

Psychology

A Journey of Discovery



atomicdogpublishing.com



Stephen Franzoi

PSYCHOLOGY

A JOURNEY

OF DISCOVERY

Stephen Franzoi
Marquette University



Cincinnati, Ohio
www.atomicdogpublishing.com

Copyright © 2002 by Atomic Dog Publishing. All rights reserved.

Library of Congress Control Number: 2001093344

ISBN 1-931442-09-6

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Printed in the United States of America by Atomic Dog Publishing,
1203 Main Street, Third Floor, Cincinnati, OH 45210.

10 9 8 7 6 5 4 3 2 1

Preface

In teaching introductory psychology, professors are essentially trying to persuade you—the student—that the information presented in the course is a valuable way to understand behavior and the process of living on this planet. There are compelling arguments in the message of psychology, and most professors believe that, if they can get you to spend some time thinking about and evaluating the message, you will become more competent in dealing with future life events. The distinct advantage that a psychology course has in stimulating student interest is that its subject matter is the “study of the mind.” As such, introductory psychology offers you the hope that course material will help you not only better understand other people, but also yourself. Seeking such knowledge is a distinguishing feature of young adulthood, and the college experience is specifically designed to foster this quest.

To help you in your quest to better understand yourself and others, this text presents the science of psychology as a journey of discovery—a journey undertaken both by researchers in their search for knowledge over the past century and by students over the course of the term. The text explains how psychology has expanded our understanding of how people think, feel, and behave, while also motivating you to apply this knowledge to better understand yourself and others. By regularly encouraging you to consider how psychological knowledge relates to your own life, the text places your learning experience within a personally relevant context that benefits retention of course material, while also fostering self-insights that can be applied to your daily living.

The history of psychology is infused with compelling stories of how researchers’ intense interest in learning about the nature of human and animal behavior led them on a journey of discovery that eventually culminated in important new knowledge. The fundamental difference between our often informal, anecdotally based personal journeys of discovery and the journeys of discovery found in psychology is that the vehicle employed in the latter journeys is the scientific method. Throughout *Psychology: A Journey of Discovery*, I tell selected discovery stories in psychology so that you will appreciate both the human element and the ever-evolving nature of scientific knowledge and insight.

Following chapter 1’s introduction to psychology, which covers the field’s history and areas of specialization, chapter 2 is devoted to the vehicle for psychological discovery—research methodology. This chapter provides a solid base for understanding the scientific enterprise of psychology. Each chapter also includes *Discovery Boxes* that discuss selected studies in detail. This emphasis on the scientific enterprise encourages a healthy, scientific skepticism of the many, often contradictory, commonsense truisms we learn from others.

Encouraging Self-Discovery

While encouraging you to analyze the scientific journey of discovery in psychology, the text also facilitates a personal journey of discovery by including over 20 self-report questionnaires that ask you to consider how the specific text material relates to your own life. The self-report questionnaires are those that researchers currently use, and the results of studies employing them are part of the text material. Thus, as you learn about various psychological theories and relevant research findings, you also learn something about yourself.

Applying Psychology to Everyday Experiences

Beyond self-report questionnaires, the text also presents a *Psychological Applications* section at the end of each chapter that demonstrates how psychology can be applied to your life. In these sections, you learn how the theories and research in a particular chapter can be applied to real-world settings. Topics covered in the *Psychological Applications* sections include developing critical thinking skills, learning how to exercise self-control in your academic and personal life, improving everyday memory, understanding test anxiety, coping with jealousy, and many others.

Encouraging Critical Thinking

You can develop an understanding of yourself and others by reading astrological predictions, internalizing the varied messages of popular culture, and uncritically accepting the advice and “wisdom” of friends, family, and (yes!) college professors. Yet, what is the value of this understanding if it is not subjected to critical cognitive analysis? Critical evaluation is an important component of *Psychology: A Journey of Discovery*. Questions in the main body of the text encourage critical thinking by inviting you to guess a study’s hypotheses, results, or alternative interpretation of findings. In addition, questions that appear in the captions of figures, tables, and photos inspire further analysis of text material. Each chapter also features *Journey of Discovery Questions*, which require critical analyses of current discussion topics. Possible answers to these questions are provided in an *Appendix* in the print version of the text and are “clickable” in the online version. Strategically placed *Info-bits* in each chapter provide additional information on selected topics. Last, but certainly not least, is a feature unique to the online version of this text: *QuickCheck* interactive questions. These questions test your knowledge on various topics and provide immediate feedback on the extent of your understanding.

Recognizing the Diversity and Unity of People

Integrated within this book’s journey of discovery theme is the encouragement to recognize the ways in which people are both similar to and different from one another. *Psychology: A Journey of Discovery* tells the story of the science of psychology in such a way that you will recognize the “yin-yang” of unity and diversity, whether you are trying to understand the thoughts, emotions, and behavior of your college roommates or those of people from other cultures.

The text not only analyzes how culture and our individual developmental experiences influence the way we think, feel, and behave, but also examines how humans, as a species, often respond similarly to their physical and social surroundings. The “yin” in this diversity-unity analysis is the sociocultural perspective, while the “yang” is the evolutionary perspective. The text explains that the culture of a people is based on their relationship with the environment, and the evolution of our species is a story of how we have adapted to our surroundings. Thus, just as our bodies and brains are products of evolutionary forces, so, too, is our culture. Yet, cultural change occurs much more rapidly than genetic change. This is why the world’s cultures vary greatly, despite little meaningful genetic variation among cultural groups.

Two belief systems that explain how individuals relate to their groups and that are important to understanding the psychology of human behavior are individualism and collectivism. Individualism is a philosophy of life stressing the priority of personal goals over

group goals, a preference for loose-knit social relationships, and a desire to be relatively independent of others' influence. In contrast, collectivism is a philosophy of life stressing the priority of group needs over individual needs, a preference for tightly knit social relationships, and a willingness to submit to the influence of one's group. Although we know that cultures differ in their individualist-collectivist orientations, we do not know whether one is better than the other in any ultimate evolutionary sense. *Psychology: A Journey of Discovery* periodically examines how the psychology of people from different cultures differs due to their individualist-collectivist bents. For those chapter topics where the individualist-collectivist analysis is not especially relevant, other more relevant cultural factors are highlighted.

