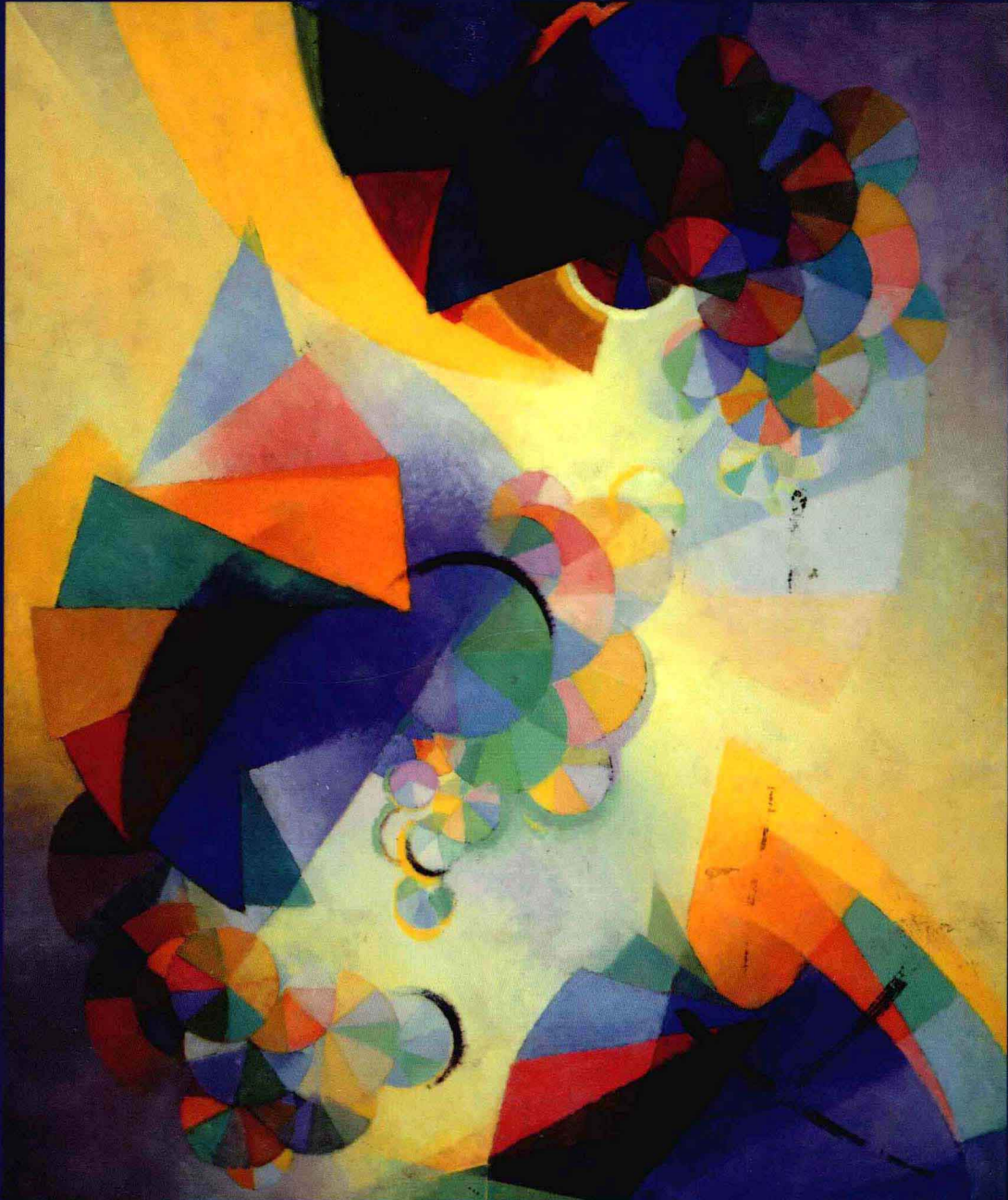


● Introduction to Psychology

Exploration and Application

Fifth Edition

Dennis Coon



● Preface to the Fifth Edition

To the Student

Psychology is a large and rapidly growing field. It is at once familiar, exotic, commonplace, surprising, and challenging. Most of all, psychology is changing. Indeed, this book can be no more than a “snapshot” of a colorful passing scene. And yet, it is rapid change that makes psychology especially fascinating: What, really, could be more intriguing than our evolving understanding of human behavior?

