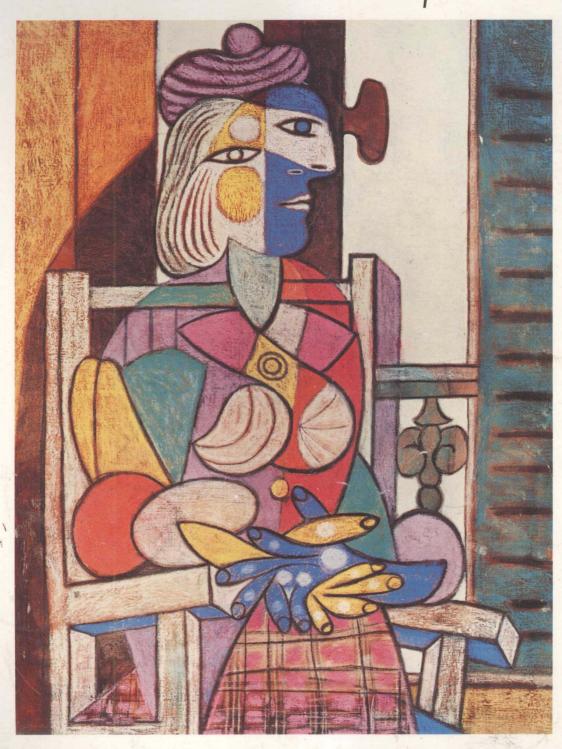
Essentials of Psychology



Douglas A. Bernstein Peggy W. Nash

ESSENTIALS of PSYCHOLOGY

Douglas A. Bernstein

University of South Florida University of Surrey

Peggy W. Nash

Broward Community College

with

Alison Clarke-Stewart

University of California, Irvine

Edward J. Roy

University of Illinois at Urbana-Champaign

Christopher D. Wickens

University of Illinois at Urbana-Champaign

To my dear wife, Miss Lindsay N. Kennedy Doug Bernstein

To my family and sons, Rob and Jeff, with love Peggy Nash

Senior Associate Editor: Jane Knetzger Basic Book Editor: Karla Paschkis Senior Project Editor: Carol Newman Senior Production/Design Coordinator: Sarah Ambrose Senior Manufacturing Coordinator: Priscilla Abreu Marketing Manager: Pamela Laskey

Cover Designer: Harold Burch Designs, NYC. Photo Researcher: Rose Corbett Gordon.

Cover Image: Pablo Picasso's *Women Seated in Front of a Window*, 1937 ©1999 Estate of Pablo Picasso/Artist Rights Society (ARS), New York.

Credits

Chapter opening photos: p. 2: © Gary Hunter/Tony Stone Images; p. 39: Copyright ©98
PhotoDisc, Inc.; p. 70: © Bald Headed Pictures/FPG International; p. 118: Copyright ©98
PhotoDisc, Inc.; p. 148: Copyright ©98 PhotoDisc, Inc.; p. 183: Copyright ©98 PhotoDisc, Inc.; p. 218: Copyright ©98 PhotoDisc, Inc.; p. 253: Copyright ©98 PhotoDisc, Inc.; p. 285:
Copyright ©98 PhotoDisc, Inc.; p. 327: Copyright ©98 PhotoDisc, Inc.; p. 376: Copyright ©98
PhotoDisc, Inc.; p. 405: © Stephen Marks Inc./Image Bank; p. 437: Copyright ©98 PhotoDisc, Inc.; p. 493: Copyright ©98 PhotoDisc, Inc.;

(Credits continue following references.)

Copyright ©1999 by Houghton Mifflin Company. All rights reserved.

No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system without the prior written permission of Houghton Mifflin Company unless such copying is expressly permitted by federal copyright law. Address inquiries to College Permissions, Houghton Mifflin Company, 222 Berkeley Street, Boston, MA 02116-3764.

Printed in the U.S.A.

Library of Congress Catalog Card Number: 98-71988

ISBN: 0-395-87071-2 (student text) 0-395-87072-0 (AIE)

2 3 4 5 6 7 8 9-WOC-02 01 00 99

PREFACE

PSYCHOLOGY IS A RICH and varied science, covering the breadth and depth of human behavior—everything from fleeting reflexes to enduring memories, from falling asleep to falling in love. In our experience, most students enter the introductory course thinking that psychology concerns itself mainly with personality, psychological testing, mental disorders, psychotherapy, and other aspects of *clinical* psychology. Many of these students are surprised, then, when we ask them to read about such topics as the structure of the brain, optical illusions, the effect of jet lag on Olympic athletes, AIDS and the immune system, and prenatal risk factors, to name just a few. Yet these are all topics under the umbrella that is psychology.