Pedagogical Aids

Psychology: A Journey of Discovery enhances learning with the following pedagogical devices:

1. Each chapter opens with a *chapter outline*.
2. *Short-sentence headings* compactly summarize the content of chapter sections and facilitate recall of text topics.
3. A *summary* at the end of each major chapter section reviews the section's most important concepts.
4. In both the print and online versions of the text, *key terms* and concepts are highlighted and defined on first appearance. In the print version, key terms are also defined in the text margins and listed in alphabetical order at the end of each chapter. A *Glossary* at the end of the print book presents all of the definitions alphabetically. The online version of the text has "pop-up" definitions of key terms.
5. *Journey of Discovery Questions* within each chapter require critical analyses of current discussion topics. Possible answers are found online, as well as in an appendix at the end of the print book.
6. *Info-bits* briefly describe the results from psychological studies that enhance text material.
7. *Quotes* from famous individuals in other fields illustrate text material.
8. *Discovery Boxes* within each chapter enhance your understanding of a variety of topics. See the list of *Discovery Boxes* on page xiv.
9. *Psychological Applications* sections help you to apply each chapter's psychological concepts to real-world situations.
10. *Suggested Websites* at the end of each chapter are online sources that you can access to obtain a better understanding of chapter material.
11. *Review Questions* at the end of each chapter allow you to check your comprehension of the chapter's major concepts.

Online and in Print

Psychology: A Journey of Discovery is available online as well as in print. The online chapters demonstrate how the interactive media components of the text enhance presentation and understanding. For example,

- Animated illustrations help to clarify concepts.
- Self-report questionnaires show you how specific text material relates to your own life.
- *QuickCheck* interactive questions and chapter quizzes test your knowledge of various topics and provide immediate feedback.
- Clickable glossary terms provide immediate definitions of key concepts.
- The search function allows you to quickly locate discussions of specific topics throughout the text.

You may choose to use just the online version of the text, or both the online and print versions together. This gives you the flexibility to choose which combination of resources works best for you. To assist those who use the online and print versions together, the primary heads and subheads in each chapter are numbered the same. For example, the first primary head in Chapter 1 is labeled 1-1, the second primary head in this chapter is labeled 1-2, and so on. The subheads build from the designation of their corresponding primary head: 1-1a, 1-1b, etc. This numbering system is designed to make moving between the online and print versions as seamless as possible.

Finally, next to a number of figures, tables, and boxes in the print version of the text, you will see an “eye-ear-hand” icon similar to the one on the left. The icon indicates that this figure, table, or box in the online version of the text is interactive in a way that applies, illustrates, or reinforces the concept.



Ancillary Materials

A test item file is available in the ExamView® Pro format. ExamView® Pro enables you to quickly create printed tests for your course using either a Windows or Macintosh computer. You can enter your own questions and customize the appearance of the tests you create. Each chapter has 100 carefully constructed questions, five of which are essay and 95 of which are multiple-choice.

A complete instructor's manual contains learning objectives, lecture suggestions, articles of interest, critical thinking questions, video suggestions, and additional web resources for each chapter.

PowerPoint® presentations (over 200) are available for classroom use of text materials.

Acknowledgments

While I was writing this text, many people provided me with invaluable assistance and understanding. I first want to thank my family for not only supporting my writing efforts and forgiving my memory lapses during this time, but also for providing me with wonderful examples of psychological principles that I used throughout the text. I also apologize to my daughters, Amelia and Lillian, for any future embarrassment I may cause them by retelling some of their life experiences in the book!

I owe a big debt of gratitude to the students in my introductory psychology courses at Marquette University who are the first to be exposed to my new stories of the psychological journey of discovery. I also wish to thank three colleagues who provided their expertise during the writing of five of the chapters in this book. My departmental colleague, Dr. Michael Wierzbicki, provided important content in the early drafts of chapters 13 (Psychological Disorders) and 14 (Therapy), Dr. Jeffrey Ratliff-Crain at the University of Minnesota, Morris did the same for chapters 11 (Motivation and Emotion) and 15 (Stress, Coping, and Health), and Dr. Karl Stukenberg at Xavier University contributed important information to chapter 12 (Personality). Their help was greatly appreciated and provided added depth to the book content.

Finally, I would like to warmly thank the people at Atomic Dog Publishing for not only providing me with the opportunity to make my book a reality, but also for making the entire publishing experience so thoroughly enjoyable. First, I would like to thank Alex von Rosenberg, CEO, who has provided the necessary resources at all stages of development and production to make this a first-rate text. Second, I would like to thank some Atomic Dog people whom I have known for a number of years: Editor-in-Chief Tom Doran, Publisher in Psychology Edgar Laube, and Director of Production Victoria Putman. I had previously worked with Tom, Ed, and Vickie when I was an author at Brown & Benchmark Publishers in the 1990s and it is great to be working with them again. While completing this book, I worked most closely with Ed, and he did a great job coordinating and organizing numerous book tasks, tracking down reviewers and resources, allaying my anxieties about deadlines, and keeping me focused. Ed, I owe you! I was also very fortunate to work with Production Coordinator Mary Monner, who kept me on track during copyediting and page proofing, and even budgeted in my vacation time! Design Coordinator Christine Abshire did a super job in taking my scrawled drawings and half-baked ideas and turning them into highly polished interactive learning devices for students. Thanks are also extended to Copy Editor Laurie McGee, who patiently cleaned up my manuscript prior to it going into production, and to Permissions Coordinator Karyn Morrison, who adeptly secured the rights to a great deal of valuable material that is included in this text.

