

PSYCHOLOGY

Fifth Edition

A group of people, possibly dancers, are captured in a dark room. They are illuminated by a warm, orange light that creates a blurred, ethereal effect. The figures are overlapping and their movements are captured in a way that suggests a sense of motion and depth. The overall mood is mysterious and artistic.

Schacter | Gilbert | Nock | Wegner



LaunchPad for *Psychology*, Fifth Edition

Available February 2020 at launchpadworks.com

Each chapter in LaunchPad for *Psychology*, Fifth Edition, features a collection of activities carefully chosen to help master the major concepts. The site serves students as a comprehensive online study guide, available any time, with opportunities for self-quizzing with instant feedback, exam preparation, and further explorations of topics from the textbook. For instructors, all units and activities can be instantly assigned and students' results and analytics are collected in the Gradebook.

LaunchPad macmillan learning

Brian H ▾ Help ▾ Feedback

< MENU **Schacter/Gilbert/Nock/Wegner, Psychology, Fifth Edition** Search Course 🔍

UNIVERSITY OF ARIZONA | Instructor: Brian Holchhalter | Course: 303 | Section: 101

You have 2 assignments due in the next 7 days

Assignments: 4 [Show past due](#)

▶ Chapter 08.	Emotion and Motivation	March 7 - 14	●
▶ Chapter 09.	Language and Thought	March 24	●
▶ Chapter 10.	Intelligence	April 15	
▶ Chapter 11.	Development	April 25	

Unassigned [Hide](#) [+ Add New](#) [+ Add from Resources](#)

▶ Chapter 01.	Evolution of Psychological Science
▶ Chapter 02.	Methods in Psychology
▶ Chapter 03.	Neuroscience and Behavior
▶ Chapter 04.	Sensation and Perception

Schacter et al., *Psychology*, 5e, © 2020 Worth Publishers

For Students

- Full e-book of *Psychology*, Fifth Edition
- LearningCurve Quizzing

- Student Video Activities
- Data Visualization Activities
- Concept Practice Activities
- PsychSim 6.0 by Thomas Ludwig and John Krantz

For Instructors

- Gradebook
- Presentation Slides
- iClicker Questions
- Chapter Figures and Photos
- Correlation of *Psychology*, Fifth Edition, to APA Learning Goals
- Correlation of *Psychology*, Fifth Edition, to MCAT Topics

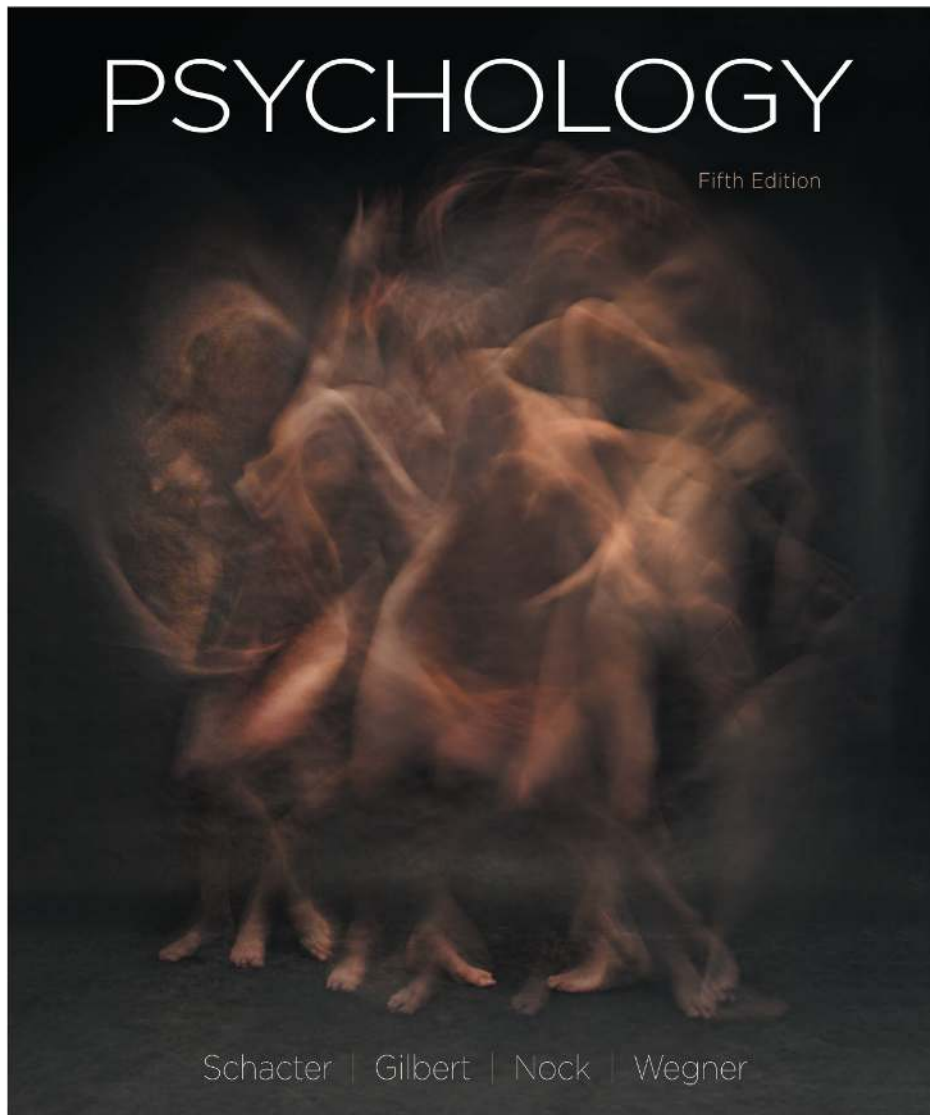


PHOTO BY BILL WADMAN

The cover of our first edition featured a man caught in mid-jump, hovering slightly above the ground. The second edition featured two people in checkered leotards tumbling together. The third edition featured a trio of airborne dancers, and the fourth edition featured a quartet. Each time, we chose a photograph that struck us as elegant and mysterious. What we didn't fully realize was that we were creating a tradition, because the number of figures on our covers always corresponded to the number of the edition. So this time we knew we needed an exquisite piece of five-figured art, and when we came across this photograph by Bill Wadman, we instantly knew we'd found it. Five dancers appear to be joined in motion, creating an entity that is more than the sum of its parts; and yet, as it turns out, the five dancers are really one dancer whom Wadman captured at five moments in time. Our species is a collection of individuals who are themselves a collection of moments, and this photograph seems to embody that deep truth. Plus, it's just gorgeous. We are delighted to feature it on the cover of our fifth edition.