For all its diversity, psychology is also a remarkably integrated discipline that links subfields to one another through common interests and overarching research questions. As psychologists and scholars, we wrote this book to portray the wide range of topics that make up the science of psychology. As teachers, we focused on the essentials of the discipline, the core concepts of psychology that we hope will be especially accessible and interesting to you. As you will see, we carefully selected our topics so as to give you an idea of how broad and diverse psychology is. We also tried to present these topics through an integrated, active pedagogical system designed to help students get the most out of the text. In creating *Essentials of Psychology*, we have dedicated ourselves to these goals:

- To select topics that represent the full range of psychology, from cell to society, without overwhelming the reader with details.
- To sharpen our focus on helping students understand and remember the material we present. In short, we tried to create a textbook that not only is clear and enjoyable to read, but that also provides features to support the learning process in all students, regardless of their academic background.
- To help students learn to think critically and scientifically by examining the ways that psychologists have solved, or failed to solve, fascinating puzzles of behavior and mental processes.
- To explain the content of psychology with an emphasis on the *doing* of psychology, grounding all discussions in current and classic research studies (to help students appreciate the importance of research, we also explore one study in detail in a special feature in each chapter).

We present the results of basic and applied research on topics that are both important to psychology and of high interest to students. These topics include, for example, how drugs affect the brain (Chapter 2), basis for optical illusions (Chapter 3), the effects of subliminal messages (Chapter 4), the importance of active learning in the classroom (Chapter 5), the repressed memory controversy (Chapter 6), the origins of intelligence (Chapter 8), sources of sexual orientation (Chapter 9), the development of morals (Chapter 10), the effects of stress on health (Chapter 11), what determines and shapes our personalities (Chapter 12), the causes of multiple personality disorder (Chapter 13), and the development of ethnic prejudice (Chapter 14).

Our discussion of research in psychology is also designed to remind students that while, in some ways, "people are people wherever you go," sociocultural factors, including gender, ethnicity, cultural background, and geography, often shape human behavior and mental processes. We repeatedly point out, therefore, that psychological research on the thinking styles, perceptual habits, psychological disorders, social pressures, and other phenomenon seen in North America or Europe, for example, may or may not apply to other cultures, or even to subcultures within Western countries.

Rather than isolating such material in boxed features, we have woven it into every chapter so that students will encounter it repeatedly as they read. We introduce the importance of sociocultural factors in Chapter 1 and continue to reinforce it through coverage of such topics as the impact of culture and experience on perception (Chapter 3), classrooms across cultures (Chapter 5), ethnic differences in IQ (Chapter 8), social and cultural factors in sexuality (Chapter 9), personality, culture, and human development (Chapter 10), gender and cultural differences in depression and suicide (Chapter 13), and cultural factors in aggression (Chapter 14), to cite just a few examples.

BOOKWIDE ORGANIZATION

This book's streamlined, fourteen-chapter organization has been specifically designed to be easily covered in a single semester. We treat closely connected topics such as sensation and perception, thought and language, motivation and emotion, and psychological disorders and treatments in single chapters, thus highlighting the logical links in the material. Did we arrange our fourteen chapters in an ideal sequence? The sequence we chose reflects the way we teach our introductory course, but we know that each instructor has his or her own preferences for sequencing that may not match ours. Indeed, we have written each of the fourteen chapters as a freestanding

XVIII Preface

unit so that you may assign it in whatever order you wish. For example, many instructors prefer to teach the material on human development relatively late in the course, which is why it appears as Chapter 10. However, the chapter can be just as comfortably assigned earlier in the course.

SPECIAL FEATURES

Essentials of Psychology contains a number of special features designed to promote efficient learning and student mastery of the material. These include, in each chapter, an integrated pedagogical system, sections on Thinking Critically, Focus on Research, and Linkages, along with an Active Review section.

Integrated Pedagogical System

Essentials of Psychology features an integrated pedagogical system designed to help students get the most out of their reading. Based on the proven SQ3R study system (discussed in detail in Chapter 6, "Memory"), learning aids in each chapter include:

- Preview questions To help students survey and question the material, each chapter opens with a full outline, a brief preview statement, and a list of questions related to the key topic of each main section of the chapter. Those questions are repeated within the chapter above the coverage that answers the question, and they appear again in the Active Review, where they help to organize the chapter summary.
- Margin glossary Key terms are defined in the margin of the page where they appear, reinforcing core concepts without interrupting the flow of reading. In the Active Review section at the end of each chapter, a definition exercise helps students restate these core concepts in their own words.
- Instructional captions Captions to all figures, tables, photographs, and cartoons also reiterate core concepts and help students learn to interpret visual information.
- In Review charts In Review charts summarize information in a convenient tabular format. We have placed two or three In Review charts strategically in each chapter to help students synthesize and assimilate large chunks of information—for example, on drug effects, key elements in personality theories, and stress responses and mediators.

Thinking Critically

A special Thinking Critically section in each chapter helps students hone their abilities in this vital skill. Our approach to writing centers on describing research on psychological phenomena in a way that reveals the logic of the scientific method, identifies possible flaws in design or interpretation, and leaves room for more questions and further research. In other words, as authors/teachers, we try to model critical thinking processes for our readers. The Thinking Critically sections are designed to make these processes more explicit and accessible by providing readers with a framework for analyzing evidence before drawing conclusions. The framework is built around five ques-

tions that the reader should find useful in analyzing not only psychological research studies, but other forms of communication as well, including political speeches, advertising claims, and appeals for contributions. These five questions first appear in Chapter 1, when we introduce the importance of critical thinking, and they are repeated in every chapter's Thinking Critically section.