Numerous reviewers, who obviously care very much about psychology and the art and craft of teaching, generously provided feedback during the writing of this text. I would like to thank:

Paul Bell, *Colorado State University*
Trey Buchanan, *Wheaton College*
Robert Caldwell, *Michigan State University*
James R. Cook, *University of North Carolina–Charlotte*
Wendy Domjan, *University of Texas–Austin*
Natalie Dove, *Purdue University*
Gary D. Fisk, *Georgia Southwestern State University*
Donelson R. Forsyth, *Virginia Commonwealth*
Susan M. Frantz, *Highline Community College*
Traci Giuliano, *Southwestern University*
Wind Goodfriend, *Purdue University*
Judith Harackiewicz, *University of Wisconsin–Madison*
Robert M. Hessling, *University of Wisconsin–Milwaukee*

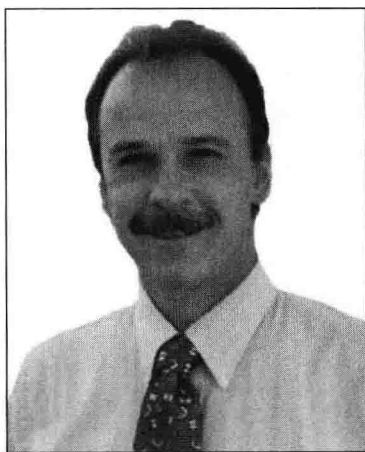
Scott F. Madey, *Shippensburg University*
Michael S. Ofsowitz, *University of Maryland, European Division*
Daniel Osherton, *Rice University*
Ellen Peters, *University of Oregon*
Laura Richardson, *University of Guam*
Leland Swenson, *Loyola Marymount University*
Alan Swinkels, *St. Edward's University*
Brian T. Yates, *American University*

And Finally . . .

I welcome your comments and feedback. Thanks to the online learning environment for Atomic Dog texts, I'll be in a position to incorporate appropriate suggestions several times a year. The prospect of being able to develop a robust exchange of ideas with current users, both students and faculty, is truly exciting. You can reach me at:

stephen.franzoi@marquette.edu.

Very best wishes,
Steve Franzoi



Stephen Franzoi is Professor of Psychology at Marquette University in Milwaukee, Wisconsin. Born and raised in Iron Mountain, Michigan, he received his B.S. in both psychology and sociology from Western Michigan University and his Ph.D. from the University of California at Davis. He also worked as a postdoctoral fellow at Indiana University in the Self Program sponsored by the National Institute of Mental Health and served as the assistant editor of *Social Psychology Quarterly*. At Marquette University, Professor Franzoi teaches introductory psychology courses and is also the author of the textbook *Social Psychology* (third edition). He is an active researcher in the areas of body esteem and self-awareness, and is currently the associate editor of the journal *Social Problems*. Over the years, Dr. Franzoi has discussed his research in *The New York Times* and *USA Today*, and on National Public Radio and the "Oprah Winfrey Show." Because of his desire to apply psychological knowledge to real-world problems, Dr. Franzoi regularly provides gender equity and multicultural workshops, including NAACP-sponsored programs, to schools and organizations. He and Cheryl Figg are the proud parents of Amelia, age 15, and Lillian, age 12.

Contents

Discovery Boxes xiv

Preface xv

1 Introduction to Psychology 1

1-1 What Is Psychology? 2

1-1a *Psychology Is the Scientific Study of Mental Processes and Behavior* 3

1-1b *Most Psychologists Believe That There Are Lawful Patterns of Behavior* 3

1-2 Early Pioneers 4

1-2a *Wilhelm Wundt and Structuralism Sought to Identify the Components of the Conscious Mind* 4

1-2b *William James and Functionalism Analyzed How the Conscious Mind Helps Us Adapt to Our Environment* 5

1-2c *Sigmund Freud and Psychoanalysis Examined How the Unconscious Mind Shapes Behavior* 6

1-2d *John Watson and Behaviorism Investigated Observable Behavior* 6

1-2e *Max Wertheimer and Gestalt Psychology Studied How the Mind Organizes Stimuli into Coherent Wholes* 7

1-2f *Despite Discrimination, Many Women and Ethnic Minorities Were Pioneers in Psychology* 8

1-3 Contemporary Perspectives and Areas of Specialization 10

1-3a *The Psychoanalytic and Behaviorist Perspectives Still Influence Theory and Research* 11

1-3b *The Humanistic Perspective Highlights Personal Growth and Conscious Decision Making* 11

1-3c *The Cognitive Perspective Analyzes How the Mind Organizes and Interprets Experiences* 11

1-3d *The Biological Perspective Studies Physiological Processes, Especially Those Occurring in the Brain* 12

1-3e *The Evolutionary Perspective Studies How Behavior Can Be Explained by Natural Selection* 12

1-3f *The Sociocultural Perspective Studies How Behavior Is Shaped by Social and Cultural Forces* 14

1-3g *Psychology's Subfields Can Be Distinguished by Their Emphasis on Research Versus Application* 15

Suggested Websites 18

Psychological Applications: *From What Psychology "Is" to How Psychology "Works"—A Prelude* 18

Key Terms 19

Review Questions 19

2 The Vehicle for Psychological Discovery 21

2-1 Is Psychology Just Common Sense? 22

2-1a *We Often Understand Our World Based on a "Naive" Psychology* 22

2-1b *Scientific Methods Minimize Error and Lead to Dependable Generalizations* 25

2-2 What Is the Process in Conducting Research? 26

2-2a *The First Research Stage Involves Selecting a Topic and Reviewing Past Research* 26

2-2b *The Second Research Stage Involves Theory and Hypothesis Development* 28

2-2c *The Third Research Stage Involves Selecting a Scientific Method and Obtaining Approval to Conduct the Study* 29

2-2d *The Fourth Research Stage Involves Data Collection, Analysis, and Reporting Results* 32

2-3 Commonly Used Scientific Methods 33

2-3a *Description Is the Goal of Observational Research* 34

2-3b *Correlational Research Analyzes the Direction and Strength of the Relationship between Variables* 36

2-3c *Experimental Research Determines Cause-Effect Relationships* 40

2-4 Is Psychology a Value-Free Science? 42

2-4a *A Recurring Debate Is Whether Psychology Is or Should Be Value-Free* 42

Suggested Websites 43

Psychological Applications: *How Can You Develop Critical Thinking Skills?* 43

Key Terms 45

Review Questions 45

3 Biological Bases of Behavior 47

3-1 The Neuron 49

3-1a *A Neuron Consists of a Soma, Dendrites, and an Axon* 49

3-1b *A Neuron Is Either in a Resting or a Firing State* 51

3-1c *Neurons Communicate with One Another by Releasing Chemicals Called Neurotransmitters* 53