In a very real sense, psychology is about each of us. Psychology asks, “How can we step outside of ourselves for a more objective look at how we live, think, and act?” Psychologists believe the answer is through careful thought, observation, and inquiry. As simple as this may seem, it is the guiding light for everything that follows in this book.

I sincerely hope that you will find psychology as fascinating as I have. In this text, I have done all that I could imagine to make your first encounter with psychology enjoyable and worthwhile. To help you get off to a good start, Chapter 1 includes a discussion of how to study effectively. The ideas covered there will help you get the most out of this text, class lectures, and your psychology course as a whole. In the remaining chapters, I hope that the delight I have found in my own students’ curiosity, insights, imagination, and interests will be apparent. Please view this book as a long letter from me to you. It is, in a very real sense, written about you, for you, and to you.

To the Instructor

This book differs from traditional texts in a number of important ways. If you are already familiar with its format, a description of Fifth Edition changes follows shortly. If the text is unfamiliar, a brief account of its design and underlying philosophy is in order.

A Book for Students As an instructor I have learned that selecting a textbook is half the battle in teaching a course. A good text does much of the work of imparting

information to students. This frees class time for discussion and it leaves students asking for more. When a book overwhelms students or cools their interest, teaching becomes an uphill battle. For this reason, I have worked hard to make this a clear, readable, and interesting text.

I believe an important question to ask of the introductory course is “What will students remember next year, or in 10 years?” Consequently, I have tried to give students a clear grasp of major concepts, rather than bury them in details. At the same time, I have tried to provide a broad overview that does justice to psychology’s diversity. I think students will find this book full of intellectual challenge, and teachers will find traditional topics covered to their satisfaction. In addition, I have made a special effort to relate psychology to common experiences and to practical problems of daily life.

A major feature of this book is the *Applications* section in each chapter. These selections explicitly bridge the gap between psychological theory and practical application. I believe students have every right to ask, “Does this mean anything to me? Can I use it? Why should I learn it if I can’t?” No matter how interesting or intellectually stimulating, a text that fails to show the practical value of adopting new ideas is irrelevant in a very basic sense. The Applications sections spell out how students can use the principles of psychology. By doing so, they breathe life into its concepts.

At the end of each chapter you will find a separate *Exploration*. These sections cover current issues, topics from psychology’s frontiers, or subjects likely to promote thought and discussion. In essence, they serve as supplemental readings within the text, to provide a taste of changing issues and ideas in psychology. Because Explorations conclude each chapter, they are easy to assign or delete at your discretion.

A Format for Learning

Before this book first appeared, psychology texts made surprisingly little use of learning principles to teach psychology. The extensive use of learning aids herein is based on my belief that students can be guided into more ef-

fective study and reading habits while they learn course content. Each chapter is built around the well-known SQ3R study-reading formula. Thus, in addition to helping students learn psychology, the chapter format encourages the development of valuable study skills. Student response to this feature of the text has been very positive, with many students reporting that they transfer the SQ3R technique to other texts as well.

Notice how the time-tested steps of the SQ3R method—*survey, question, read, recite, and review*—underlie the design of each chapter.

Survey A short *Chapter Preview* arouses reader interest, gives an overview of the chapter, and focuses attention on the task at hand. A new boxed outline, titled *In This Chapter*, accompanies the Preview and lists upcoming topics. After that, *Survey Questions* spotlight major issues so that students will read with a purpose.

Question Throughout each chapter, *Guide Questions* act as advance organizers to prime students to look for important ideas as they read. This helps ensure that reading is an active learning experience. Guide Questions also create a dialogue in which student questions and reactions are anticipated. This clarifies difficult points in a lively give-and-take between questions and responses. And, significantly, Guide Questions model critical thinking skills, to encourage reflection and inquiry.

Read The readability of each chapter has been carefully controlled for maximum student involvement and comprehension. I rewrote nearly every line of this edition in an effort to make the text as clear and accessible as possible. To further facilitate comprehension, the text employs a full array of traditional learning aids. These include boldface type and phonetic pronunciations for important terms, bullet summaries, a detailed glossary (also with pronunciations), summary tables, a detailed index, and a robust illustration program.

The *Compare* boxes that appear at selected points in each chapter are new in this edition. Each Compare box contains two or more precise definitions to help students differentiate between terms that are often confused (for example, negative reinforcement and punishment). Making comparisons encourages students to sharpen key distinctions and to think about what they are learning.

Special boxed *Highlights*—which discuss recent research, interesting topics, and original viewpoints—are judiciously placed in each chapter. Highlights serve as stimulating but non-intrusive supplements to the main text.