PSYCHOLOGY

PSYCHOLOGY

5e

DANIEL L. SCHACTER

Harvard University

DANIEL T. GILBERT

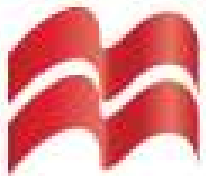
Harvard University

MATTHEW K. NOCK

Harvard University

DANIEL M. WEGNER

Harvard University



worth publishers

Macmillan Learning

New York

Senior Vice President, Content Strategy: Charles Linsmeier
Program Director: Shani Fisher
Executive Program Manager: Daniel DeBonis
Senior Development Editor: Valerie Raymond
Editorial Assistant: Nicholas Rizzuti
Executive Marketing Manager: Katherine Nurre
Marketing Assistant: Chelsea Simens
Director of Media Editorial and Assessment: Noel Hohnstine
Media Editor: Stefani Wallace
Media Project Manager: Joseph Tomasso
Director, Content Management Enhancement: Tracey Kuehn
Senior Managing Editor: Lisa Kinne
Senior Content Project Manager: Vivien Weiss
Project Manager: Jana Lewis, Lumina Datamatics, Inc.
Senior Workflow Project Supervisor: Susan Wein
Design Services Manager: Natasha Wolfe
Design Manager and Cover Designer: John Callahan
Interior Designer: Patrice Sheridan
Executive Permissions Editor: Robin Fadool
Photo Editor: Jennifer Atkins
Art Manager: Matthew McAdams
Illustrations: Eli Ensor, Matthew McAdams
Composition: Lumina Datamatics, Inc.
Cover Photographs: Bill Wadman

Library of Congress Control Number: 2019947605

ISBN-13: 978-1-319-24013-4 (epub)

Copyright © 2020, 2017, 2014, 2011 by Worth Publishers
All rights reserved

Worth Publishers

One New York Plaza

Suite 4600

New York, NY 10004-1562

www.macmillanlearning.com

Dedication

*We dedicate this edition to **Dan Wegner** — co-author, colleague, and friend. His brilliant ideas and beautiful words remain in our pages, and in our hearts. Ad perpetuam rei memoriam.*

ABOUT THE AUTHORS



COURTESY OF DANIEL SCHACTER

Daniel Schacter is William R. Kenan, Jr. Professor of Psychology at Harvard University. Dan received his BA degree from the University of North Carolina at Chapel Hill. He subsequently developed a keen interest in amnesic disorders associated with various kinds of brain damage. He continued his research and education at the University of Toronto, where he received his PhD in 1981. He taught on the faculty at Toronto for the next six years before joining the psychology department at the University of Arizona in 1987. In 1991, he joined the faculty at Harvard University. His research explores the relationship between conscious and unconscious forms of memory, the nature of distortions and errors in remembering, and the ways in which we use memory to imagine future events. Many of his studies are summarized in his 1996 book, *Searching for Memory: The Brain, the Mind, and the Past*, and his 2001 book, *The Seven Sins of Memory: How the Mind Forgets and Remembers*, both winners of the American Psychological Association's William James Book Award. He has also received awards for his teaching and research, including the Harvard-Radcliffe Phi Beta Kappa Teaching Prize, the Distinguished Scientific Contributions Award from the American Psychological Association, and the William James Fellow Award from the Association for Psychological Science for "a lifetime of significant intellectual contributions to the basic science of psychology." In 2013, he was elected to the National Academy of Sciences.



JOANNE GILBERT

Daniel Gilbert is the Edgar Pierce Professor of Psychology at Harvard University. Dan received his BA from the University of Colorado at Denver in 1981 and his PhD from Princeton University in 1985. He taught at the University of Texas at Austin, and in 1996 joined the faculty of Harvard University. He has received the Distinguished Scientific Award for an Early Career Contribution to Psychology from the American Psychological Association; the Diener Award for "outstanding contributions to social psychology" from the Foundation for Personality and Social Psychology; the Campbell Award for "distinguished scholarly achievement and sustained excellence in research in social psychology" from the Society for Personality and Social Psychology; and the William James Fellow Award for "a lifetime of significant intellectual contributions to the basic science of psychology" from the Association for Psychological Science. He teaches Introductory Psychology and has won teaching awards that include the Phi Beta Kappa Teaching Prize and the Harvard College Professorship. His research focuses on how and how well people think about their emotional reactions to future events. He is the author of the best seller *Stumbling on Happiness*, which won the Royal Society's General Prize for best

popular science book of the year, and the cowriter and host of the PBS television series *This Emotional Life*.



NICOLAS GUEVARA

Matthew Nock is the Edgar Pierce Professor of Psychology at Harvard University. Matt received his BA from Boston University in 1995 and his PhD from Yale University in 2003. He completed his clinical internship at Bellevue Hospital and the New York University Child Study Center, and then joined the faculty of Harvard University in 2003. While an undergraduate, he became interested in understanding why people do things to intentionally harm themselves, and he has been conducting research to answer that question ever since. His research is multidisciplinary and uses a wide range of methodological approaches (e.g., epidemiologic surveys, laboratory-based experiments, and clinic-based studies) to understand how these behaviors develop, how to predict them, and how to prevent their

occurrence. He has received many teaching awards at Harvard, as well as four Early Career awards recognizing his research. In 2011 he was named a MacArthur Fellow.



THE FAMILY OF DANIEL WEGNER

Daniel Wegner was the John Lindsley Professor of Psychology in Memory of William James at Harvard University. He received his BS in 1970 and his PhD in 1974, both from Michigan State University. He began his teaching career at Trinity University in San Antonio, Texas, before joining the faculties at the University of Virginia in 1990 and then Harvard University in 2000. He received the Distinguished Scientific Contributions Award from the American Psychological Association, the William James Fellow Award for “a lifetime of significant intellectual contributions to the basic science of psychology” from the Association for Psychological Science, and the Distinguished Scientist Award from the Society of Experimental Social Psychology. His research focused on thought suppression and mental

control, transactive memory in relationships and groups, and the experience of conscious will. His work on thought suppression and consciousness served as the basis of two popular books, *White Bears and Other Unwanted Thoughts* and the *Illusion of Conscious Will*, both of which were named *Choice* Outstanding Academic Books. He was a dedicated mentor, a popular teacher, and a cherished colleague and friend. Dan was diagnosed with ALS and died in 2013.

BRIEF CONTENTS

1 The Evolution of Psychological Science

2 Methods in Psychology

3 Neuroscience and Behavior

4 Sensation and Perception

5 Consciousness

6 Memory

7 Learning

8 Emotion and Motivation

9 Language and Thought

10 Intelligence

11 Development

12 Personality

13 Social Psychology

14 Stress and Health

15 Psychological Disorders

16 Treatment of Psychological Disorders

Glossary

References

Name Index

Subject Index

CONTENTS

Cover

Front Matter 1

Front Matter 2

Half Title Page

Title Page

Copyright

Dedication

About the Authors

Brief Contents

A Note to Students

A Note to Instructors

Acknowledgements



STORIEDEYE/ALAMY

1 The Evolution of Psychological Science

Psychology's Philosophical Roots

Dualism and Materialism

Realism and Idealism

Empiricism and Nativism

The Late 1800s: Toward a Science of the Mind

Structuralism: What Is the Mind Like?

Functionalism: What Is the Mind For?

OTHER VOICES: Is Psychology a Science?