3-2 Neural and Hormonal Systems 57

3-2a *The Peripheral Nervous System Connects the Brain and Spinal Cord with the Organs and Tissues of the Body* 57

3-2b *The Spinal Cord Connects the Peripheral Nervous System to the Brain* 58

3-2c *The Endocrine System Communicates by Secreting Hormones, Which Travel through the Bloodstream* 61

3-3 The Brain 62

3-3a *Modern Technology Can Measure the Brain's Electrical Activity, Structure, Blood Flow, and Chemistry* 63

3-3b *The Brain Can Be Divided into Three Major Regions Known as the Hindbrain, Midbrain, and Forebrain* 64

- 3-3c *The Cerebrum Is the Crowning Achievement of Human Evolution* 67
- 3-3d *The Cerebral Cortex Consists of Specialized, Interactive Regions or "Lobes"* 69
- 3-3e *The Right and Left Cerebral Hemispheres Function Differently* 71
- 3-3f *There May Be Sex and Cultural Differences in Hemispheric Organization* 73
- 3-3g *The Brain Has the Ability to Alter Its Neural Connections* 76
- 3-3h *The Mind Arises from the Brain-Body Interaction* 78
- 3-4 *Genetic Influences on Behavior* 80
 - 3-4a *The Basic Biochemical Unit of Inheritance Is the Gene* 80
 - 3-4b *Both Heredity and Environment Can Influence Physical and Behavioral Traits* 81
- Suggested Websites 82
- Psychological Applications: *If You Are Left-Handed, Is Your Brain Organized Differently from That of Right-Handers?* 83
- Key Terms 84
- Review Questions 85

4 Human Development 87

- 4-1 *Physical and Prenatal Development* 88
 - 4-1a *Prenatal Development Occurs in Three Stages* 88
 - 4-1b *The Developing Fetus Can Be Harmed by a Number of Parental and Environmental Factors* 89
 - 4-1c *A Child's Brain Grows at an Immense Rate, Relative to the Rest of the Body* 90
 - 4-1d *Physical Growth and Motor Development Occur Hand-in-Hand* 91
- 4-2 *Social Development* 96
 - 4-2a *Attachment Is a Basic Need in Humans and Many Other Animals* 96
 - 4-2b *Parenting Style, Initial Temperament, and Culture All Influence Attachment Style* 98
 - 4-2c *Children Can Handle Parental Separation under Certain Conditions* 99
 - 4-2d *Today's Fathers Are More Involved in Child Care Than Previous Generations of Fathers* 100
 - 4-2e *Self-Concept Is the Primary Social Achievement of Childhood* 101
 - 4-2f *Self-Concept Is Shaped by Culture* 103
 - 4-2g *Erikson Believed That Psychosocial Development Occurs in Eight Stages, Each Marked by a Crisis* 105
- 4-3 *Cognitive Development* 109
 - 4-3a *Piaget's Theory of Cognitive Development Has Four Distinct Stages* 109
 - 4-3b *Some of Piaget's Conclusions about Children's Mental Capabilities Are Incorrect* 113

- 4-3c *Vygotsky's Theory of Cognitive Development Stresses the Importance of Instruction and Guidance* 114
- 4-3d *The Information-Processing Approach Examines Age-Related Differences in How Information Is Organized and Manipulated* 115
- 4-4 *Moral Development* 116
 - 4-4a *Kohlberg Maintained That There Are Three Levels of Moral Development* 116
 - 4-4b *Kohlberg's Theory Has Been Criticized as Being Male-Oriented* 118
- 4-5 *Adolescence and Adulthood* 119
 - 4-5a *Puberty Signals the Onset of Adolescent Physical Development* 119
 - 4-5b *Heightened Self-Consciousness Is a Hallmark of Adolescence* 120
 - 4-5c *Aging Is the Progressive Deterioration of the Body* 121
 - 4-5d *There Is No Clear Understanding of How We Cope with Dying* 122
- 4-6 *A Final Note* 123

- Suggested Websites 124
- Psychological Applications: *Using Effective Tutoring Strategies to Facilitate Cognitive Development* 124
- Key Terms 125
- Review Questions 125

5 Sensation and Perception 127

- 5-1 *Basic Principles of Sensation* 129
 - 5-1a *Our Senses Vary in Their Sensitivity Thresholds* 129
 - 5-1b *Our Sensory Receptors Adapt to Unchanging Stimuli* 131
- 5-2 *Vision* 132
 - 5-2a *We See Only a Narrow Band of Electromagnetic Energy* 132
 - 5-2b *Light Passes through the Cornea, Pupil, and Lens before Focusing on the Retina* 132
 - 5-2c *Visual Information from Both Eyes Is Transmitted to Both Brain Hemispheres* 135
 - 5-2d *Colors Are Created in Our Visual System, Not in the World* 136
 - 5-2e *The Trichromatic Theory and the Opponent-Process Theory Explain Different Aspects of Color Vision* 137
 - 5-2f *Color Constancy Demonstrates That We Perceive Objects in Their Environmental Context* 140
- 5-3 *Hearing* 140
 - 5-3a *Sound Is the Stimulus for Hearing* 141
 - 5-3b *The Auditory System Consists of the Outer Ear, Middle Ear, and Inner Ear* 141

- 5-3c Different Theories Explain Different Aspects of Pitch Perception 143
- 5-4 Your Other Senses 144
 - 5-4a Smell and Taste Represent “Far” and “Near” Chemical Senses 145
 - 5-4b Touch Is Determined by the Skin Senses of Pressure, Temperature, and Pain 147
 - 5-4c The Proprioceptive Senses Detect Body Movement and Location 150
- 5-5 Perception 152
 - 5-5a Sensory Stimuli Are Organized into a Gestalt through Form Perception, Depth Perception, and Perceptual Constancy 152
 - 5-5b Perceptual Sets Create Expectations for How to Interpret Sensory Stimuli 155
 - 5-5c Perceptual Illusions Represent a Misperception of Physical Reality 156
 - 5-5d Certain Aspects of Perception Are Innate, While Others Are Learned 159
 - 5-5e There Is Little Scientific Evidence for Extrasensory Perception 160

Suggested Websites 161

Psychological Applications: Can You Improve Your Memory and Self-Esteem through Subliminal Persuasion? 162

