hope College), using interactive videos, charts, and simulations to immerse students in the world of psychological research and placing them in the role of scientist or subject in activities that highlight important concepts, processes, and experimental approaches.
- **Video Activities** include more than 100 engaging video modules that instructors can easily assign and customize for student assessment. Videos cover classic experiments, current news footage, and cutting-edge research, all of which are sure to spark discussion and encourage critical thinking.
- **Labs** offer interactive experiences that fortify the most important concepts and content of introductory psychology. In these activities, students participate in classic and contemporary experiments, generating real data and reviewing the broader implications of those findings. A virtual host makes this a truly interactive experience.

- The ***Scientific American*** **News Feed** delivers weekly articles, podcasts, and news briefs on the very latest developments in psychology from the first name in popular science journalism.
- **Deep integration** is available between LaunchPad products and Blackboard, Brightspace by D2L, Canvas, and Moodle. These deep integrations offer educators single sign-on and gradebook sync now with auto-refresh. Also, these best-in-class integrations offer deep linking to all Macmillan digital content at the chapter and asset level, giving professors ultimate flexibility and customization capability within their LMS.

Instructor Supplements, Videos, and Presentation Resources

- The **Instructor's Resource Manual** was prepared by Heather Jennings of Mercer County Community College, with past contributions from Edna Ross, University of Louisville; Skip Pollock, Mesa Community College; Claudia Cochran-Miller, El Paso Community College; Beth Finders, St. Charles Community College; Beverly Drinnin, Des Moines Area Community College; Wayne Hall, San Jacinto College—Central Campus; Nancy Melucci, Los Angeles Community College District; Paul DeMarco, University of Louisville; Julie Gurner, Community College of Philadelphia; Anne McCrea, Sinclair Community College; and Rachel Rogers, Community College of Rhode Island. Arranged topically rather than by chapter for this edition, the Instructor's Resource Manual includes an abundance of materials to aid instructors in planning their courses, including classroom demonstrations and activities, student exercises, advice on teaching the nontraditional student, popular video suggestions, and "Psychology in the News" topics. The lecture guides contain chapter objectives and outlines and suggestions on how to approach your lecture.
- The **Downloadable Diploma Computerized Test Bank** was written by Don and Sandra Hockenbury with the assistance of Cornelius Rea. This edition's test bank was expertly revised by Mark Hurd, College of Charleston, and Natalie Ceballos, Texas State University. This enhanced Test Bank includes over 6,000 multiplechoice, true-false, and short-answer essay questions, plus Learning Objectives for each chapter that correspond to those in the Instructor's Resource Manual. Each question is referenced to the textbook and keyed to a learning objective and an APA learning outcome. Available for both Windows and Macintosh, the Test Bank files can be downloaded at http://macmillanhighered.com/Catalog/product/psychology-seventhedition-hockenbury. Diploma is versatile dual-platform test-generating software that allows instructors to edit, add, or scramble questions from the *Psychology,* Seventh Edition Test Bank and to format tests, drag and drop questions to create quizzes quickly and easily, and then print them for an exam. The computerized Test Bank will also allow instructors to export into a variety of formats that are compatible with many Internet-based testing products. For more information on Diploma, please visit Wimba's Web site: http://www.wimba.com/products/diploma
- **Interactive Presentation Slides** are another great way to introduce Worth's dynamic media into the classroom without lots of advance preparation. Each presentation covers a major topic in psychology and integrates Worth's high-quality videos and animations for an engaging teaching and learning experience. These interactive presentations are complementary to adopters of *Psychology* and are perfect for technology novices and experts alike.
- The **Video Anthology for Introductory Psychology** includes over 150 unique video clips to bring lectures to life. Provided free of charge to adopters of *Psychology,*

this rich collection includes clinical footage, interviews, animations, and news segments that vividly illustrate topics across the psychology curriculum.

- The **i>Clicker Classroom Response System** is a versatile polling system developed by educators and for educators that makes class time more efficient and interactive. i>Clicker allows you to ask questions and instantly record your students' responses, take attendance, and gauge students' understanding and opinions. i>Clicker is available at a 10% discount when packaged with *Psychology*.