- 1. What am I being asked to believe or accept?
- 2. Is there evidence available to support the claim?
- 3. Can that evidence be interpreted another way?
- 4. What evidence would help to evaluate the alternatives?
- 5. What conclusions are most reasonable?

Using this simple yet powerful framework, we explore issues such as subliminal persuasion, pornography and aggression, recovered memories, and acupuncture, to name just a few. Page xv includes a complete list of the Thinking Critically features.

Focus on Research

Scientists in psychology have helped us to better understand behavior and mental processes through their commitment to empirical research. They have posed vital questions about psychological phenomenon and designed research that is capable of answering, or at least illuminating, those questions. In Chapter 1 we introduce readers to the methods of scientific research and to basic research designs in psychology. Every subsequent chapter features a Focus on Research section that highlights a particular research study to help students appreciate the value of research and the creativity with which psychologists have conducted it. Like the Thinking Critically sections, the Focus on Research features are organized around five questions designed to help readers organize their thinking about research questions and research results.

- 1. What was the researcher's question?
- 2. How did the researcher answer the question?
- 3. What did the researcher find?
- 4. What do the results mean?
- 5. What do we still need to know?

These Focus on Research sections help students to see how psychologists have used experiments, surveys, observations, and other designs to explore phenomena, such as learned help-lessness, infant cognition, and cross-cultural attribution. A full list of the Focus on Research features appears on page xv.

Linkages

In our experience, introductory psychology students are better able to appreciate the scope of our discipline when they look at it not as a laundry list of separate topics but as an interrelated Preface xix

set of subfields, each of which contributes to and benefits from the work going on in all of the others. To help students see these relationships, we have built into the book an integrating tool called Linkages. There are three elements in the Linkages program.

- Linkages diagrams The first figure in each chapter is a Linkages diagram, which presents a set of questions that illustrate three of the ways in which material in the chapter is related to other chapters in the book. For example, the Linkages diagram in Chapter 2, "Biology and Behavior," contains questions that show how biological psychology is related to consciousness ("Does the brain shut down when we sleep?"), human development ("How do our brains change over a lifetime?"), and psychological disorders and treatment ("How do drugs help people who suffer from schizophrenia?").
- Cross-references The page numbers following each question in the Linkages diagrams direct the student to pages that carry further discussion of that question. There, the linking question is repeated in the margin alongside the discussion.
- Linkages sections One of the questions in each chapter's Linkages diagram is treated more fully in a special section later in the chapter entitled, appropriately enough, Linkages (see page xvi for a complete list).

These three elements combine with the text narrative to highlight the network of relationships among psychology's subfields. This Linkages program is designed to help students see the "big picture" that is psychology—no matter how many chapters their instructor assigns, or in what sequence.

Active Review

Our focus on fostering learning and comprehension carries through to the end-of-chapter materials. The Active Review contains a chapter summary organized around the Preview Questions and a Review of Key Terms that asks students to write their own definitions of the terms from the chapter. Twenty multiple-choice questions give students valuable practice taking tests of conceptual and applied knowledge of the chapter's key points; an answer key provided at the end of the text identifies and briefly explains each correct answer, and refers the students to the page on which the concept is first discussed. To Learn More provides an annotated list of courses, movies, books, and web-search key words to help students find additional information about each chapter's topics.

TEACHING AND LEARNING SUPPORT PACKAGE

Many useful materials have been developed to support *Essentials of Psychology*. Designed to enhance the teaching and learning experience, they are well integrated with the text and include some of the latest technologies.

Annotated Instructor's Edition

Designed to help instructors coordinate the print, video, and software supplements available with the text, the Annotated Instructor's Edition shows which materials apply to the content on each page of the student text. Annotations indicate learning objectives, test questions, discussion and lecture ideas, handouts, active learning activities, videodisk segments, computer simulations, overhead transparencies, and the like. A key identifying the supplements appears on the inside front cover.

Print Supplements for the Instructor

Instructor's Resource Manual Developed for the brief course by Amanda Allman, M.A., University of Illinois, the Instructor's Resource Manual includes discussion, activity, and lecture suggestions and handouts for each chapter, as well as a video guide and a pedagogical strategy section on active learning, critical thinking, using Linkages, and research focuses. It introduces the learning objectives that unify the Instructor's Resource Manual, Test Bank, and Study Guide.

Printed Test Bank Written by Amanda Allman, the *Test Bank* includes 100 multiple-choice and three essay questions per chapter. Every multiple-choice question is keyed to pages in the student text and to the learning objectives that also appear in the IRM and Study Guide. Each question is identified by whether it tests applied or factual knowledge. Many of the test items have been class-tested with between 500 and 2,500 students. A statistical performance analysis is provided for all class-tested questions. A Computerized Test Bank allows instructors to generate exams and to integrate their own test items with those on disk.