The Early 1900s: Psychoanalysis and Behaviorism

Psychoanalysis: The Mind Does Not Know Itself

Behaviorism: The Mind Does Not Matter

The Early 1900s: Resistance to Behaviorism

Gestalt Psychology and Developmental Psychology

THE REAL WORLD: Beneath the Ocean of Memory

Social Psychology

The Late 1900s: The Cognitive Revolution

Cognitive Psychology

Evolutionary Psychology

After the Revolution

The Early 2000s: New Frontiers

Neuroscience

Cultural Psychology

A WORLD OF DIFFERENCE: To Have or Have Not

Becoming a Psychologist

Who Becomes a Psychologist?

How Do People Become Psychologists?

Chapter Review



BRUCE ROLFF/ALAMY

2 Methods in Psychology

Empiricism: How to Know Stuff

The Scientific Method

The Art of Looking

A WORLD OF DIFFERENCE: Are Heroes and Sheroes Divided by Zeroes?

Methods of Observation: Finding Out What People Do

Measurement

Description

Methods of Explanation: Figuring Out Why People Do What They Do

Correlation

Causation

HOT SCIENCE: Hate Posts and Hate Crimes: Not Just a Correlation

Drawing Conclusions

THE REAL WORLD: The Surprisingly High Likelihood of Unlikely Coincidences

Thinking Critically About Evidence

We See What We Expect and Want to See

We Don't Consider What We Don't See

The Skeptical Stance

The Ethics of Science: Doing What's Right

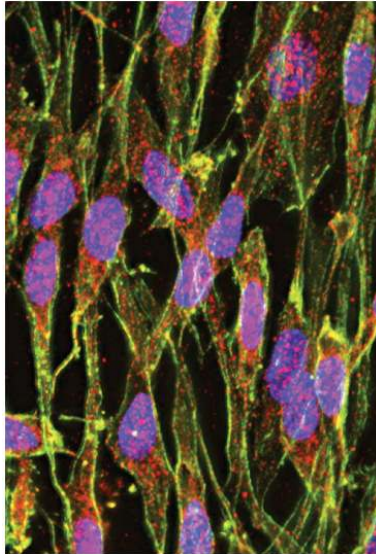
Respecting People

Respecting Animals

OTHER VOICES: Can We Afford Science?

Respecting Truth

Chapter Review



© SPL/SCIENCE SOURCE

3 Neuroscience and Behavior

Neurons: The Origin of Behavior

Components of the Neuron

Neurons Specialized by Function

Neurons Specialized by Location

The Electrochemical Actions of Neurons: Information Processing

Electric Signaling: Conducting Information Within a Neuron

Chemical Signaling: Transmission Between Neurons

The Organization of the Nervous System

Divisions of the Nervous System

Components of the Central Nervous System

THE REAL WORLD: The Power of Thought: Brain–Machine Interfaces

Structure of the Brain

The Hindbrain

The Midbrain

The Forebrain

A WORLD OF DIFFERENCE: Alzheimer’s Disease and the Hippocampus: Sex Differences

Brain Plasticity

The Adaptive Brain: Understanding Its Evolution

A Division Forms: Vertebrates and Invertebrates

Genes, Epigenetics, and the Environment

What Are Genes?

A Role for Epigenetics

The Role of Environmental Factors

Investigating the Brain

Studying the Damaged Brain

Studying the Brain's Electrical Activity

Using Brain Imaging to Study Structure and to Watch the Brain in Action

HOT SCIENCE: Big Brain, Smart Brain?

OTHER VOICES: Neuromyths

Chapter Review



PURESTOCK/GETTY IMAGES

4 Sensation and Perception

Sensation and Perception Are Distinct Activities

Sensory Energy and Transduction

The Illusion of Perception

Sensory Adaptation

Psychophysics

Measuring Thresholds

Signal Detection

THE REAL WORLD: Multitasking

Visual Pathways: Connections Between the Eye and the Brain

Sensing Light

Perceiving Color

The Visual Brain

Visual Perception: Recognizing What We See

Binding Individual Features into a Whole

Recognizing Objects by Sight

Perceptual Constancy and Contrast

A WORLD OF DIFFERENCE: The Dress

Perceiving Depth and Size

Perceiving Motion and Change

OTHER VOICES: Hallucinations and the Visual System

Hearing: More Than Meets the Ear

Sensing Sound

Perceiving Sound Sources

Hearing Loss

HOT SCIENCE: Big Technology in Little Ears

The Body Senses: More Than Skin Deep

Sensing Touch

Sensing Pain

Perceiving Pain

Body Position, Movement, and Balance

The Chemical Senses: Adding Flavor

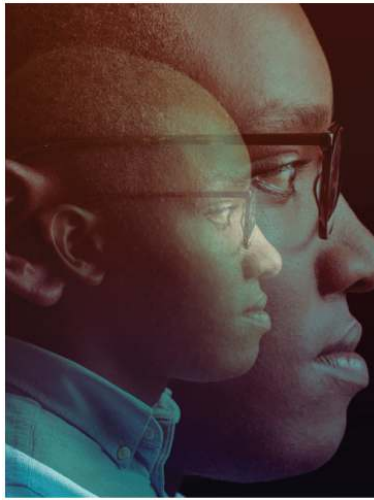
Sense of Smell

Perceiving Smell

Sense of Taste

Perceiving Flavor

Chapter Review



WESTEND61/GETTY IMAGES

5 Consciousness

The Mysteries of Consciousness

The Problem of Other Minds

The Mind–Body Problem

The Nature of Consciousness

Four Basic Properties

Levels of Consciousness

Conscious Contents

The Unconscious Mind

Freudian Unconscious

A Modern View of the Cognitive Unconscious

The Unconscious Mind: Smart or Not So Smart?

Sleep and Dreaming: Good Night, Mind

Sleep

Dreams

A WORLD OF DIFFERENCE: Dreaming Blind

Drugs and Consciousness: Artificial Inspiration

Drug Use and Addiction

Types of Psychoactive Drugs

THE REAL WORLD: Drugs and the Regulation of Consciousness

HOT SCIENCE: Why Is There an Opioid Epidemic and What Can We Do About It?

OTHER VOICES: A Judge’s Plea for Pot

Hypnosis: Open to Suggestion

Induction and Susceptibility

Hypnotic Effects

Chapter Review



IKON IMAGES/SCIENCE SOURCE

6 Memory

What Is Memory?

Encoding: Transforming Perceptions Into Memories

Semantic Encoding

Visual Imagery Encoding

Organizational Encoding

Encoding of Survival-Related Information

Storage: Maintaining Memories Over Time

Sensory Storage

Short-Term Storage and Working Memory

Long-Term Storage

HOT SCIENCE: Can Sleep Enhance Learning? Yes!

Memories, Neurons, and Synapses

Retrieval: Bringing Memories to Mind

Retrieval Cues: Reinstating the Past

Consequences of Retrieval

Separating the Components of Retrieval

Forms of Long-Term Memory: More Than One Kind

Implicit Memory

Explicit Memory: Semantic and Episodic

A WORLD OF DIFFERENCE: Do We All Reexperience Our Personal Pasts?