Key Terms 162

Review Questions 163

6 Consciousness 165

- 6-1 The Nature of Consciousness 166
 - 6-1a Consciousness Is Personal, Selective, Divided, Continuous, and Changing 166
 - 6-1b Consciousness May Provide Us with Survival Advantages 170
- 6-2 Sleep 171
 - 6-2a Daily Body Rhythms Regulate Our Activities 171
 - 6-2b There Are Five Stages of Sleep 173
 - 6-2c Sleep Habits Vary Individually and Culturally 175
 - 6-2d Dreaming Often Occurs during REM Sleep 177
 - 6-2e No Consensus Exists on the Cause or Meaning of Dreams 179
- 6-3 Other Altered States of Consciousness 183
 - 6-3a Hypnosis Has Been Practiced for Thousands of Years 183
 - 6-3b Some Psychologists Doubt That Hypnosis Is an Altered State 185
 - 6-3c Meditation Provides Relaxation and Reduces Arousal 186
 - 6-3d Intense Religious Experiences Often Involve Altered States 187
 - 6-3e Psychoactive Drug Use Can Lead to Dependence 188

- 6-3f Depressants Slow Bodily Functions and Induce Relaxation 189
- 6-3g Stimulants Speed Up Bodily Functions 191
- 6-3h Hallucinogens Induce Profoundly Altered States 193
- 6-3i Biological and Sociocultural Factors Influence Drug Use 194

Suggested Websites 195

Psychological Applications: How Can You Deal with Sleep Disorders? 196

Key Terms 197

Review Questions 197

7 Learning 199

- 7-1 Classical Conditioning 201
 - 7-1a Pavlov Stumbled upon Classical Conditioning 201
 - 7-1b There Are Six Important Principles of Classical Conditioning 203
 - 7-1c Animals Differ in What Responses Can Be Classically Conditioned 207
- 7-2 Operant Conditioning 211
 - 7-2a Operant Behavior Is Largely Voluntary, Goal Directed, and Controlled by Its Consequences 211
 - 7-2b A Reinforcer Increases the Probability of the Behavior It Follows 212
 - 7-2c Different Reinforcement Schedules Lead to Different Learning and Performance Rates 214
 - 7-2d Shaping Steadily Reinforces Closer Approximations to Desired Behavior 217
 - 7-2e Punishment Should Only Be Used under Certain Circumstances 218
 - 7-2f Operant Conditioning Theory Overlooks Biological Predispositions and Cognitive Processes 221
- 7-3 Observational Learning 224
 - 7-3a A Great Deal of Learning Occurs by Observing and Imitating Others' Behavior 224
 - 7-3b Children Can Learn Aggressive Behavior through Observation 225
 - 7-3c Positive Social Modeling Can Counteract the Negative Influence of Aggressive Models 226

Suggested Websites 227

Psychological Applications: Learning How to Exercise Self-Control in Your Academic and Personal Life 228

Key Terms 229

Review Questions 229

8 Memory 231

- 8-1 The Nature of Memory 233
 - 8-1a The Computer's Information-Processing System Has Been a Useful Model of Human Memory 233

- 8-1b Sensory Memory Preserves Highly Detailed Sensory Information for Only a Few Moments 237
- 8-1c Short-Term Memory Is Now Conceived of as a "Working Memory" System 238
- 8-1d We Often Encode Information into Long-Term Memory Using Elaborative Rehearsal 240
- 8-1e There Is More Than One Type of Long-Term Memory 242
- 8-2 How Is Knowledge Organized in Memory? 244
 - 8-2a Some Information in Long-Term Memory Is Organized into Networks of Related Concepts 244
 - 8-2b Information in Long-Term Memory Can Be Organized around Schemas 245
 - 8-2c Memory May Involve Parallel Processing of Neural Units 247
- 8-3 How Do We Remember? 248
 - 8-3a Remembering Can Be Either Explicit or Implicit 249
 - 8-3b Retrieval Cues Help Trigger Recall of Stored Memories 251
 - 8-3c Memories Are Often Sketchy Reconstructions of the Past 254
- 8-4 How Does Forgetting Occur? 258
 - 8-4a Most Forgetting Occurs Soon after Learning 258
 - 8-4b Forgetting Often Occurs Due to Interference 258
 - 8-4c We Are Sometimes Motivated to Forget Information 260
- 8-5 What Is the Biological Basis for Memories? 260
 - 8-5a Long-Term Potentiation May Be the Neural Basis for Memory 261
 - 8-5b Several Brain Regions Are Involved in Memory Formation and Storage 261

Suggested Websites 265

Psychological Applications: Improving Everyday Memory 265

Key Terms 267

Review Questions 267

9 Language and Thinking 269

- 9-1 Language 270
 - 9-1a The Evolution of Language Had Both Social and Cognitive Advantages for the Human Species 270
 - 9-1b Language Capabilities May Not Be Unique to Humans 272
 - 9-1c Human Languages Have a Hierarchical Structure 275
 - 9-1d Infants Appear to Be Born Prepared to Learn Language 276
 - 9-1e Language Development Occurs in Distinct Stages 281
 - 9-1f The Linguistic Relativity Hypothesis Asserts That Language Determines Thought 282

9-2 Thinking 285

- 9-2a Concept Formation Is a Basic Element of Cognition 285
- 9-2b We Employ a Number of Problem-Solving Strategies 288
- 9-2c A Number of "Internal" Obstacles Can Impede Problem Solving 289
- 9-2d Decision Making Involves Evaluating Alternatives and Making Choices about Them 291
- 9-2e Decision-Making Heuristics Often Sidetrack Everyday Cognition 293
- 9-2f Self-Esteem Can Influence Our Decision-Making Strategies 296

Suggested Websites 298

Psychological Applications: How Can You Change Your Language Style to Become a More Persuasive Speaker? 298

Key Terms 299

Review Questions 299

10 Intelligence 301

10-1 Measuring Intelligence 303

- 10-1a The Early History of Intelligence Testing Illustrates How Scientists Can Be Influenced by Cultural Stereotypes 303
- 10-1b Modern Tests of Mental Abilities Measure Either Aptitude or Achievement 306
- 10-1c Psychological Tests Must Be Standardized, Reliable, and Valid 308