Acknowledgments

Many talented people contributed to this project. First, thanks to Elissa S. Epel, University of California, San Francisco, for her expert advice on the section on telomeres and stress. We would also like to acknowledge the efforts of our supplements team that created materials specifically devoted to our book. Our thanks to:

- **Cornelius Rea,** who taught for many years at Simon Fraser University and Douglas College, and currently has a consulting business in West Vancouver, British Columbia, Canada, for once again writing a very effective student Study Guide.
- **Heather Jennings** at the Mercer County Community College for preparing a comprehensive and substantially revised Instructor's Resources.
- **Paul DeMarco,** University of Louisville; **Julie Gurner,** Community College of Philadelphia; **Anne McCrea,** Sinclair Community College; and **Rachel Rogers,** Community College of Rhode Island for contributing activities to the Instructor's Resources.
- **Mark Hurd,** College of Charleston, and **Natalie Ceballos,** Texas State University, for carefully updating the test bank for this edition.
- **Claudia Cochran-Miller** at El Paso Community College and **Marie Waung** at the University of Michigan at Dearborn for their exceptional appendix on industrial/organizational psychology.
- **Marie D. Thomas** at California State University, San Marcos, for updating the student-friendly statistics appendix.

As colleagues who care as much as we do about teaching, they have our gratitude for their hard work and commitment to excellence.

We are indebted to our colleagues who acted as reviewers throughout the development of the seventh edition of *Psychology*. Their thoughtful suggestions and advice helped us refine and strengthen this edition.

To our February 2013 Introductory Psychology Symposium attendees, we are indebted to you for your input and guidance:

- **Jim Cuellar,** Indiana University
- **Paul DeMarco,** University of Louisville
- **Jerry Green,** Tarrant County College
- **Raymond Kilduff,** Community College of Rhode Island
- **Tera Letzring,** Idaho State University
- **Dan Muhwezi,** Butler Community College
- **Brian Parry,** Colorado Mesa University
- **Edna Ross,** University of Louisville
- **Laura Sherrick,** Front Range Community College

To our Hockenbury, Nolan & Hockenbury Advisory Board, thank you for your feedback, reviews, and ideas. Your contributions have influenced the seventh edition greatly:

Sherry J. Ash, San Jacinto Community College
Rosenna Bakari, Des Moines Area Community College
Thomas Baker, University of Texas, San Antonio
Shirley A. Bass-Wright, St. Philip's College
Andrea Brown, Montgomery College, Rockville
Sabrina Brown, Pearl River Community College
Kate Byerwalter, Grand Rapids Community College
Jessica K. Carpenter, Elgin Community College
Jenel T. Cavazos, Cameron University
Barbara Corbisier, Blinn College
Ronald E. Diehl, Sinclair Community College
Daniel J. Dickman, Ivy Tech Community College, Evansville
Stan Friedman, Texas State University
Carrie Hall, Miami University
John Haworth, Chattanooga State University
Richard Helms, Central Piedmont Community College
Cynthia Ingle, Bluegrass Community & Technical College
Brandon J. Jablonski, Sinclair Community College
Joan B. Jensen, Central Piedmont Community College
Richard Kandus, Mt. St. Jacinto College
Jennifer S. Lee, Cabrillo College
Elsa Mason, College of Southern Nevada
Stefanie Mitchell, San Jacinto Community College
John Raacke, Fort Hays State University
Vicki Ritts, St. Louis Community College at Meramec
Mahbobeh Yektaparast, Central Piedmont Community College
A. Clare Zaborowski, San Jacinto Community College