Electronic and Multimedia Supplements

Power Presentation Manager This powerful program allows instructors to create their own well-organized classroom presentations using line art, tables, outlines, and videodisc material, as well as their own resources.

Lecture Starter Video This videotape includes about sixty-five short (two- to seven-minute) videoclips organized into thirty-four topical areas, designed to function as lecture or discussion starters. Visit Houghton Mifflin Company's web site for the video guide, which includes description and discussion questions.

The Psychology Show This video supplement for introductory psychology is available in both videodisc and VHS format. Featuring one hour of videoclip footage (nineteen segments) and numerous still images, *The Psychology Show* is designed to expand on the text's coverage of major topical areas in psychology and stimulate class discussion. The accompanying guide offers information on each motion segment and provides bar codes for videodisc use.

PsychAbilities Simulations These thirteen computer simulations illustrate intriguing phenomena and recreate important psychological experiments. They are available on disk for use in the classroom or the computer laboratory.

PsychAbilities Web Site PsychAbilities, a teaching and learning web site, offers instructors and students access to interactive activities, links, study tools, and teaching materials for the introductory course. Visit the Psychology home page on Houghton Mifflin's College Division web site at http://www.hmco.com.

Overhead Transparencies The accompanying transparencies include over one hundred four-color images from the text and other sources.

Media Policy Ask your Houghton Mifflin representative about the additional videos and CD-ROMs available, including, among many videos, *The Brain* modules, *The Mind* modules, *Discovering Psychology*, and *The Psychology Show*.

Print and Electronic Supplements for the Student

Printed Study Guide Developed by Amanda Allman, the *Study Guide* augments the Active Review study materials built into every chapter of *Essentials of Psychology*. For each chapter, the *Study Guide* includes learning objectives, key term hints and examples, Concept Exercises, Critical Thinking exercises, Personal Learning Activities, and two multiple-choice quizzes with wrong-answer rejoinders and a self-diagnostic quiz analysis to pinpoint weak topic and cognitive skill areas.

Computerized Study Guide This interactive program gives students feedback on correct as well as incorrect answers.

Succeed in College! This skills-building booklet contains selected chapters from Walter Pauk's best-selling study skills text, *How to Succeed in College. Succeed in College!* offers timetested advice on note taking, test taking, and other topics, as well as a section on careers in psychology, and it can be shrinkwrapped free of charge with new copies of *Essentials of Psychology* sold in North America.

Internet Guide The Internet Guide, which can be shrink-wrapped with new copies of *Essentials of Psychology*, introduces students to electronic mail, discussion groups, on-line journals, the World Wide Web, Usenet news groups, and numerous addresses and sites relevant to psychology.

Psychology in Context Psychology in Context, by David N. Sattler and Virginia Shabatay, is an exceptional reader of engaging first-person narratives and essays keyed to major psychological concepts, and it is available in a shrink-wrapped package with new copies of Essentials of Psychology.

PsychAbilities Web Site As described above, this dynamic site offers students access to a variety of unique Net resources and provides frequently updated links.

ACKNOWLEDGMENTS

Many people provided us with the help, criticism, and encouragement we needed to create *Essentials of Psychology*. We are of course indebted to our colleagues Ed Roy, Chris Wickens, and Alison Clarke-Stewart, who, as co-authors of the Bernstein, Clarke-Stewart, Roy, and Wickens textbook, *Psychology*, provided invaluable assistance in reviewing the *Essentials* manuscript as it developed. We offer profound thanks, also, to our colleague Lou Penner, of the University of South Florida, who has joined the author team for the fifth edition of *Psychology*, and who offered innumerable helpful comments and suggestions, especially in relation to the chapters on personality and social psychology.

Special thanks are also due to our dear friend and valued colleague, Sandra Schweighart Goss, director of Introductory Psychology at the University of Illinois, who worked closely with us in the planning stages as we shaped and organized *Essentials of Psychology*. Elaine Cassel, at Lord Fairfax Community College, and Kevin Keating, at Broward Community College, were also continuing sources of good advice.

Thanks go, too, to Diane Weidner, Doug Bernstein's secretary for the past fifteen years, and to Barbara Kessler, Peggy Nash's secretary, who did their usual fabulous jobs at the multitude of administrative and communication tasks that go along with a project like this. We could not have done it without you, Diane and Barbara.

We also extend our heartfelt thanks to *Essentials*' Board of Consultants, eight dedicated instructors whose involvement in focus groups and surveys, comments on manuscript chapters, and answers to development queries shaped this text.

Charles Blair-Broeker, Cedar Falls High School
Ken LeSure, Cuyahoga Community College
Barbara Lusk, Collin County Community College
Malinda Jo Muzi, Community College of Philadelphia
Maggie Sokolik, University of California, Berkeley
Nancy Simpson, Trident Technical College
Fred Whitford, Montana State University
Robert Wildblood, Northern Virginia Community College

We owe an enormous debt as well to the colleagues listed below for their thoughtful reviews of the manuscript as it was being developed. Their advice and suggestions for improvement were responsible for many of the good qualities you will find in this book. If you have any criticisms, they probably involve areas our reviewers warned us about!