10-2 Intelligence: One Thing or Many? 312

- 10-2a Early Factor-Analytic Studies Led to Conflicting Conclusions about "General Intelligence" 312
- 10-2b Gardner's Theory of Multiple Intelligences Attempts to Broaden the Concept of Intelligence 313
- 10-2c Sternberg's Triarchic Theory States That Intelligence Consists of Three Sets of Mental Abilities 314
- 10-2d Emotional Intelligence Allows Us to Understand and Regulate Our Emotional and Social Lives 315

10-3 The Dynamics of Intelligence 318

- 10-3a Neuroscientists Try to Link Differences in Intelligence to Dissimilarities in People's Brains 318
- 10-3b Although Intelligence Becomes More Stable with Age, It Is Far from Fixed 319
- 10-3c The "Challenged" and the "Gifted" Are the Two Extremes of Intelligence 320

10-4 Hereditary and Environmental Influences on Intelligence 324

- 10-4a Twin and Adoption Studies Indicate That Genes and Environment Both Influence Intelligence 324
- 10-4b There Are Group Differences in IQ Scores 326
- 10-4c Genetic Explanations of Group IQ Score Differences Remain Highly Controversial 328

- 10-4d** Cultural and Social Psychological Factors May
Partly Explain Group IQ Differences 330

Suggested Websites 334

Psychological Applications: How Can You “Create” a
Creative Environment? 334

Key Terms 335

Review Questions 335

11 Motivation and Emotion 337

11-1 Motivation 338

- 11-1a** Motivation Is a Dynamic Process 338
11-1b Genes May Shape Our Motivation 339
11-1c We Are Sometimes Motivated to Reduce Arousal 339
11-1d We Are Sometimes Motivated to Achieve and
Maintain an Optimal Level of Arousal 340
11-1e Incentive Theory Examines How External Factors
Motivate Behavior 341
11-1f Maslow Proposed That Some Needs Have to Be
Met before Others 343

11-2 Sexual Motivation 345

- 11-2a** Men Report Enjoying Greater Sexual Variety
Than Women 345
11-2b The Female and Male Sexual Response Cycle
Is Very Similar 350
11-2c Sexual Orientation Is a Continuum Rather Than
an All-or-None Distinction 351
11-2d The Causes of Sexual Orientation Are as Yet
Unclear 354
11-2e People Who Are Uncomfortable Thinking about
Sex Are More Likely to Have Unprotected Sex 356

11-3 Hunger and Eating 357

- 11-3a** Various Biological Mechanisms Control Hunger
and Eating 357
11-3b Our Environment Also Controls Hunger
and Eating 359
11-3c The Body May Be “Set” to Maintain Weight
within a Limited Range 360

11-4 Achievement Motivation 362

- 11-4a** There Are Individual Differences in the Need
for Achievement 362
11-4b There Are Strategies for Increasing Achievement
Motivation 364

11-5 Emotion 365

- 11-5a** Emotions Are Positive or Negative Feeling
States 365
11-5b Emotions Facilitate Survival 366
11-5c Emotions Result in Bodily Responses 367
11-5d Two Theories Dispute Whether Physiological
Responses Precede Emotions 368
11-5e The Brain Coordinates Emotional Responses 370
11-5f The Two-Factor Theory Emphasizes the Role
of Cognition in Emotions 373

- 11-5g** One Emotion May Trigger an Opposite
Emotion 374

- 11-5h** People Differ in Their Need to Emotionally
Evaluate 374

Suggested Websites 376

Psychological Applications: Understanding Test Anxiety
and Tips to Control It 376

Key Terms 377

Review Questions 377

12 Personality 379

12-1 The Nature of Personality 380

- 12-1a** Consistency and Distinctiveness Define
Personality 381
12-1b Culture and Evolutionary Processes Shape
Personality 381

12-2 The Psychoanalytic Perspective 382

- 12-2a** Psychoanalytic Theory Asserts That
the Unconscious Controls Behavior 382
12-2b Freud Divided the Personality into the Id, Ego,
and Superego 384
12-2c Personality Development Occurs in a Series
of Psychosexual Stages 385
12-2d Ego Defense Mechanisms Reduce or Redirect
Anxiety Caused by Unconscious Desires 387
12-2e There Are Many Variations of Psychoanalytic
Theory 388

12-3 The Humanistic Perspective 391

- 12-3a** Rogers's Person-Centered Theory Emphasizes
Self-Realization 392
12-3b Maslow's Theory of Self-Actualization Stresses
the Need to Fulfill One's Potential 392
12-3c Critics of the Humanistic Perspective Contend
That It Is Overly Optimistic about Human
Nature 393
12-3d The Self Has Become an Important Area of Study
in Psychology 393

12-4 The Trait Perspective 396

- 12-4a** Trait Theories Describe Basic Personality
Dimensions 397
12-4b Factor Analysis Is Used to Identify Personality
Traits 398
12-4c The Five Factor Model Specifies Five Basic
Personality Traits 399
12-4d Both Genetic and Environmental Factors Shape
Personality 401
12-4e Critics Challenge Whether Traits Reliably Predict
Behavior 402

12-5 The Social-Cognitive Perspective 404

- 12-5a** Personality Is Shaped by the Interaction
of Personal Factors, Environmental Factors,
and Our Behaviors 405

- 12-5b *Interactions with the Environment Can Develop Feelings of Personal Control or Helplessness* 406
- 12-5c *The Social-Cognitive Perspective Has Been Criticized for Failing to Explain the Nonrational Aspects of Personality* 406

12-6 Measuring Personality 408

- 12-6a *Projective Tests Are Designed to Reveal Inner Feelings, Motives, and Conflicts* 408
- 12-6b *Objective Tests Ask Direct, Unambiguous Questions about a Person's Thoughts, Feelings, and Behavior* 410

Suggested Websites 412

Psychological Applications: *Do You Have a Chameleon-Like Personality?* 413

Key Terms 415

Review Questions 415

13 Psychological Disorders 417

13-1 How Should We Define and Explain Psychological Disorders? 419

- 13-1a *The Medical Model Proposes That Psychological Disorders Are Like Diseases* 420
- 13-1b *A Psychological Disorder Involves Atypical Behavior That Causes Personal Distress or Social Impairment* 420
- 13-1c *Psychologists Employ Numerous Theoretical Perspectives in Explaining Mental Illness* 422