The remarkable people who make up Worth Publishers have a well-earned reputation for producing college textbooks and supplements of the highest quality. Special thanks to our publisher, Rachel Losh, for her enthusiasm, creativity, humor, and unfailing support of our project, always with a smile. Rachel, we couldn't have done it without you! We have already greatly benefited from the energy and insights of our new executive acquisitions editor, Daniel McDonough, and welcome him to our team. Next up is our developmental editor, Marna Miller (aka "Wonder Woman") whose talent, dedication, and unflappable good humor are truly remarkable. Marna is more than "just" a gifted editor—she is a wonderful human being. Thanks also go to assistant editor Katie Garrett and editorial assistant Kimberly Morgan who expertly and cheerfully kept track of countless details, stacks of paper, and electronic files. The incredible new design for the seventh edition reflects the creative talents of senior design manager Vicki Tomaselli. We never cease to be impressed by designer Charles Yuen's ability to create the seamless interaction of text, graphics, boxes, and features that you see on every page of *Psychology.* The stunning graphics of this edition represent the combined talents of illustrator Todd Buck, art manager Matthew McAdams, photo editor Christine Buese, and photo researcher Jacqueline Wong, whose creative efforts to find just the right image are greatly appreciated.

By any standard, director of editing, design, and media production for the sciences and social sciences Tracey Kuehn is an unbelievably talented and dedicated person. For the last six editions, Tracey's expertise, creativity, and delightful sense of humor have kept our project—and us—on track. Managing editor Lisa Kinne effectively tackled and resolved the inevitable problems that accompany a project of this complexity.

Our heartfelt thanks also to Barbara Seixas who coordinated a bewildering array of technical details to bring the book to press.

Perhaps the greatest unsung heroes in college textbook publishing are the supplements and media editors. At Worth Publishers, those editors work tirelessly to set the standard by which all other publishers are judged. With conscientious attention to a multitude of details, media editor Lauren Samuelson has expertly assembled the integrated program of print, video, and Internet supplements that accompanies our text. Lauren also coordinated the development of the Think Like a Scientist digital activities with creativity, expertise, and enthusiasm.

Psychology marketing manager Lindsay Johnson helped launch the seventh edition with her expertly coordinated advertising, marketing, and sales support efforts.

A few personal acknowledgements are in order. Several friends and family members kindly allowed us to share their stories with you. Sadly, Fern, Erv, and Ken are no longer with us, but they live on in our memories, as well as in the personal stories that we continue to tell about them. Sandy and Don deeply miss Fern and Erv's unflagging support, and the kindness, love, and seemingly endless supply of funny stories that we so relied on over the years of writing and revising the six previous editions of *Psychology* and *Discovering Psychology*. We are grateful to James and to Gene Fischer for connecting us with him, and to our good friends Andi, Hawk, and Wyncia; Asha and Paul; Tom and Lynn, and their children, Will, and Lily; and especially Marcia, for allowing us to tell their stories in our book. Sandy would also like to thank Bruce, Kat, Maureen, Alison, and Steve for their openhearted presence and companionship on the path. Last but surely not least, Sandy and Don's daughter Laura has lived with this project since birth. Laura, thank you for your idealism, your generous spirit, and for being true to yourself.

Susan is immensely grateful to her husband, Ivan Bojanic, and their families—the Nolan and Bojanic clans—for their love and support, and for patiently enduring endless tales of fascinating psychology research. She also thanks Tom Heinzen for instigating her passion for writing psychology textbooks, and Andrew Giachetti, Marjorie Levinstein, Katherine Moen, Ally Reeves, and Inga Schowengerdt, for their invaluable research assistance. Susan thanks, too, her Seton Hall colleagues as well as the many students whose reactions to the material covered in the Introduction to Psychology class have shaped her teaching and writing. Finally, Susan is indebted to Seton Hall Department of Psychology secretary, Willie Yaylaci, for her generous help and support throughout the writing of this edition.

An Invitation

We hope that you will let us know how you and your students like the seventh edition of *Psychology*. And, as always, we welcome your thoughts, comments, and suggestions. You can write to us in care of Worth Publishers, 41 Madison Avenue, 35th Floor, New York, NY 10010, or contact us via e-mail at: **Hockenbury.Psychology@gmail.com.**

Above all, we hope that your class is an enjoyable and successful one as you introduce your students to the most fascinating and personally relevant science that exists.