Chapters throughout the text have been kept short so that each can be read in a single session. This brevity provides excellent flexibility regarding the order in which chapters are assigned. It also gives students a sense of closure or completion at the end of each assignment.

Recite Every few pages, a *Learning Check* allows students to test their understanding and recall of the preceding discussion. Learning Checks are short, non-comprehensive quizzes that require students to stop and actively process information. Students who miss any questions are encouraged to back-track and clarify their understanding before reading more. Completing each Learning Check serves as a form of recitation to enhance learning. It also provides feedback so that students can gauge their progress.

Review As mentioned earlier, an Applications section follows the core of each chapter. Applications show students how psychological concepts relate to practical problems, including problems in their own lives. Through these discussions, students review and extend the ideas they have learned. Applications help reinforce and consolidate learning by illustrating psychology's practicality.

An Exploration follows each Applications section. In most cases, students must be familiar with chapter concepts to fully appreciate an Exploration. This again motivates students to review what they have learned and broaden their understanding.

To complete the review phase of the SQ3R method, a point-by-point *Chapter Summary* provides a concise synopsis of all major topics. Each chapter concludes with a provocative series of *Questions For Discussion* that may be used in class.

Fifth Edition Changes

As in most sciences, there is a stable core of information in psychology that changes little from year to year. Yet, at the same time, psychology continues to produce a wealth of new data and ideas. My challenge in this revision was thus two-fold. First, I wanted to refine and distill the core content of the text. Second, I wanted to introduce students to exciting advances in psychology.

Readers will have to judge for themselves, but I believe that tightening some parts of the text to make room for new information actually strengthened the presentation of core topics. As a result, I was able to include, in almost every chapter, new ideas that I personally found fascinating. I sincerely hope that readers will share my ex-

citement about the new information and insights that psychology has produced in recent years.

Chapter Format With this revision, the chapter format has evolved in several ways. The new “In This Chapter” outlines that accompany Chapter Previews are designed to help students gain an overview of chapter content. Survey Questions are now bulleted for easier reading. The “Compare” boxes are new. Highlights are very carefully repositioned within the chapter design. The Applications are boxed, but they are printed on white paper to make it clear that they are an integral part of each chapter. It is also notable that Chapter Summaries now follow the Explorations. This move was requested by many adopters and reviewers. It allows the summary to cover the entire chapter, and it signals to students that all major sections of the chapter should be read.

New Topics and Updated Coverage Virtually every chapter of the Fifth Edition has been rewritten, reorganized, or improved, with new information evident on every page. I have drawn on hundreds of new references (many as recent as 1988) for this revision. This edition includes one entirely new Chapter Preview and several that are revised. There are 19 new Highlights. Examples include new discussions of subliminal messages in rock music, police detectives’ use of cognitive interviewing to improve eyewitness’ memories, and seasonal affective disorders. Six new or substantially revised Applications appear in this edition. Eight Explorations are entirely new or extensively updated.

Combined with line-by-line updates, the content changes in this edition are too numerous to describe here. I would, nevertheless, like to give at least a sample of new or revised topics. These include: empiricism, women in psychology, psychology as a profession, major perspectives in psychology (ch. 1); research methods and critical thinking, firewalking (ch. 2); brain-and-behavior links, split-brain research, laterality, PET scans of the brain at work (ch. 3); theories of color vision and the sense of smell, alleged use of subliminal messages in rock music (ch. 4); the moon illusion, attention, top-down and bottom-up processing (ch. 5); sleep, cocaine abuse, nicotine, sensory deprivation, drug abuse (ch. 6); prepared fear theory, human learning (ch. 7); using punishment wisely, the impact of TV as a model, breaking bad habits, buffering television’s impact on children (ch. 8); the “feeling of knowing,” the permanence of memory, flashbulb memories, ways to improve memory, cognitive interviewing and eyewitness recall (ch. 9); contemporary cognitive research, heuristics, intuitive thought, artificial in-