13-2 How Should We Classify Psychological Disorders? 425

- 13-2a *There Are Both Risks and Benefits in Using Diagnostic Labels* 426
- 13-2b *The Diagnostic and Statistical Manual of Mental Disorders Is the Most Widely Used Classification Scheme* 427

13-3 The Major Classes of Disorders Identified by DSM-IV 428

- 13-3a *Anxiety Disorders Are Characterized by Distressing, Persistent Anxiety or Maladaptive Behavior* 428
- 13-3b *Mood Disorders Are Characterized by Emotional Extremes* 432
- 13-3c *Dissociative Disorders Involve a Loss of Contact with Portions of One's Consciousness or Memory* 437
- 13-3d *Schizophrenia Involves Disturbances in Almost All Areas of Psychological Functioning* 439
- 13-3e *Somatoform Disorders Are Characterized by Physical Complaints without Physical Causes* 442
- 13-3f *Personality Disorders Are Inflexible and Enduring Behavior Patterns That Impair Social Functioning* 445

Suggested Websites 447

Psychological Applications: *What Are Some Important Facts about Suicide?* 447

Key Terms 448

Review Questions 448

14 Therapy 451

14-1 Who Offers Therapies for Psychological Disorders? 452

- 14-1a *There Are Psychological and Biomedical Therapies* 452
- 14-1b *There Are Three Primary Mental Health Professions That Provide Therapy* 453

14-2 Psychodynamic Therapies 455

- 14-2a *Psychoanalysis Laid the Groundwork for Psychodynamic Therapies* 455
- 14-2b *Free Association Is the Primary Psychodynamic Technique* 455
- 14-2c *Psychodynamic Therapy Is Lengthy and Expensive* 456

14-3 Behavioral Therapies 457

- 14-3a *Some Behavioral Therapies Rely upon Classical Conditioning* 457
 - 14-3b *Operant Conditioning Is Used in Token Economies* 460
 - 14-3c *Observational Learning Is Used in Modeling and Social Skills Training* 461
- ### 14-4 Cognitive Therapies 462
- 14-4a *Rational-Emotive Behavioral Therapy Confronts Clients' Irrational Assumptions* 462
 - 14-4b *Cognitive-Behavioral Therapy Focuses on Depression and Other Emotional Problems* 463

14-5 Humanistic Therapies 464

- 14-5a *Client-Centered Therapy Focuses on Clients' Conscious Self-Perceptions* 464
- 14-5b *Gestalt Therapy Encourages Clients to Get in Touch with Their Current Feelings* 465
- 14-5c *Existential Therapy Helps Clients Deal with the Fundamental Problems of Existence* 467

14-6 Other Forms of Psychotherapy 468

- 14-6a *Child Therapies Use Techniques Designed for Younger Minds* 468
- 14-6b *Group Therapy Involves Clients Discussing Their Problems with One Another under a Therapist's Guidance* 469
- 14-6c *Family and Couples Therapies Try to Change Dysfunctional Interaction Patterns* 470

14-7 Biomedical Therapies 471

- 14-7a *Antipsychotic Drugs Affect Dopamine Neurotransmitters* 472

- 14-7b Antidepressant Drugs Affect Serotonin and Norepinephrine Neurotransmitters 473
- 14-7c Antianxiety Drugs Are the Most Widely Used Legal Drugs 473
- 14-7d Electroconvulsive Therapy Is Sometimes Used to Treat Depression 474
- 14-7e Psychosurgery Involves Removing Portions of the Brain 474
- 14-8 Current Economic Trends in Treatment 476
 - 14-8a Managed Health Care Has Caused Cost Cutting in Treating Psychological Disorders 476
 - 14-8b There Are Increased Efforts to Document Treatment Effectiveness 477

Suggested Websites 478

Psychological Applications: How Do You Select a Psychotherapist? 479

Key Terms 480

Review Questions 480

15 Stress, Coping, and Health 483

- 15-1 What Causes Stress? 484
 - 15-1a Stressors Can Be Positive or Negative, as Well as Large or Small 485
 - 15-1b Hans Selye Viewed Stress as a Specific Set of Responses to Demands 485
 - 15-1c Cognitive Appraisal Is an Important Part of the Stress Response 486
 - 15-1d Psychophysiological Illnesses Are Stress Related 490
- 15-2 What Moderates Stress? 492
 - 15-2a Predictability and Control Can Moderate the Stress Response 492
 - 15-2b Hostile and Pessimistic Persons Are More Reactive to Stressors 493
 - 15-2c Social Support Has Therapeutic Effects 496
- 15-3 What Behaviors Hurt or Help Our Health? 499
 - 15-3a Knowing about “Safer Sex” Is Not Enough 499
 - 15-3b Obesity and Eating Disorders Are a Function of Internal and External Forces 501
 - 15-3c Aerobic Exercise Can Increase Both Physical and Mental Health 507
 - 15-3d Relaxation Training Is Effective in Reducing Stress and Improving Health 510

Suggested Websites 512

Psychological Applications: Who Is Happy and Why? 512

Key Terms 514

Review Questions 514

16 Understanding Social Behavior 517

- 16-1 Social Perception 518
 - 16-1a The First Step in Impression Formation Is Categorizing People into Groups 518

- 16-1b Categorizing People into Groups Can Lead to Stereotyping 519
- 16-1c There Is a Physical Attractiveness Stereotype 519
- 16-1d Stereotyping Can Cause Prejudice and Discrimination 520
- 16-1e Social Judgments Are Influenced by Nonverbal Behavioral Cues 523
- 16-1f Most People Are Poor at Detecting Deception 524
- 16-1g Explaining People’s Behavior Hinges on Either Internal or External Attributions 525
- 16-2 Attitudes 527
 - 16-2a Two Common Attitude Shapers Are Repeated Exposure and Conditioning 528
 - 16-2b Attitude Change Can Occur with or without Comprehension of the Persuasive Message 528
 - 16-2c Cognitive Dissonance Theory Explains How the Need for Consistency Can Lead to Attitude Change 530