TO THE STUDENT

Learning from *Psychology*

Welcome to psychology! Our names are **Sandy Hockenbury, Susan Nolan,** and **Don Hockenbury**, and we're the authors of your textbook. Every semester, we teach several sections of introductory psychology. We wrote this text to help you succeed in the class you are taking. Every aspect of this book has been carefully designed to help you get the most out of your introductory psychology course. Before you begin reading, you will find it well worth your time to take a few minutes to familiarize yourself with the special features and learning aids in this book.

Learning Aids in the Text

KEY THEME

You can enhance your chances for success in psychology by using the learning aids that have been built in to this textbook.

KEY QUESTIONS

- What are the functions of the Prologue, "Myth or Science?" questions, Advance Organizers, Key Terms, Key People, and Concept Reviews?
- What are the functions of the different types of boxes in this text, and why should you read them?
- Where can you go to access a virtual study guide at any time of the day or night, and what study aids are provided?

First, read and think about the "Myth or Science?" questions at the beginning of each chapter. These questions reflect common ideas about some of the topics we'll cover. How many of these statements have you heard before? In the course of reading the chapter you'll find out which statements are popular myths—and which are actually true and based on scientific evidence.

Next, take a look at the **Chapter Outline** at the beginning of each chapter. The Chapter Outline provides an overview of the main topics that will be covered in the chapter. You might also want to flip through the chapter and browse a bit so you have an idea of what's to come.

Then, read the chapter **Prologue.** The Prologues are true stories about real people. Some of the stories are humorous, some dramatic. We think you will enjoy this special feature, but it will also help you to understand the material in the chapter that follows and why the topics are important and relevant to your life. In each chapter, we return to the people and stories introduced in the Prologue to illustrate important themes and concepts.

As you begin reading the chapter, you will notice several special elements. **Major Sections** are easy to identify because the heading is in orange type. The beginning of each major section also includes an **Advance Organizer**—a short section preview that looks like the one above.

The **Key Theme** provides you with a preview of the material in the section to come. The **Key Questions** will help you focus on some of the most important material in the section. Keep the questions in mind as you read the section. They will help you identify important points in the chapter. After you finish reading each section, look again at the Advance Organizer. Make sure that you can confidently answer each question before you go on to the next section. If you want to maximize your understanding of the material, write out the answer to each question. You can also use the questions in the Advance Organizer to aid you in taking notes or in outlining chapter sections, both of which are effective study strategies.

Notice that some terms in the chapter are printed in **boldface,** or darker, type. Some of these key terms may already be familiar to you, but most will be new. The darker type signals that the term has a specialized meaning in psychology. Each key term is formally defined within a sentence or two of being introduced. The key terms are also defined in the margins, usually on the page on which they appear in the text. Some key terms include a **pronunciation guide** to help you say the word correctly.

Occasionally, we print words in *italic type* to signal either that they are boldfaced terms in another chapter or that they are specialized terms in psychology.

Certain names also appear in boldface type. These are the **key people**—the researchers or theorists who are especially important within a given area of psychological study. Typically, key people are the psychologists or other researchers whose names your instructor will expect you to know.

A **Concept Review** appears several times in every chapter. The Concept Reviews contain exercises that allow you to check your understanding of important information. Answer the questions by filling in the blanks or by circling the correct answer. Then check your work against the correct answers provided at the end of each chapter.

You'll also notice notations at the end of major sections inviting you to › Test your understanding with ***LEARNING***Curve. This notation signals that the material you have just finished reading is covered by a comprehensive quiz in LaunchPad. (You can find instructions on how to access LaunchPad in the section titled "LaunchPad for *Psychology* 7e" on the next page.)

In the margins of every chapter, you will find callouts directing you to LaunchPad activities. Some of these LaunchPad activities expand upon topics introduced in the text, while others will help you review and better comprehend the text's information. Many of the activities incorporate video footage or simulations, but all of them were chosen for their relevance to the chapter material.

Another special feature is the **Think Like a Scientist** digital activity, which you will also find in LaunchPad. These activities were created by your authors to help you develop your scientific thinking skills. Each activity provides an interactive, fun, and interesting activity to apply what you've learned to a new topic or claim. Whenever you see a Think Like a Scientist callout in the margin of your textbook, check out the activity to explore questions like "Can you learn to tell when someone is lying?" and "Do you have psychic powers?"