telligence, expertise (ch. 10); circadian rhythms, jet lag, and shift work, “yo-yo dieting,” intrinsic motivation, behavioral weight-control (ch. 11); theories of emotion, the facial feedback hypothesis, behavioral lie catching, Sternberg’s triarchic theory of love (ch. 12); health psychology and behavioral medicine, behavioral risk factors, health promoting behaviors, Type A behavior, the hardy personality, stress and the immune system, meditation (ch. 13); parenting styles, social development, attachment and daycare, Piagetian stages, early childhood education programs, moral development (ch. 14); childhood problems, midlife development, aging, death and bereavement (ch. 15); traits, types, self-concept, theories of personality, situations and dispositions, shyness, genetics and personality (ch. 16); possible selves, self-monitoring (ch. 17); the *Army Alpha*, deviation IQ, retardation, the heredity-environment debate, confluence model, the Larry P. case (ch. 18); DSM-III-R, child molestation, anxiety disorders, personality disorders, depression and suicidal thinking (ch. 19); DSM-III-R, ECT, depression, schizophrenia, seasonal affective disorder, psychiatric commitment and civil rights (ch. 20); short-term dynamic therapy, psychotherapy outcome research, counseling skills and helping behaviors (ch. 21); covert behavior modification (ch. 22); self-handicapping and alcohol abuse, excessive obedience to authority (ch. 23); aggression, superordinate goals and nuclear holocaust (ch. 24); recent survey data, gender differences, homosexuality, AIDS and sexual responsibility, sexual problems, maintaining intimacy in relationships (ch. 25); human factors engineering, business management, environmental psychology, law and psychology, jury behavior (ch. 26).

Supporting Materials

Offering an introductory course in psychology is one of the most challenging of all teaching assignments. To ease your task and enrich your course, an enlarged and improved array of supporting materials has been created.

Study Guides Two excellent study guides will again be available to accompany the text. To structure learning, each chapter of Faren Akins’ *Study Guide* provides a list of key terms and concepts, a programmed review, a practice test, and a crossword puzzle based on the text. Tom Bond’s *Mastery Study Guide* offers a very thorough review and a chance to practice concepts presented in the text. The MSG includes a list of important terms and individuals, learning objectives (with space for student responses), two tests (“Do You Know the Information,”

“Can You Apply the Information”), and a fill-in-the-blanks Chapter Review.

WESTUDY A microcomputer tutorial program called WESTUDY is available to accompany this edition of the text. WESTUDY poses questions to students in three easy-to-run formats: a multiple-choice review, a race, and a college bowl contest. When used by one or more students, WESTUDY is a motivating and enjoyable study aid.

Transparencies I am very pleased to report that Bill Dwyer, who has enhanced this text in other ways, has created a set of transparencies to enliven classroom presentations. Bill’s transparencies are on acetate, in color, and they look so good I am anxious to use them myself. Contact your West representative for more information.

Instructor’s Manual The *Instructor’s Manual* for this edition has undergone a major revision by Michael Sosulski. The manual includes learning objectives, film suggestions, demonstrations, new supplemental lectures, new classroom exercises, and suggested readings. It also contains general teaching strategies and references, diagnostic reading tests, and other helpful materials. All *Instructor’s Manual* materials are now grouped by chapter for easy use.

Testbank William Dwyer and Michael Zeller collaborated to update and improve the *Testbank*. This high-quality collection now consists of 3,000 multiple-choice questions. Over 1,000 of these items are new and many more conceptual questions are included. The *Testbank* also offers essay questions for each chapter. All test items are incorporated into WESTEST, a microcomputer test-generation program that is available by request.

Psychware *Psychware* is a CAI package to enrich the introductory course. Robert S. Slotnick and the New York Institute of Technology have developed a stimulating collection of tutorials, simulations, and experiments for use on microcomputers. Each exercise is highly interactive and features engaging graphics. By using *Psychware*, students can apply the principles of operant conditioning, they can test their short-term memory, they can explore social behavior or gain insight into Piaget’s stages of cognitive development, and much more.

Audio Cassettes New with this edition are audio cassettes scripted by Janice Hartgrove-Freile. These cassettes provide a concise review of major ideas from each

chapter of the text. They can be used to further reinforce learning, and they make it possible for students to review while on the move. Cassettes are available free to adopters for further copying, or they can be sold directly by your bookstore.

Videotapes Also new is an exciting pair of 60-minute videotapes from PBS’s award-winning series, “The Brain.” Segments of these videos apply to subjects throughout the text, but they are especially relevant to Chapters 3, 4, 6, 11, 12, 13, and 20. Topics are carefully indexed on the tapes for classroom use and an instructor’s manual is included. These tapes are available free to qualified adopters of the text.

Summary I sincerely hope that teachers and students will consider this book and its supporting materials a refreshing change from the ordinary. Writing and revising it has been quite an adventure. In the pages that follow, I think the reader will find an attractive blend of the theoretical and the practical, plus many of the most exciting ideas in psychology.