Collaborative Memory: Social Influences on Remembering

THE REAL WORLD: Is Google Hurting Our Memories?

Memory Failures: The Seven “Sins” of Memory

- 1. Transience**
- 2. Absentmindedness**
- 3. Blocking**
- 4. Memory Misattribution**

OTHER VOICES: Memories Inside Out

HOT SCIENCE: Déjà Vu: Can We Predict the Future?

- 5. Suggestibility**
- 6. Bias**
- 7. Persistence**

Are the Seven “Sins” Vices or Virtues?

Chapter Review



MARILYN NIEVES/GETTY IMAGES

7 Learning

What Is Learning?

Classical Conditioning: One Thing Leads to Another

The Basic Principles of Classical Conditioning

THE REAL WORLD: Understanding Drug Overdoses

Conditioned Emotional Responses: The Case of Little Albert

A Deeper Understanding of Classical Conditioning

Operant Conditioning: Reinforcements from the Environment

The Development of Operant Conditioning: The Law of Effect

B. F. Skinner: The Role of Reinforcement and Punishment

The Basic Principles of Operant Conditioning

A Deeper Understanding of Operant Conditioning

HOT SCIENCE: Dopamine and Reward Learning: From Parkinson's Disease to Gambling

Observational Learning: Look at Me

Observational Learning in Humans

Observational Learning in Animals

Neural Elements of Observational Learning

Implicit Learning: Under the Radar

Cognitive Approaches to Implicit Learning

A WORLD OF DIFFERENCE: Implicit Learning in Autism Spectrum Disorder

Implicit and Explicit Learning Use Distinct Neural Pathways

Learning in the Classroom

Techniques for Learning

Chapter Review

OTHER VOICES: Learning at Jiffy Lube University

Testing Aids Attention

Control of Learning



ECHO/GETTY IMAGES

8 Emotion and Motivation

The Nature of Emotion

The Emotional Mind

OTHER VOICES: Glad to be Mad?

The Emotional Body

The Emotional Brain

Emotional Communication

Communicative Expression

Deceptive Expression

A WORLD OF DIFFERENCE: Say Cheese

Lying

The Nature of Motivation

Instincts

Drives

The Hedonic Principle

The Motivated Body

Hunger

Eating Disorders

Obesity

THE REAL WORLD: Get It While You Can

HOT SCIENCE: This Is Your Brain on Goldfish

Sexual Desire

Sexual Behavior

The Motivated Mind

Intrinsic Versus Extrinsic

Conscious Versus Unconscious

Approach Versus Avoidance

Chapter Review



MURIEL DE SEZE/GETTY IMAGES

9 Language and Thought

Language and Communication: From Rules to Meaning

The Complex Structure of Human Language

Language Development

THE REAL WORLD: Exploring the 30-Million-Word Gap

Theories of Language Development

Language Development and the Brain

Broca's Area and Wernicke's Area of the Brain

Involvement of The Right Cerebral Hemisphere

Bilingualism and The Brain

Can Other Species Learn Human Language?

Language and Thought: How Are They Related?

Language and Color Processing: Differing Results

A WORLD OF DIFFERENCE: Language and Perception: Is There a Dominant Sense?

Was Whorf "Half Right"?

Concepts and Categories: How We Think

Psychological Theories of Concepts and Categories

Concepts, Categories, and the Brain

Decision Making: Rational and Otherwise

The Rational Ideal

The Irrational Reality

HOT SCIENCE: Can Framing Effects Make You Rich?

Why Do We Make Decision-Making Errors?

Decision Making and the Brain

Problem Solving: Working It Out

Means–Ends Analysis

Analogical Problem Solving

Creativity and Insight

Reasoning: Truth and Validity

Belief Bias

The Illusion of Truth

OTHER VOICES: Why Do People Fall for Fake News?

Chapter Review



CHRISTOPHER WILSON

10 Intelligence

How Can Intelligence Be Measured?

The Intelligence Quotient

The Intelligence Test

A WORLD OF DIFFERENCE: Equality in Smartland

What Is Intelligence?

A Hierarchy of Abilities

The Middle-Level Abilities

Where Does Intelligence Come From?

Genetic Influences on Intelligence

Environmental Influences on Intelligence

Gene–Environment Interactions

HOT SCIENCE: Brains Wide Open

Who Is Most Intelligent?

Individual Differences in Intelligence

Group Differences in Intelligence

THE REAL WORLD: Racism and Intelligence Testing

Improving Intelligence

OTHER VOICES: Not By Intelligence Alone

Chapter Review



JOHN LUND/GETTY IMAGES

11 Development

Prenatal: A Womb With a View

Prenatal Development

Prenatal Environment

Infancy and Childhood: Perceiving, Doing, and Thinking

Perceptual Development

Motor Development

Cognitive Development

A WORLD OF DIFFERENCE: That's the Dumbest Thing I Never Heard!

OTHER VOICES: Shut the Lights Off, Say No More

Infancy and Childhood: Bonding and Helping

Social Development

Moral Development

Adolescence: Minding the Gap

The Protraction of Adolescence

Emerging Sexuality

THE REAL WORLD: Coming to Terms with Ourselves

From Parents to Peers

Adulthood: Change We Can't Believe In

Changing Abilities

Changing Goals

HOT SCIENCE: There's No Time Like the Present

Changing Roles

Chapter Review



PEOPLEIMAGES/E+/GETTY IMAGES

12 Personality

Personality: What It Is and How It Is Measured

Describing and Explaining Personality

Measuring Personality

The Trait Approach: Identifying Patterns of Behavior

Traits as Behavioral Dispositions and Motives

The Search for Core Traits

HOT SCIENCE: Personality on the Surface

Traits as Biological Building Blocks

Gender Differences: Biology or Culture?

A WORLD OF DIFFERENCE: Do Males and Females Have Different Personality Traits?

The Psychodynamic Approach: Forces That Lie Beneath Awareness

The Structure of the Mind: Id, Ego, and Superego

The Humanistic–Existential Approach: Personality as Choice

Human Needs and Self-Actualization

Personality as Existence

The Social–Cognitive Approach: Personalities in Situations

Consistency of Personality Across Situations

Personal Constructs: The Key to the Perceiver’s Personality

THE REAL WORLD: Does Your Personality Change Depending on Who You’re With?

Personal Goals and Expectancies Lead to a Characteristic Style of Behavior

The Self: Personality in the Mirror

Self-Concept

Self-Esteem

Chapter Review



DAVID GILLIVER/BARCROFT MEDIA

13 Social Psychology

Interpersonal Behavior

Aggression

Cooperation

HOT SCIENCE: Partners in Crime

Altruism

A WORLD OF DIFFERENCE: Do Me a Favor?

Interpersonal Attraction

Selectivity

Attraction

Relationships

Interpersonal Perception

Stereotyping: The Problem with Category-Based Inferences

THE REAL WORLD: Does Perspective-Taking Work?