LaunchPad

Worth Publishers

Think you're good at paying attention? Try **Video Activity: Attention.**

Can you learn to tell when someone is lying? Go to LaunchPad: Resources to **Think Like a Scientist** about **Lie Detection.**

LaunchPad

Reviewing for Examinations

The **Chapter Review** at the end of each chapter includes several elements to help you review what you have learned. The chapter's **key points** are summarized and bulleted under each major section heading. All the chapter's **key people** and **key terms** are listed, along with the pages on which they appear and are defined. The key terms are also boldfaced in the chapter summary so you can see their use in context. You can check your knowledge of the key people by describing in your own words why each scientist is important. You will also want to define each key term in your own words, then compare your definition to information on the page where it is discussed.

Special Features in the Text

Each chapter in *Psychology* has several boxes that focus on different kinds of topics. Take the time to read the boxes because they are an integral part of each chapter. They also present important information that you may be expected to know for class discussion or tests. There are five types of boxes:

- **Critical Thinking** boxes ask you to stretch your mind a bit by presenting issues that are provocative or controversial. They will help you actively question the implications of the material that you are learning.

- **Science Versus Pseudoscience** boxes examine the evidence for various popular pseudosciences—from subliminal persuasion to *Baby Einstein* videos and graphology. These discussions will help teach you how to think scientifically and to critically evaluate claims in many different fields—not just psychology.
- **Culture and Human Behavior** boxes are another special feature of this text. Many students are unaware of the importance of cross-cultural research in contemporary psychology. These boxes highlight cultural differences in thinking and behavior. They will also sensitize you to the ways in which people's behavior, including your own, has been influenced by cultural factors.
- **In Focus** boxes present interesting information or research. Think of them as sidebar discussions. They deal with topics as diverse as human pheromones, whether animals dream, and why snakes and spiders give so many people the creeps.
- **Focus on Neuroscience** sections provide clear explanations of intriguing studies that use brain-imaging techniques to study psychological processes. Among the topics that are highlighted: schizophrenic hallucinations, mental images, drug addiction, and romantic love and the brain.

The **Psych for Your Life** section at the end of each chapter provides specific suggestions to help apply chapter information to help you deal with real-life concerns. These suggestions are based on psychological research, rather than opinions, anecdotes, or pop psych self-help philosophies.

Especially important is the Psych for Your Life section at the end of Chapter 1, which provides a list of research-based study techniques that you can use to help you succeed in psychology and other courses as well. In addition, the Psych for Your Life sections for Chapters 5, 6, and 8 deal with setting and achieving goals and enhancing motivation and memory, so you may want to skip ahead and read them after you finish this To the Student section. We hope that all of the Psych for Your Life sections make a difference in your life.

There are two special appendices at the back of the text. The **Statistics: Understanding Data** appendix discusses how psychologists use statistics to summarize and draw conclusions from the data they have gathered. The **Industrial/Organizational Psychology** appendix describes the branch of psychology that studies human behavior in the workplace. Your instructor may assign one or both of these appendices, or you may want to read them on your own.

Also at the back of this text is a **Glossary** containing the definitions for all **key terms** in the book and the pages on which they are discussed in more detail. You can use the **Subject Index** to locate discussions of particular topics and the **Name Index** to locate particular researchers. Finally, interested students can look up the specific studies we cite in the **References** sections.

LAUNCHPAD FOR *PSYCHOLOGY,* SEVENTH EDITION

Get the most out of *Psychology,* Seventh Edition with **LaunchPad,** which combines an interactive e-Book with high-quality multimedia content and activities that give you immediate feedback on your performance. Throughout the book you will see callouts that signal you to go to LaunchPad to access this online content.

- **Fully Interactive e-Book:** The LaunchPad e-Book for *Psychology,* Seventh Edition comes with powerful study tools. You can search, highlight, and bookmark, making it easier to study.
- **Multimedia content:** Access videos, simulations, tutorials, and Think Like a Scientist activities that help you understand and master the material.
- **LearningCurve:** These game-like quizzes adapt to what you already know and help you master the concepts you need to learn.