Grace Auyang, University of Cincinnati
Alan Baxter, Technical Career Institutes, New York
Beth Benoit, University of Massachusetts, Lowell and
Middlesex Community College

Joseph J. Benz, *University of Nebraska at Kearney* Winfield Brown, *Florence Darlington Technical College* Preface

Saundra Ciccarelli, Gulf Coast Community College
Nat DeAnda, Los Madanos College
Grace Galliano, Kennesaw State University
Christopher Gilbert, Bristol Community College
Craig W. Gruber, Walt Whitman High School
Debra Hollister, Valencia Community College
Gene Indenbaum, SUNY Farmingdale
David Murphy, Waubonsee College
Randall E. Osborne, Indiana University East
Ralph G. Pifer, Sauk Valley Community College
John L. Romanek, Jefferson Community College
Holly Straub, University of South Dakota
M. Lisa Valentino, Seminole Community College
C. Van Youngman, Art Institute of Philadelphia

The process of creating *Essentials of Psychology* was greatly facilitated by the work of many dedicated people in the College Division at Houghton Mifflin Company. From the sales representatives and sales managers who reinforced our colleagues' requests for the text, to the marketing staff who worked to tell our colleagues what *Essentials* has to offer, it seems everyone in the division had a hand in shaping this book. Several people in the editorial and production areas at Houghton Mifflin deserve

special mention, however, because they did an absolutely outstanding job in helping us develop the Essentials manuscript and turn that manuscript into the beautiful book you are now holding. Senior Associate Editor Jane Knetzger was involved in the shaping and development of Essentials from day one; her advice and suggestions were invariably helpful. Karla Paschkis, our Basic Book Editor, did a great job "on the front lines" as we worked on the manuscript and tried to meet the developmental goal of focusing on the essentials of psychology. Thanks for not killing us, Karla. And many thanks to Carol Newman, for coordinating the myriad production tasks associated with this project and for keeping them, and us, on schedule. We appreciate it very much. We also want to thank Ann Schroeder and Charlotte Miller for their outstanding work in the creation of the art and photo program for Essentials, and many thanks, too, to Christine Arden for her flawless copyediting of the final manuscript, and to Sarah Ambrose for her work as Production/Design Coordinator. Without these people, and those who worked with them, Essentials of Psychology would still be just an idea.

Finally, we want to express our thanks to our friends and families who helped sustain us as we worked on this book. Your love and support meant more to us than you will ever know.

Doug Bernstein Peggy Nash

BRIEF CONTENTS

Features Preface Introduction to the Science of Psychology Biology and Behavior			
		Sensation and Perception	
		Consciousness	
Learning			
Memory			
Thought and Language			
Mental Abilities			
Motivation and Emotion			
Human Development			
Health, Stress, and Coping			
Personality			
Psychological Disorders and Their Treatments			
Social Psychology			
Appendix: Statistics in Psychological Research			
Answer Key to Multiple-Choice Questions			
References			
Credits			
Glossary/Index			

CONTENTS

Features xv Preface xvii

1

INTRODUCTION TO THE SCIENCE OF PSYCHOLOGY

The World of Psychology: An Overview 4

Behavior and Mental Processes 4 A Brief History of Psychology 6

Approaches to the Science of Psychology 10

Many Approaches, One Theme 10 Subfields of Psychology 12 Linkages Within Psychology and Beyond 15

Human Diversity and Psychology 16

The Impact of Culture on Psychology 16 Psychology and Sociocultural Variables Today 19

Thinking Critically About Psychology (or Anything Else) 19

Research Designs in Psychology 21

The Role of Theories 21
Naturalistic Observation 22
Case Studies 23
Surveys 23
Experiments 24

■ FOCUS ON RESEARCH: Studying EMDR 24 Selecting Human Participants for Research 27

Statistical Analysis of Research Results 29

Descriptive Statistics 29 Inferential Statistics 30

Ethical Guidelines for Psychologists 31

LINKAGES: Psychological Research and Behavioral Genetics 33

Active Review 35

BIOLOGY AND BEHAVIOR

Cells of the Nervous System 41

Neurons 41
Action Potentials 43
Synapses and Communication Between Neurons 43

The Chemistry of Behavior: Neurotransmitters 44

Seven Major Neurotransmitters 45

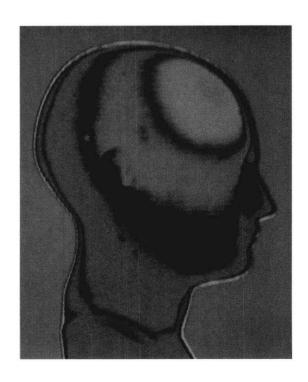
■ THINKING CRITICALLY: Are There Drugs That Can Make You Smarter? 47