Attribution: The Problem With Target-Based Inferences

Interpersonal Influence

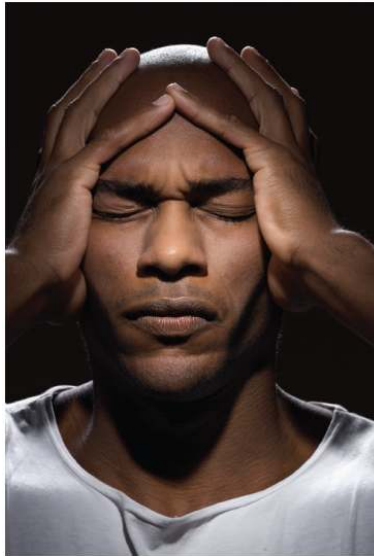
The Hedonic Motive

The Approval Motive

OTHER VOICES: 91% of Students Love This Box

The Accuracy Motive

Chapter Review



FOTOSEARCH/AGE FOTOSTOCK

14 Stress and Health

Sources of Stress: What Gets to You

Stressful Events

Chronic Stressors

A WORLD OF DIFFERENCE: Can Discrimination Cause Stress and Illness?

Perceived Control Over Stressful Events

Stress Reactions: All Shook Up

Physical Reactions

HOT SCIENCE: Stress, Health, and Money

Psychological Reactions

Stress Management: Dealing With It

Mind Management

Body Management

Situation Management

The Psychology of Illness: Mind Over Matter

Psychological Effects of Illness

Recognizing Illness and Seeking Treatment

THE REAL WORLD: This Is Your Brain on Placebos

Somatic Symptom Disorders

On Being a Patient

Patient–Practitioner Interaction

The Psychology of Health: Feeling Good

Personality and Health

Health-Promoting Behaviors and Self-Regulation

OTHER VOICES: The Dangers of Overparenting

Chapter Review



TREVOR WILLIAMS/GETTY IMAGES

15 Psychological Disorders

Defining Mental Disorders: What Is Abnormal?

Conceptualizing Mental Disorders

Classifying Disorders: The *DSM*

Disorders Appear in All Cultures

A WORLD OF DIFFERENCE: The Impact of Culture on Mental Disorders

Causation of Disorders

A New Approach to Understanding Mental Disorders: RDoC

THE REAL WORLD: How Are Mental Disorders Defined and Diagnosed?

Dangers of Labeling

Anxiety Disorders: Excessive Fear, Anxiety, and Avoidance

Phobic Disorders

Panic Disorder and Agoraphobia

Generalized Anxiety Disorder

Obsessive-Compulsive Disorder: Persistent Thoughts and Repetitive Behaviors

Posttraumatic Stress Disorder: Distress and Avoidance After a Trauma

Depressive and Bipolar Disorders: Extreme Highs and Lows

Depressive Disorders

Bipolar Disorder

Schizophrenia and Other Psychotic Disorders: Losing the Grasp on Reality

Symptoms and Types of Schizophrenia

OTHER VOICES: Successful and Schizophrenic

Biological Factors

Social/Psychological Factors

Disorders of Childhood and Adolescence

Autism Spectrum Disorder

Attention-Deficit/Hyperactivity Disorder

HOT SCIENCE: Optimal Outcome in Autism Spectrum Disorder

Conduct Disorder

Personality Disorders: Extreme Traits and Characteristics

Types of Personality Disorders

Antisocial Personality Disorder

Self-Harm Behaviors: Intentionally Injuring Oneself

Suicidal Behavior

Nonsuicidal Self-Injury

Chapter Review



LÍVIA FERNANDES-BRAZIL/
MOMENT SELECT/GETTY IMAGES

16 Treatment of Psychological Disorders

Treatment: Getting Help to Those Who Need It

Why Many People Fail to Seek Treatment

THE REAL WORLD: Types of Psychotherapists

Approaches to Treatment

Psychological Treatments: Healing the Mind Through Interaction

Psychodynamic Therapy

Humanistic and Existential Therapies

Behavioral and Cognitive Therapies

HOT SCIENCE: “Rebooting” Psychological Treatment

Group Treatments: Healing Multiple Minds at the Same Time

Biological Treatments: Healing the Mind by Physically Altering the Brain

Antipsychotic Medications

Antianxiety Medications

Antidepressants and Mood Stabilizers

Herbal and Natural Products

A WORLD OF DIFFERENCE: Differences in People’s Responses to Treatment

Combining Medication and Psychotherapy

OTHER VOICES: Diagnosis: Human

Biological Treatments Beyond Medication

Treatment Effectiveness: For Better or For Worse

Treatment Illusions

Treatment Studies: Seeking Evidence

Which Treatments Work According to the Evidence?

Chapter Review

Glossary

References

Name Index

Subject Index

Back Cover

A NOTE TO STUDENTS

Dear Student,

The world is full of mysteries—from stars to fossils, from quarks to cells. But for us, the greatest mystery has always been other people, and that’s what drew each of us into our first psychology course in college. What we remember about those courses is that we were blown away by the ideas we encountered and by the lectures we heard, but what we don’t remember are the textbooks. That’s probably because they were little more than jargon-filled encyclopedias of names and dates that we eagerly sold to some other unsuspecting sucker the moment we finished our final exams.

After we became psychology professors, we started to wonder why textbooks had to be like that. We decided they didn’t, so in 2008 we wrote the textbook that we wished we’d been given when we were students. The reaction to it was nothing short of astounding. We’d never written a textbook before, so we had no idea what to expect, but never in our wildest dreams did we imagine that we would end up winning *the Pulitzer Prize!*

Which was good, because we didn’t. But what actually happened was even better: We started getting e-mails from students all over the country who told us (with seeming surprise) that they actually *liked* reading our textbook. They liked the content, of course, because psychology is an inherently fascinating subject, but they liked some other things too. First, they liked the fact that our textbook didn’t *sound* like a textbook. It wasn’t written in the stodgy dad-voice of that guy who seems to be the narrator in every high school biology film ever made (“Behold the sea otter, nature’s furry little scavenger”). Rather, it was written in *our* voices—the same voices we use when we talk to our students, our friends, and our pets, which is why [Chapter 12](#) was originally titled “Stop Chewing My Shoes.” Students also liked the fact that we told the *story* of psychology—that we integrated topics rather than just listing them, that we illustrated ideas rather than just describing them, and that we made fun of ourselves and anyone else who didn’t run away fast enough. That kind of feedback is what’s kept us going for five editions.

Of course, a textbook has to do more than just tell an interesting and entertaining story. It also has to *help you learn*. That’s why in addition to all the stuff that novels, cookbooks, and owner’s manuals have—words and sentences, graphs and diagrams—textbooks also have features that are meant to help you understand and remember the material you’re reading. Designing these features requires a keen understanding of how human beings learn, and, as luck would have it, that’s one of the subjects on which psychologists happen to be experts. The features in our textbook all make use of basic principles of psychology. To introduce you to those features, we’ll start by giving you six tips for reading our textbook,

and then, after you've read those tips, we'll explain how our textbook's features will help you implement them.