To learn more about LaunchPad for *Psychology,* Seventh Edition or to request access, go to www.launchpadworks.com.

That's it! We hope you enjoy reading and learning from the seventh edition of *Psychology.* If you want to share your thoughts or suggestions for the next edition of this book, you can write to us at the following address:

Sandy Hockenbury, Susan Nolan, and Don Hockenbury
c/o Worth Publishers
41 Madison Avenue, 35th Floor
New York, NY 10010

Or you can contact us at our e-mail address:

Hockenbury.Psychology@gmail.com

Have a great semester!

MYTH OR SCIENCE?

Is it true . . .

- That the field of psychology primarily focuses on treating people with psychological problems and disorders?
- That Sigmund Freud was the first psychologist?
- That when two behaviors are "linked," "related," or tend to occur together, it's safe to assume that one behavior caused the other?
- That reading something over and over again is not the most effective way to prepare for a test?
- That psychologists can trick you into taking part in a study?
- That brain scans can pinpoint the exact, single part of the brain that causes a complex behavior?

(inset) wavebreakmedia/Shutterstock
(bkgrd) Steve Cukrov/Shutterstock

Introduction and Research Methods

The First Exam

PROLOGUE

YOU DON'T NEED TO BE A PSYCHOLOGIST to notice that the classroom atmosphere can be a little tense the day after the first exam. As we handed back the test results, several faces fell. Many of the students were freshmen and not yet accustomed to the self-paced learning required in a college course. But there were also several older adults, including two military vets, one recently returned from Afghanistan.

"So let's go over these test questions," your author Sandy began. "I noticed a lot of you had trouble with the difference between independent and dependent variables. Maybe we should talk about that again before we go on to Chapter 2."

Jacob frowned. "I can't understand why I did so badly," he said. "I mean, I read the chapter! Look." He held up his textbook. The pages were heavily underlined and covered with highlight colors—yellow, blue, and green.