The Peripheral Nervous System: Keeping in Touch with the World 49

The Somatic Nervous System 50
The Autonomic Nervous System 50

The Central Nervous System: Making Sense of the World 50

The Spinal Cord 51
The Brain 51
The Hindbrain 52
The Midbrain 53
The Forebrain 53
The Cerebral Cortex 56
Sensory and Motor Cortex 57



FOCUS ON RESEARCH: The Case of the Disembodied Woman 59
 Association Cortex 60
 The Divided Brain: Lateralization 61
 Split-Brain Studies 61
 Plasticity in the Brain 62

LINKAGES: Human Development and the Changing Brain 63

The Endocrine System: Coordinating the Internal World 64
Active Review 66



SENSATION AND PERCEPTION

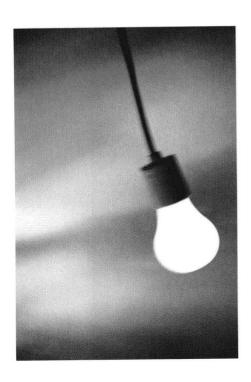
Sensing and Perceiving Our World 72

Sensory Systems 73

Coding Sensations: Did You Feel That? 74 Absolute Thresholds: Is Something Out There? 74

Seeing 76

Light 76
Focusing Light 77
Converting Light into Images 77



Seeing Color 80 Theories of Color Vision 81

Hearing 84

Sound 84 The Ear 85 Coding Sounds 87

The Chemical Senses: Smell and Taste 88

Smell, Taste, and Flavor 8 Our Sense of Smell 89 Our Sense of Taste 90

Sensing Your Body 91

Touch and Temperature 91 Pain 92

THINKING CRITICALLY: Does Acupuncture Relieve
 Pain? 94
 Sensing Body Position 95

Perception 97

Organizing the Perceptual World 97

Principles of Perceptual Organization 97
Perception of Depth and Distance 99
Perception of Motion 101
Perceptual Constancy 101
Optical Illusions 102
Culture, Experience, and Perception 103

Recognizing the Perceptual World 105

Bottom-Up Processing 105
Top-Down Processing 106
Top-Down and Bottom-Up Processing Together 107

LINKAGES: Perception and Human
Development 108

Attention 109

The Process of Attention 110
Dividing and Focusing Attention 110

■ FOCUS ON RESEARCH: Attention and the Brain 112

Active Review 113



CONSCIOUSNESS

The Scope of Consciousness 120

States of Consciousness 120 Levels of Consciousness 121 Mental Processing Without Awareness 121

THINKING CRITICALLY: Hidden Persuaders and Subliminal Perception 123

■ FOCUS ON RESEARCH: Subliminal Messages in Rock Music 124 Altered States of Consciousness 126

Sleeping and Dreaming 127

Stages of Sleep 127 Sleep Disorders 128 Why Do People Sleep? 130 Dreams and Dreaming 133

Hypnosis 134

Experiencing Hypnosis 134
Explaining Hypnosis 135
Applications of Hypnosis 136

LINKAGES: Meditation, Health, and Stress 136

Psychoactive Drugs 137

Psychopharmacology 137
The Varying Effects of Drugs 138
Depressants 139
Stimulants 141
Opiates 142
Hallucinogens 142

Active Review 144



LEARNING

Classical Conditioning: Learning Signals and Associations 150

Pavlov's Discovery 151
Conditioned Responses Over Time: Extinction and Spontaneous Recovery 152
Stimulus Generalization and Discrimination 153
The Signaling of Significant Events 154
Some Applications of Classical Conditioning 156

LINKAGES: Learning and Consciousness 157

Instrumental and Operant Conditioning: Learning the Consequences of Behavior 158

From the Puzzle Box to the Skinner Box 158
Basic Components of Operant Conditioning 159
Forming and Strengthening Operant Behavior 162
Why Reinforcers Work 165
Punishment and Learning 165
Operant Conditioning of Human Behavior 166

Cognitive Processes in Learning 168

Learned Helplessness 168

FOCUS ON RESEARCH: The "I Can't Do It"

Attitude 168

Latent Learning and Cognitive Maps 170
Insight and Learning 171
Observational Learning: Learning by Imitation 172

THINKING CRITICALLY: Does Watching Violence on Television Make People More Violent? 173

Using Research on Learning to Help People Learn 176

Classrooms Across Cultures 176 Active Learning 177 Skill Learning 177

Active Review 178



MEMORY

The Nature of Memory 185

Basic Memory Processes 185 Types of Memory 186 Models of Memory 187

Storing New Memories 190

Sensory Memory 190
Short-Term, or Working, Memory 191
Long-Term Memory 193
Distinguishing Between Short-Term and
Long-Term Memory 195



Retrieving Memories 197

Retrieval Cues and Encoding Specificity 197 Context and State Dependence 198 Retrieval from Semantic Memory 198

Constructing Memories 200

- FOCUS ON RESEARCH: I Could Swear I Heard It! 200 Constructive Memory and PDP Models 202
- LINKAGES: Memory and Perception in the Courtroom 203