Six Tips for Reading This Textbook

Reading just happens. You look at a printed page and your eyes instantly start to glide across it, turning black squiggles into words and sentences without any help from you. Unlike reading, understanding and remembering don't just happen, which is why you can read a sentence, look up, and ten seconds later have no freaking idea what you just read. (If that's happening now, please start this section over). Research shows that the best way to turn *reading* into *understanding and remembering* is to not just let reading happen but, rather, to take an active role in reading. Here are five ways to do that.

- **Rehearse.** No, we don't mean dress up and recite Shakespeare. In psychology, rehearsal simply means repeating information to yourself, and if you do it right, it turns out to be a remarkably useful way to memorize facts. For example, suppose you wanted to remember the name of the person who built the first psychology laboratory (which you will probably want to do when you read [Chapter 1](#)). First you might say something like “Wilhelm Wundt built the first psychology laboratory” a few times to yourself, wait a few seconds, then say it a few times again, wait even longer, then say it again, then ... well, you get the idea. By increasing the interval between rehearsals you will be making it a little bit harder to remember the fact each time—kind of like doing bench presses and adding increasing amounts of weight with each set of repetitions—and research shows that this is an effective way to commit information to memory.
- **Interpret.** Rehearsal is good for memorizing facts, but if you want to learn psychology, you're going to need to understand *ideas*. Research shows that one of the best ways to understand and remember ideas is to stop reading for a moment and *interpret* them—that is, to think about what they mean and how they relate to you. For example, suppose you wanted to learn the basic ideas behind behaviorism (which you will indeed want to do when you read [Chapter 7](#)). You will be tempted to read what we've written about behaviorism and move on, but you'd be better off pausing and asking yourself a question such as “How would a behaviorist explain my choice of college majors?” To answer this question, you will not only need to recall what you read about behaviorism, but you will also need to relate it to other things that you already know (e.g., that you struggled to decide whether you should major in psychology or in something your parents incorrectly told you was more important). It turns out that it is much easier to remember new information when you relate it to something with which you are already familiar.
- **Organize.** If someone asked you to memorize the words “Greet, Ask, Beg, Sign, Fold, Insert, Lick,” in that order, you might find it difficult—unless you noticed that these are the steps involved in composing a letter that asks for money and then mailing it to your parents. Organizing information in a meaningful way is one of the best methods for learning and remembering it, which is why after reading each chapter, you should try telling yourself its story. This doesn't just mean rehearsing the facts or interpreting the various ideas, but rather, it means linking them together and asking how one leads to the other.

- **Test.** You may be tempted to use a yellow highlighter as you read, and then to study by re-reading the material you highlighted. This is a mistake (especially if you have an electronic copy of the textbook) because as you re-read the highlighted material it will start to seem more and more familiar to you, and you will mistakenly assume that because the material is familiar, you know it pretty well. But the fact is that you only “know it” when you’re reading it! A much better way to learn is to *test yourself* on the material while you are *not* looking at the textbook. Better yet, study with someone else and test each other.
- **Space.** *When* should you do all this stuff? The wrong answer is “The night before the exam.” Research shows that you are much more likely to remember what you learn if you read a bit of the textbook every day and do these exercises while you’re reading. Cramming the night before an exam is not only a painful experience (as you might have guessed from the word *cramming*), it is also one of the very worst things you can do if you want to learn, remember what you’ve learned, and do well on an exam. Reading the textbook the night before is only slightly better than not reading it at all.
- **Sleep.** You already know that it’s a good idea to get plenty of sleep the night before an exam. But as you will discover in [Chapter 6](#), it is equally important to get plenty of sleep on the days that you do the study exercises we’ve just described. When you sleep, your brain rehearses information you encountered during the day, sifting through it, finding patterns in it, and storing it efficiently. Letting your brain “sleep on it” is nearly as important as having your brain “read it” in the first place.

Features That Help You Implement These Tips

So yes, those are six excellent pieces of advice. But how in the world are you supposed to remember them—or remember to use them? Don’t worry. We’ve got your back. Our textbook contains a variety of features that we specifically designed to help you implement these and other research-based learning strategies. In fact, we even wrote one really boring chapter just to help you sleep! (Kidding.)

For example, you’ll notice that every chapter is divided into a few major sections, and at the beginning of each major section are a set of **Learning Outcomes** that allow you to “be on the lookout” for key concepts as you are reading. This will help you organize the material in your mind—kind of like how knowing beforehand that Romeo and Juliet are star-crossed lovers can help you make sense of the play when you are watching it. Just as the Learning Outcomes tell you what to look for before you read, the **Build to the Outcomes** questions (which you’ll find at the end of each major section) help you decide whether you found what you were looking for. These questions will help you determine whether your reading has produced the level of understanding you should desire—and that your instructor will require! If not, then you can re-read the section, or find the information you missed in the **Chapter Review** that appears at the end of each chapter.

We’ve also built features to help you interpret the material you’re reading. For instance, at the end of each chapter, you will find a series of **Changing Minds** scenarios that describe everyday situations in which

misconceptions about human behavior arise, and that then ask you to use the chapter’s material to correct them. The **Data Visualization Activities** that are available in LaunchPad invite you to engage with the material by answering questions the way psychologists do—namely, by looking at data! Each activity presents an interactive graph that displays real data from a published study, followed by questions that allow you to test your understanding of the study as well as your ability to reason about the data. The **LearningCurve** adaptive quizzing system will also allow you to test yourself—and it will design quizzes just for you.

A Box of Words

You may have noticed that when people tell stories (“When I was in Rome this summer, I saw the Trevi Fountain, the Sistine Chapel, and the Colosseum”), they occasionally pause to tell you some related thing that they found especially interesting (“Did you know that in the 16th century, the Pope tried to turn the Colosseum into a wool factory?”). Then when they’re done, they pick up their story again. Well, every chapter in our textbook also tells a story, and once in a while we pause that story to tell you some related thing that we found especially interesting—not about Italian wool factories, but about psychology. The way you’ll know we’re pausing is that you will bump into a box of words. These boxes come in four flavors, and we’ve given each a name.

- One box is called **A World of Difference**. People differ in countless ways—by culture, gender, race, religion, age, wealth, sexual orientation, and a whole host of other differences. These sources of diversity influence just about everything people think, feel, and do, so in every chapter we pause our story to highlight one or more of them.
- A second box is called **Other Voices**. Long before psychologists appeared on earth, poets, pundits, playwrights, and philosophers were having insights into human nature. So we decided to invite some of them to share their insights with you. In every chapter, you will find a short essay by someone who thinks deeply, writes beautifully, and, most importantly, isn’t us.
- A third box is called **The Real World**. From rats in mazes to humans in brain scanners, a textbook can sometimes seem like a report from places that aren’t much like the place you live. That’s why in every chapter we have included a box that shows how the material you are reading can be applied to the stuff of everyday life—from dating to studying to going on a job interview.
- Finally, in every chapter you will bump into a box called **Hot Science**. When we wrote the last edition, Donald Trump was a real estate developer and no one had ever heard the phrase “me too,” which is to say that things change fast. That’s why in every chapter, we take a moment to share with you a brand-new scientific finding that has changed the way we think—and that might change the way you think as well.