16-3 Social Influence 532

- 16-3a Asch’s Research Demonstrates the Power of Conformity Pressure 532
- 16-3b Compliance Is Influenced by Mood, Reciprocity, and Reason-Giving 534
- 16-3c Milgram’s Research Demonstrates That People Often Can Be Induced to Obey Destructive Orders 535

16-4 Hurting and Helping Others 537

- 16-4a Aggression Involves the Intention to Harm Another Living Being 537
- 16-4b There Are Gender Differences in Styles of Aggression 538
- 16-4c Helping Others Is Largely a Learned Response 540
- 16-4d Deciding to Help Often Involves a Series of Decisions 541

16-5 Interpersonal Attraction and Love 547

- 16-5a Proximity and Similarity Often Lead to Attraction 547
- 16-5b Romantic Love Consists of Both Passionate and Companionate Love 548
- 16-5c Homosexual and Heterosexual Romantic Relationships Are Psychologically Similar 549

Suggested Websites 552

Psychological Applications: How Can You Cope with Jealousy? 552

Key Terms 553

Review Questions 553

Appendix: Possible Answers to Journey of Discovery Questions 555

Glossary 563

References 577

Name Index 641

Subject Index 657

Discovery Boxes

- Discovery Box 1-1: What Is the Nature-Nurture Debate? 13
- Discovery Box 1-2: Does Evolution Necessarily Lead to More Complex Life Forms? 15
- Discovery Box 1-3: Do Cultures Differ in How Members Relate to Their Groups? 16
- Discovery Box 2-1: When Are You Most Likely to Believe You “Knew It All Along”? 24
- Discovery Box 2-2: How Can Meta-Analysis Improve Our Understanding of Multiple Studies? 33
- Discovery Box 2-3: How Do Psychologists Measure Self-Consciousness and Self-Disclosure? 38
- Discovery Box 3-1: What Can Cause and Cure the Common Headache? 56
- Discovery Box 3-2: Do You Notice When Your Sympathetic Nervous System Is Activated? 60
- Discovery Box 3-3: Do You and Your Friends Use Different Patterns of Brain Activity to Recognize Each Others’ Faces? 74
- Discovery Box 3-4: How Can You Keep Your Brain Healthy as You Age? 78
- Discovery Box 4-1: Are the Senses Functional Prior to Birth? 94
- Discovery Box 4-2: Is Moral Reasoning Shaped by a Culture’s Individualist-Collectivist Tendencies? 118
- Discovery Box 5-1: Are You Color-Blind? 138
- Discovery Box 5-2: Can You Use Psychology to Reduce Pain? 151
- Discovery Box 5-3: Do Perceptual Illusions Differ Cross-Culturally? 158
- Discovery Box 6-1: How Do Psychologists Study Selective Attention? 168
- Discovery Box 6-2: Why Do We Sleep? 176
- Discovery Box 6-3: Are You a Morning or a Night Person? 177
- Discovery Box 6-4: Are You Getting Enough Sleep? 178
- Discovery Box 6-5: How Can You Meditate? 187
- Discovery Box 7-1: Can You Classically Condition Your Own Eye-Blinking? 203
- Discovery Box 7-2: Can Fear Be Learned through Stimulus Generalization? 206
- Discovery Box 7-3: Can You Identify Your Personal Reinforcers? 215
- Discovery Box 7-4: Can Accidental Reinforcement Lead to Superstitious Behavior? 219
- Discovery Box 8-1: Can You Use Your Knowledge of Semantic Networks to “Read” People’s Minds? 246
- Discovery Box 8-2: What Do We Know about the Tip-of-the-Tongue Phenomenon? 250
- Discovery Box 8-3: How Might Memory Illusions Be Formed? 252
- Discovery Box 8-4: How Accurate Are Flashbulb Memories? 256
- Discovery Box 8-5: Should We Trust Repressed Memories? 262
- Discovery Box 9-1: What Explains Slips of the Tongue? 278
- Discovery Box 9-2: Do Individualists and Collectivists Differ in Their Language Styles? 286
- Discovery Box 9-3: Do We Differ in Our Need for Cognition? 294
- Discovery Box 10-1: How Does Culture Shape Creative Expression? 316
- Discovery Box 10-2: Can Enriched Environments Enhance Intelligence? 321
- Discovery Box 10-3: How Do Negative Stereotypes Foster Academic Underperformance? 332
- Discovery Box 11-1: How Can You Use Rewards without Undermining Intrinsic Motivation? 343
- Discovery Box 11-2: How Might Different Sexual Scripts Lead to Acquaintance Rape? 348
- Discovery Box 11-3: How Does Culture Shape Our Food Preferences? 360
- Discovery Box 11-4: Are There Cultural Differences in What Constitutes “Achievement”? 365
- Discovery Box 11-5: Is There Such a Thing as an Accurate Lie Detector? 370
- Discovery Box 12-1: How Do You Explain Success and Failure in Your Life? 396
- Discovery Box 12-2: Do Nonhuman Animals Have Personality Traits? 402
- Discovery Box 13-1: How Can a Traumatic Event Alter Our Basic Beliefs? 431
- Discovery Box 13-2: Why Are There Higher Rates of Schizophrenia among Members of the Lowest Socioeconomic Classes? 443
- Discovery Box 14-1: Why Do Certain Minorities Underutilize Therapeutic Services? 466
- Discovery Box 14-2: Can You Receive Therapy through the Internet? 471
- Discovery Box 15-1: Is the “Fight-or-Flight” Response Gender Specific? 487
- Discovery Box 15-2: What Is Positive Psychology? 496
- Discovery Box 15-3: Are There Gender Differences in Providing Social Support in Romantic Relationships? 498
- Discovery Box 15-4: How Long Will You Live? 502
- Discovery Box 15-5: What Is Body Esteem? 508
- Discovery Box 16-1: Are There Universal Beauty Standards? 521
- Discovery Box 16-2: How Universal Is the Fundamental Attribution Error? 526
- Discovery Box 16-3: Do You Have a Preference for Consistency? 531
- Discovery Box 16-4: Can the “Culture of Honor” Explain Certain Types of Male Violence? 542
- Discovery Box 16-5: What Is Your Helping Orientation? 544
- Discovery Box 16-6: Does the Relationship between Love and Marriage Differ across Cultures? 550