Forgetting 204

How Do We Forget? 204 Why Do We Forget? 205

■ THINKING CRITICALLY: Can Traumatic Memories Be Repressed, Then Recovered? 207

Biological Bases of Memory 209

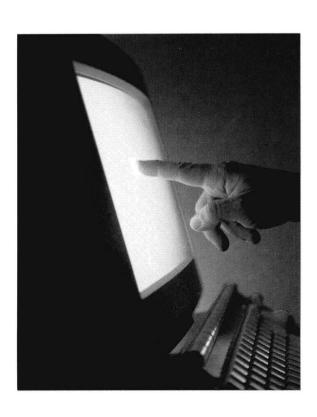
Location of Memories in the Brain 209 How the Brain Forms Memories 210

Improving Your Memory 211

Mnemonics 211

Guidelines for More Effective Studying 211

Active Review 213



7 THOUGHT AND LANGUAGE

Basic Functions of Thought 220

The Circle of Thought 220 Information-Processing Speed: Reaction Time 222

Mental Representations: The Ingredients of Thought 223

Cognitive Maps 223 Images 224 Concept Schemas and Event Scripts 224 Propositions 226

Thinking Strategies 226

Formal Reasoning 226 Informal Reasoning 227

Problem Solving 228

Strategies for Problem Solving 229 Obstacles to Problem Solving 229

■ FOCUS ON RESEARCH: Problem-Solving Strategies in the Real World 231
Problem Solving by Computer 233

Decision Making 234

Evaluating Options 235
Biases and Flaws in Decision Making 235

LINKAGES: Group Processes in Problem Solving and Decision Making 237

Language 238

The Elements of Language 238
Understanding Speech 240
Learning to Speak: Stages of Language
Development 241
How Is Language Acquired? 243

■ THINKING CRITICALLY: Can Nonhumans Communicate with Language? 245 Knowledge, Language, and Culture 247

Active Review 248

χi



MENTAL ABILITIES

Understanding Intelligence 254

The Psychometric Approach 255
The Information-Processing Approach 256
The Triarchic Theory 256
Multiple Intelligences 257

Testing Intelligence 258

A Brief History of IQ Tests 258 IQ Tests Today 260

Evaluating IQ Tests 262

The Reliability and Validity of IQ Tests 262 How Fair Are IQ Tests? 264

■ THINKING CRITICALLY: Are IQ Tests Culturally Biased? 264

Nature, Nurture, and IQ 267

IQ Scores as a Measure of Innate Ability 267

FOCUS ON RESEARCH: Who Is Smarter,
 Men or Women? 268
 Group Differences in IQ Scores 269
 Conditions That Can Raise IQ 272
 IQ Scores in the Classroom 273

Diversity in Mental Abilities 274

Creativity 274 Unusual Mental Ability 276

LINKAGES: Mental Abilities and Aging 279

Active Review 280

9

MOTIVATION AND EMOTION

Concepts and Theories of Motivation 287

Sources of Motivation 287
Instinct Theory and Its Descendants 288
Drive Reduction Theory 289
Arousal Theory 289
Incentive Theory 290

Hunger and Eating 291

Biological Signals for Hunger and Satiety 291 Hunger and the Brain 292 Flavor, Cultural Learning, and Food Selection 293 Eating Disorders 294

Sexual Behavior 296

■ FOCUS ON RESEARCH: Tell Me About Your
Sex Life 297
The Biology of Sex 298
Social and Cultural Factors in Sexuality 300
Sexual Orientation 300

 THINKING CRITICALLY: What Determines Sexual Orientation? 301
 Sexual Dysfunctions 303

Achievement Motivation 304

Need for Achievement 304 Gender Differences in Achievement Motivation 306 Achievement and Success in the Workplace 306

Relations and Conflicts Among Motives 307

Maslow's Hierarchy 308

LINKAGES: Conflicting Motives and Stress 308

The Nature of Emotion 310

Defining Characteristics 310 The Biology of Emotion 311

Theories of Emotion 313

James's Theory 313 Schachter's Theory 316 Cannon's Theory 317

Communicating Emotion 319

Innate Expressions of Emotion 319 Social and Cultural Influences on Emotional Expression 320

Active Review 322



xii

10 HUMAN DEVELOPMENT

Exploring Nature-Nurture 329

Understanding Genetic Influence 331 Genes and the Environment 331

Beginnings 332

Prenatal Development 332 The Newborn 334

Infancy and Childhood: Cognitive Development 336

The Development of Knowledge: Piaget's Theory 336

- FOCUS ON RESEARCH: Are You Telling Me That Infants Know Physics? 340 Modifying Piaget's Theory 343 Information Processing During Childhood 344
- LINKAGES: Development and Memory 345
 Culture and Cognitive Development 346
 Individual Variations in Cognitive Development 346

Infancy and Childhood: Social and Emotional Development 347

Individual Temperament 348 The Infant Grows Attached 349

 THINKING CRITICALLY: Does Day Care Harm the Emotional Development of Infants? 352
 Relationships with Parents and Peers 353
 Social Skills and Understanding 357
 Gender Roles 357