Those are the features and those are the boxes and that’s probably enough for one preface. We could drone on because, after all, we *are* professors, but we trust you get the point: We love the science of psychology

and we've written a book that we hope makes you fall in love with it as well. Whether or not that happens, we're eager to hear what you think about our new edition. Feel free to reach out to us at MattAnd3Dans@gmail.com.

A NOTE TO INSTRUCTORS

Dear Instructor,

Why do we do this to ourselves? You've spent days and days browsing textbooks when you could have been baking cookies, reading poetry, or binge-watching *The Walking Dead*. We've spent years and years reading papers, writing chapters, and finding photographs when we could have been listening to music, visiting museums, or binge-watching *The Walking Dead*. Why have we all chosen to get lost in Textbookland when there are so many zombies to stream?

For the love of science. You and we may be different ages, genders, races, and religions; we may come from different places or speak different first languages; but much greater than our differences is our common bond, and that is our shared and unshakeable belief that science provides the best tools for understanding the mysteries of human behavior. Somewhere along the way, we all stumbled on a field called psychology and got stuck there because we fell in love with a simple idea—the idea that the methods scientists use to figure out what causes cancer or to understand how butterflies migrate can also be used to answer age-old questions about the hearts and minds of our kind. Honestly, anyone who stumbles on that idea and isn't excited by it has to be a zombie.

Is our textbook right for you? We don't know. But we do know that when you choose a textbook you are entrusting part of your students' education to someone else, and that trust needs to be earned. We've tried to do that by writing a textbook that has a single overarching goal: To make your students fall in love with this amazing young science for just the reasons that you did and we did. Whatever they do with that passion—whether they become psychologists, better parents, smarter consumers, or more informed citizens—our job is to ignite it by spreading the good news about our science. That's what we try to do on every one of the pages that follow, and you will decide if we've succeeded.

Okay, give us a minute to dry our eyes. There, that's better. Now let's get into some of the nutsy-boltsy stuff you'll want to know about our textbook, and about our fifth edition in particular.

Ch-ch-ch-ch-changes!

The words *new* and *improved* sell a lot of mobile phones and coffee makers, and they probably sell a lot of textbooks too. But we won't use them. After all, this is the fifth edition of our textbook, and if everything in it were new and improved, then everything in the previous editions would have to be obsolete or in desperate need of repair. That's simply not the case. We've spent more than a decade working on this

textbook, and we've learned a lot—not just from writing and re-writing it, but also from the many instructors and students across the country who have taken the time to tell us what they liked, what they didn't like, and how we could turn the latter into the former.

We've listened, and the reason our fifth edition is the best one ever is that rather than *changing* everything just so we could point to some new bells and whistles, we put most of our energies into *perfecting* the things that were already working well. Instructors told us that our pedagogical tools were strong, so we sharpened them rather than replacing them. They told us that our coverage was right on target, so we steadied our aim rather than aiming elsewhere. And they told us that their students enjoyed our casual and sometimes irreverent narrative voice, so we updated our jokes rather than admitting to ourselves that they were really, really bad. If the fifth edition looks familiar to you, that's because with each edition we've learned to make more babies and less bathwater.

With that said, the fifth edition is by no means the fourth with a new cover. You will see several significant changes right off the bat. For instance, we pretty much burned down [Chapter 1](#) (Psychology: The Evolution of a Science) for the insurance money and rebuilt it from scratch. We think the new version provides a clearer and more engaging exploration of psychology's rich history. We've also done major renovations of [Chapter 4](#) (Sensation and Perception), [Chapter 8](#) (Emotion and Motivation), and [Chapter 9](#) (Language and Thought), and added extended coverage to other chapters—for instance, further explanation of action potentials in [Chapter 3](#) (Neuroscience and Behavior) and the new section on replication in [Chapter 2](#) (Methods). Most importantly, we sneaked a photo of Pete Townshend onto page 461 so that the young people in your class will know who The Who were. Some things are just too important to leave to chance. You'll find a complete list of changes at macmillanlearning.com.

But Wait ... There's More!

Our primary job as textbook authors is to give your students a solid overview of the vast literature in psychological science so that you can spend your class time focusing on the things you really want to tell them, or ask them, or do with them, rather than trying to cover all that territory yourself. Maybe that's all you wanted us to do, in which case ... um, you're welcome.

But if you think textbook authors can do more than that, well then, we happen to agree with you. That's why we (and *we* of course means “a team of dedicated people whose hard work we will now try to take credit for”) have developed a variety of resources to make your job easier and your teaching more effective. Here are just a few of them:

- **LaunchPad** is the name of Macmillan Learning's online platform, which combines the full e-book version of our textbook with a whole bunch of interesting activities, award-winning media, and

state-of-the-art assessment tools. For students, LaunchPad is the ultimate online study guide; for you, it is a place where class documents can be posted, assignments given, quizzes graded, and progress measured. Best of all, LaunchPad integrates seamlessly with all the major learning management systems used by colleges and universities these days, including Blackboard, Brightspace by D2L, Canvas, and Moodle.

- One of the features of Launchpad that we personally like best is the **LearningCurve** adaptive quizzing system. This system measures a student's performance and then chooses quiz questions based on how well they are doing, which means that every student in your class can take a quiz that has been custom-designed for them. What's more, LearningCurve gives students instant feedback about their performance, while providing you with a report on the progress of individual students and on your class as a whole. You really have to see how beautiful the platform is and how easily it works. Go to launchpadworks.com and take it for a test drive.
- Students hate taking exams. What they don't realize is that we hate making them even more! That's why our book comes with a **Test Bank** (revised by Chad Galuska of the College of Charleston, Jennifer Perry of Kalamazoo College, and Chrysalis Wright of the University of Central Florida) that includes more than 250 multiple-choice, true/false, and essay questions for every chapter. You may have designed your class around the APA's outcomes for introductory psychology students, and, if so, you'll be happy to know that we link the test bank questions to these outcomes, making it easy for you to see which goals are being achieved.
- Can we help you make some **lecture slides**? We hope so, because our book comes with a fully updated set. Can we suggest some **lecture topics and class activities**? We hope so, because our book also comes with a downloadable **Instructor's Resource Manual** (created by Jeffrey B. Henriques of the University of Wisconsin, Madison), which contains plenty of them. Can we get you a cup of coffee? Just checking to see if you were still with us.
- Our textbook gives you access to a large number of **supplements** that your students may find useful, depending on how you've chosen to focus your teaching. For instance, if you focus a lot on critical thinking skills, then you might want to supplement our coverage of that topic in [Chapter 2](#) by having your students read *The Critical Thinking Companion for Introductory Psychology* or *The Worth Expert Guide to Scientific Literacy*. Or maybe you and your students care a lot about the application of psychology in the real world, in which case you might want to supplement our textbook by having them read *Psychology and the Real World* or *The Psychology Major's Companion*. And if none of these or our many other titles quite does the trick, you can use **Macmillan's Custom Publishing Program** to produce a supplement that is specifically tailored to the material you want to emphasize. Pretty much the only supplement we can't provide is CBD oil. But maybe soon.
- Is there a doctor in the house? Some of your students may be preparing to take the **MCAT**, and if so, we've got them covered. We prepared a special resource that connects the contents of our textbook to the specific topics that are covered on the MCAT exam. Furthermore, our test bank includes a special set of questions for each chapter that test quantitative reasoning ability in the style of the MCAT.