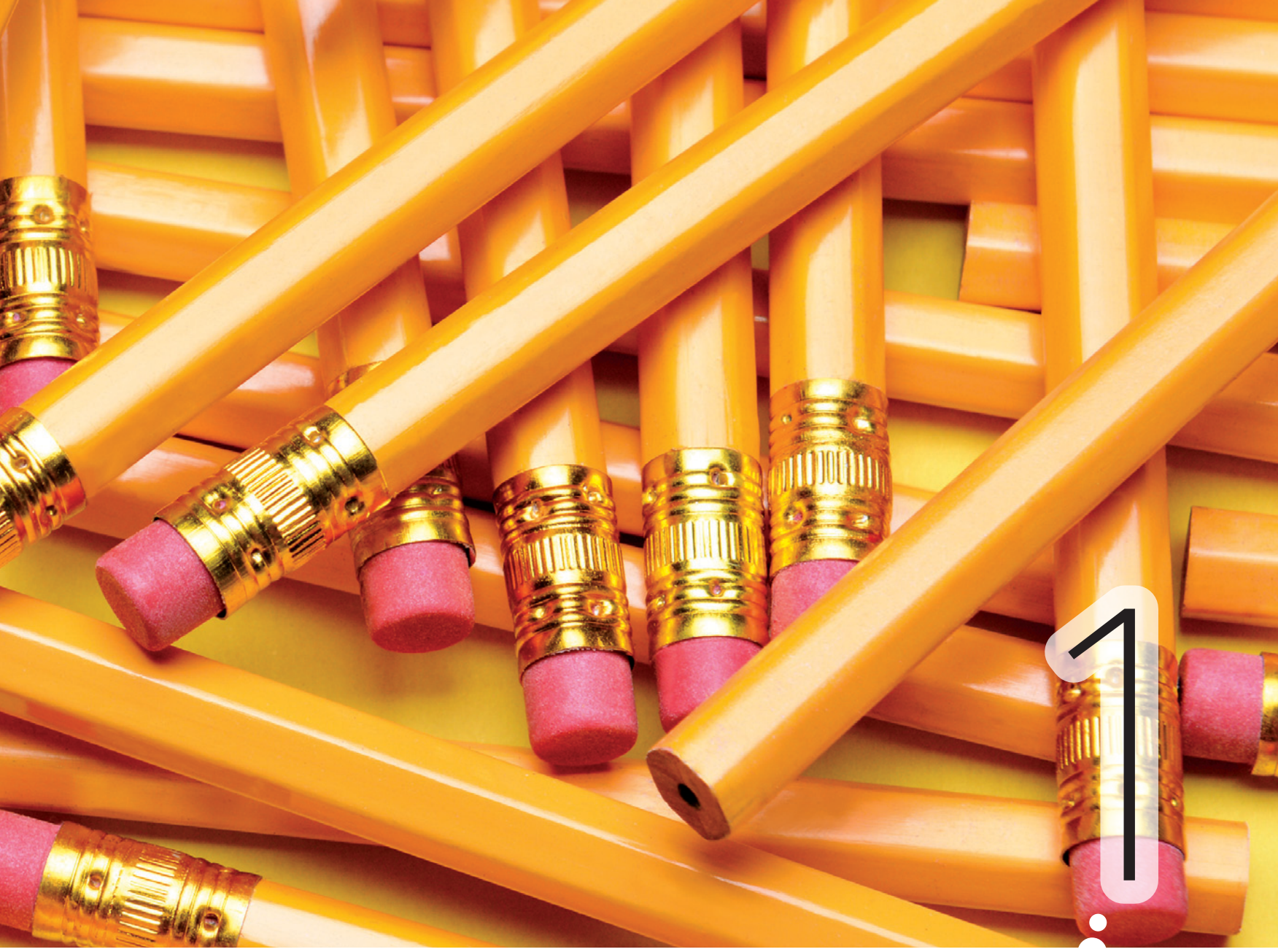
It isn't unusual for students to have trouble with their first real exam in college. Knowing that, we usually take some time to talk about study skills after exams are returned. "How did you prepare for the exam?" your author Susan asked the class.

"I made flashcards," Latisha said. "But it didn't seem to help that much. I only got a B-, and I thought I really knew this stuff."

"Flashcards can be a great technique," Sandy said, "if you use them correctly."

Latisha looked puzzled. "What do you mean? I used them the way everybody uses flashcards. I tested myself and if I knew the answer, I set the card aside. I kept running through the ones I missed until they were all gone and I knew them all."

"Well, believe it or not," Sandy said, "psychologists have done a lot of research on learning new material, and it turns out that that's *not* the most effective way to use flashcards."



1

"What is, then?" Latisha asked.

"Stay tuned," Sandy said with a smile. "We're going to talk about it in today's class."

Jenna broke in. "I always freeze on tests. They stress me out so bad my mind goes blank."

"I do too," Tyler piped up. "So my girlfriend gave me this bracelet to wear for exams. She swears by hers. Do you think it helps?"

"What is that?" Sandy said. Tyler handed the heavy metal bracelet to Sandy. "What's it supposed to do?"

"It's made of some kind of special metal—maybe titanium?" Tyler said. "It's magnetic. Oh, and the Web site said it generated a negative ion field, or maybe it neutralizes positive ions. It didn't make a whole lot of sense to me. But my girlfriend said that a lot of famous baseball players and golfers wear one. It's supposed to help with pain but it's also supposed to help you concentrate and give you a better memory. I figured it couldn't hurt, so why not try it?"

"I'm not aware of any research on using magnets for concentration or memory," Sandy said carefully. "But we can certainly look it up and let you know what we find out."

Later in the chapter, we'll share what we found out about magnetic jewelry—and more important, what psychologists have discovered about

IN THIS CHAPTER:

- **INTRODUCTION:** What Is Psychology?
- Contemporary Psychology
- The Scientific Method
- Descriptive Research
- Experimental Research
- Ethics in Psychological Research
- Closing Thoughts
- **PSYCH FOR YOUR LIFE:** Successful Study Techniques