Adolescence 359

The Challenges of Change 359
Identity and Development of the Self 361
Abstract Thought and Moral Reasoning 363

Adulthood 365

Physical Changes 366 Cognitive Changes 366 Social Changes 367 Death and Dying 371

Active Review 372

HEALTH, STRESS, AND COPING

Health Psychology 378 Understanding Stress 379

Stressors 379 Stress Responses 381

- LINKAGES: Stress and Psychological Disorders 385Stress Mediators 386
- FOCUS ON RESEARCH: Personality and Health 390

The Physiology and Psychology of Health and Illness 392

Stress, the Immune System, and Illness 392 Heart Disease and Behavior Patterns 394

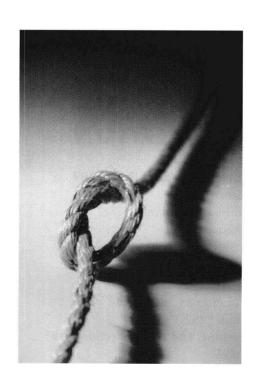
■ THINKING CRITICALLY: Does Cynical Hostility
Increase the Risk of Heart Disease? 394
Risking Your Life: Health-Endangering Behaviors

Promoting Healthy Behavior 397

Health Beliefs and Health Behaviors 398

Changing Health Behaviors: Stages of Readiness 398 Programs for Coping with Stress 399

Active Review 401



12

PERSONALITY

The Psychodynamic Approach 408

Structure of Personality 408
Stages of Personality Development 409
Variations on Freud's Personality Theory 411
Contemporary Psychodynamic Theories 411
Evaluating the Psychodynamic Approach 412

The Trait Approach 413

Prominent Trait Theories 413 The "Big Five" Model of Personality 416

■ THINKING CRITICALLY: Are Personality Traits Inherited? 416
Evaluating the Trait Approach 419

■ FOCUS ON RESEARCH: Personality Development Over Time 419

The Cognitive-Behavioral Approach 421

Prominent Cognitive-Behavioral Theories 421 Evaluating the Cognitive-Behavioral Approach 423

The Phenomenological Approach 424

Major Phenomenological Theories 424 Evaluating the Phenomenological Approach 426

LINKAGES: Personality, Culture, and Human Development 427

Assessing Personality 428

Objective Tests 429
Projective Tests 431
Personality Tests and Employee Selection 432

Active Review 433

Psychological Processes 442 Sociocultural Context 443 Diathesis-Stress as an Integrative Approach 444

Classifying Psychological Disorders 444

A Classification System: DSM-IV 445 Anxiety Disorders 448

LINKAGES: Psychological Disorders and Learning 450
Somatoform Disorders 451
Dissociative Disorders 452
Mood Disorders 454
Schizophrenia 459
Personality Disorders 463

FOCUS ON RESEARCH: Are There Links Between Child
 Abuse and Antisocial Personality Disorder? 464
 A Sampling of Other Psychological Disorders 465

The Treatment of Psychological Disorders 469

Psychodynamic Psychotherapy 470 Phenomenological Psychotherapy 472 Behavior Therapy 474 Group, Family, and Couples Therapy 478

Evaluating Psychotherapy 480

THINKING CRITICALLY: Is One Approach to
Psychotherapy Better Than the Others? 481
Cultural Factors in Therapy 482
Rules and Rights in the Therapeutic Relationship 483
Biological Treatments 483

Community Psychology 485 Active Review 488



PSYCHOLOGICAL DISORDERS AND THEIR TREATMENTS

Understanding Psychological Disorders: Some Basic Issues 440

What Is Abnormal? 440
Behavior in Context: A Practical Approach 440

Explaining Psychological Disorders 441

Supernatural Influences 441 Biological Factors 441





Social Construction of the Self 495

Social Comparison 495 Social Identity Theory 496

Social Perception 496

The Role of Schemas 497
First Impressions 497
Explaining Behavior: Attribution 499

■ FOCUS ON RESEARCH: Attribution Across
Cultures 499
Biases in Attribution 501

Attitudes 503

The Structure of Attitudes 503 Forming Attitudes 503 Changing Attitudes 504

Prejudice and Stereotypes 506

Theories of Prejudice 506 Reducing Prejudice 507

Interpersonal Attraction 509

Keys to Attraction 509 Intimate Relationships and Love 510

Social Influence 513 Social Norms 513

LINKAGES: Motivation and the Presence of Others 514 Conformity and Compliance 515

Obedience 519

Factors Affecting Obedience 520 Evaluating Milgram's Studies 522

Aggression 524

Why Are People Aggressive? 524 When Are People Aggressive? 526

■ THINKING CRITICALLY: Does Pornography Cause Aggression? 527

Altruism and Helping Behavior 530

Why Do People Help? 530 Cooperation, Competition, and Conflict 534

Group Processes 534

Group Leadership 535 Group Think 536

Active Review 537

Appendix: Statistics in Psychological
Research A-I
Answer Key to Multiple-Choice Questions A-6
References A-9
Credits A-48
Glossary/Index A-50