These are just a few of the resources that help make our textbook more than the sum of its chapters. Rather than chopping down trees to tell you about the rest of them, we've put the details online at

ACKNOWLEDGMENTS

Despite what you might guess by looking at our pictures, we all found women who were willing to marry us after some special pleading. We are grateful to Susan McGlynn, Marilyn OVOliphant, and Keesha Nock, who never complained about those long nights and weekends when we were writing this textbook rather than hanging out with them. Um ... you did miss us, didn't you?

Although ours are the only names on the cover, writing a textbook is a team sport, and we've been fortunate to have a terrific group of professionals in our dugout. They have helped us more than we can say, and more than they probably realize:

Rebecca Addington

University of Wisconsin–Madison

Christine Bartholomew

Kent State University

Dave Baskind

Delta College

Elizabeth A. Becker

St. Joseph's University

Joan Bihun

University of Colorado Denver

Dawn Brinkley

University of Texas–Dallas

Jennifer L. Butler

Case Western Reserve University

Marci Campbell

Salt Lake Community College

Diana L. Ciesko

Valencia College

Emily Cohen-Shikora

Washington University–St. Louis

Rebecca DesRoches

Regis College

Chris De La Ronde

Austin Community College

Michael Disch

St. Edwards University

Kimberly Duff

Cerritos College

April K. Dye

Carson-Newman University

John E. Edlund

Rochester Institute of Technology

Kim Ernst

Loyola University New Orleans

Lauren Ethridge

University of Oklahoma

Celeste Favela

El Paso Community College

Mark Ferguson

University of Wisconsin–Stevens Point

Sara Finley

Pacific Lutheran University

Jocelyn R. Folk

Kent State University

Jim Fryer

SUNY Pottsdam

Sophie A. George

Dixie State University

Afshin Gharib

Dominican University of California

Jerry Green

Tarrant County College

Maria E. Guarneri-White

Pacific Lutheran University

Jane S. Halonen

University of West Florida

Edward Hansen

Florida State University

Shani N. Harris

Spelman College

Erin Henshaw

Denison University

L. E. Holliman

Georgia State University at Perimeter–Clarkston Campus

Keith Holyoak

University of California Los Angeles

George-Harold Jennings

Drew University

Janna Kline

Rutgers University

Michael M. Knepp

University of Mount Union

Karen Kwan

Salt Lake Community College

Christopher B. Mayhorn

North Carolina State University

Michael Jason McCoy

Cape Fear Community College

Wendy Mendes

University of California San Francisco

Dennis K. Miller

University of Missouri–Columbia

Rikki L. A. Miller

University of Southern Maine

Erin M. Myers

Western Carolina University

Khu Nguyen

Washington University in St. Louis

Bradley M. Okdie

Ohio State University–Newark

Caroline Olko

Nassau Community College

Natasha Otto

Morgan State University

Doug A. Peterson

University of South Dakota

Jessica Petok

St. Olaf College

Catherine Phillips

Northwest Vista College

Gary Popoli

Stevenson University

Mixalis Poulakis

University of Indianapolis

G. A. Radvansky

University of Notre Dame

Marjorie Rhodes

New York University

Kiefer Rich

San Diego City College

Blake Riek

Calvin College

Gwendolyn Scott-Jones

Delaware State University

Keith M. Shafritz

Hofstra University

Shubam Sharma

University of Florida

Michelle Shiota

Arizona State University

Hiroko Sotozaki

Western Illinois University

Jonathan N. Sparks

Vance-Granville Community College

Peter Sparks

Oregon State University–Cascades

Helen T. Sullivan

Rider University

Donald Tellinghuisen

Calvin College

David G. Thomas

Oklahoma State University

Travis Tubré

University of Wisconsin–River Falls

Lora Vasiliauskas

Virginia Western Community College

Constance Walsh

Fullerton College

Megan Kozak Williams

Linfield College

James Thomas Wright

Forsyth Technical Community College

Dasa Zeithamova

University of Oregon

We'd also like to thank Chad Galuska and Jeff Henriques, who wrote the supplemental materials that support our textbook's educational mission. The insight and experience they brought to this task was extraordinary, and it shows.

As always, we are deeply grateful to our good friends at Worth Publishers, with whom we have happily

worked for so many years. They include:

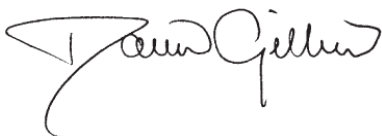
- Senior vice president Chuck Linsmeier, who has been providing much-needed wisdom, encouragement, and gin since our very first day.
- Our executive program manager, Dan DeBonis, who has managed our project with panache while keeping the trains, planes, automobiles, submarines, and pachyderms all running on time.
- Our brilliant, talented, and preternaturally cheerful senior development editor, Valerie Raymond, without whom we would all jump off a tall building (just behind Dan DeBonis who might need a push).
- Our project manager Jana Lewis, our senior content project manager Vivien Weiss, our senior workflow project supervisor Susan Wein, and our editorial assistant Nick Rizzuti, all of whom seem to know some magic spell that turns a bunch of disorganized text files into a set of beautiful pages.
- Our senior design manager Natasha Wolfe, our design manager John Callahan, our art manager Matt McAdams, our photo manager Robin Fadool, and our photo researcher Jennifer Atkins, who worked together to make our textbook as delightful to look at as it is to read.
- Our media editor Stefani Wallace, who expertly guided the development and creation of our superb supplements package.
- Our executive marketing manager Kate Nurre and marketing assistant Chelsea Simens, who have always been and continue to be tireless public advocates for our vision.
- Our editorial assistants, Molly Evans and Franchesca Ramirez, who provided capable assistance even when we didn't know we needed it.

What would we have done without all of you? Gracias, arigato, danke, merci, xie xie, and a way big thanks!



Daniel L. Schacter

Cambridge, 2020



Daniel T. Gilbert

Cambridge, 2020



Matthew K. Nock
Cambridge, 2020

1

The Evolution of Psychological Science



STORIEDEYE/ALAMY

- **Psychology's Philosophical Roots**
- **The Late 1800s: Toward a Science of the Mind**
- **The Early 1900s: Psychoanalysis and Behaviorism**
- **The Early 1900s: Resistance to Behaviorism**
- **The Late 1900s: The Cognitive Revolution**
- **The Early 2000s: New Frontiers**
- **Becoming a Psychologist**