Acknowledgements

The enterprise of psychology is a cooperative effort requiring the talents and energies of a large community of scholars, teachers, researchers, and students. As with earlier versions of this text, this edition has combined the efforts of a large number of people. I would like to thank first the many students who sent comments, suggestions, and letters of encouragement.

To the professional users/reviewers who gave their time and expertise I extend my sincere thanks. I deeply appreciate the contributions of all those who have, over the years, contributed to this text’s evolution. I especially wish to thank those who helped make this edition a reality:

Brian R. Bate,
Cuyahoga Community
College

Charles Croll,
Broome Community
College, New York

Daniel B. Cruse,
University of Miami,
Florida

Lorraine P. Dieudonne,
Foothill College

Paul W. Fenton,
University of Wisconsin,
Stout

Linda E. Flickinger,
Saint Clair County
Community College,
Michigan

Chris Fraser,
Gippsland Institute of
Advanced Education,
Australia

Christopher Frost,
Southwest Texas State
University
David A. Gershaw,
Arizona Western College
Michael E. Gorman,
Michigan Technological
University
David A. Griesé,
State University of New
York, Farmingdale
John Grivas,
Monash University,
Australia
Janice Hartgrove-Freile,
North Harris County
College
Barbara Honhart,
Lansing Community
College
Myles E. Johnson,
Normandale Community
College
Pat Jones,
Brevard Community
College

Phil Lau,
DeAnza College
Edward R. McCrary III,
El Camino College
Andrew Neher,
Cabrillo College
Cora F. Patterson,
University of
Southwestern Louisiana
Steven J. Pollock,
Moorpark College,
California
James J. Ryan,
University of Wisconsin,
La Crosse
Francine Smolucha,
Moraine Valley
Community College,
Illinois
Michael C. Sosulski,
College of DuPage

John A. Paris
Dick Rasor
Sue S. Schmitt

Chuck Titus
Joseph Vielbig

I would also like to thank the psychologists whose work has so obviously enhanced this text and its supporting materials: Faren Akins, Tom Bond, David Cunningham, Bill Dwyer, Janice Hartgrove-Freile, Michael Sosulski, and Michael Zeller. It has been a pleasure working with such talented and supportive colleagues.

Getting a text into print seems almost miraculous at times. With this fact in mind, I would like to thank Janet Greenblatt for her meticulous editing. Likewise, I am indebted to Bob Jucha for his strong editorial support, and to Bill Stryker for his many days, evenings, and weekends of dedicated design and production work. Thanks also to Kristen McCarthy for combining originality with practicality. These individuals and many others at West Publishing Company have made this text a reality.

Finally, I would like to express my continuing gratitude to Clyde H. Perlee, Jr., everyone's favorite Editor in Chief, for his patience, inspiration, and friendship. This is his book as well as mine.

Last of all, I would like to thank my wife Sevren, whose emotional support and countless hours of help made this book possible.

Dennis Coon

I would also like to thank the following individuals who provided advice and guidance during the writing of the Fifth Edition.

Faren Akins
Charles A. Alexander
Scott W. Allen
Stuart Appelle
James W. Armstrong
Alan Auerback
K. Barsz
Wayne Bartz
Tom Bond
Steven H. Brown
André Cedras
Donna K. Duffy
Fred H. Fahringer

Edna Fiedler
Walter J. Flakus
William F. Ford
David A. Griesé
Janice Hartgrove-Freile
George Hill
Randall E. Jarrell
George W. Johnson
Stuart Karabenick
Peter Kokesnik
Wolanyo Kpo
James H. Nelson
Mike Ostrowski

● Introduction to Psychology

Exploration and Application

Fifth Edition



Dennis Coon

Department of Psychology
Santa Barbara City College, California

West Publishing Company

St. Paul • New York • Los Angeles • San Francisco

A study guide has been developed to assist you in mastering the concepts presented in this text. The study guide clarifies concepts by presenting them in concise, condensed form. It reinforces your understanding of terms, concepts, and individuals and also provides a programmed review and self-test questions. The study guide is available from your local bookstore under the title, *Study Guide to Accompany Introduction to Psychology: Exploration and Application*, prepared by Faren Akins.

A *Mastery Study Guide* written by Tom Bond also is available to accompany this book. The *Mastery Study Guide* is specially designed for self-paced, or PSI, courses. It is also highly appropriate for any course in which true mastery of concepts is the goal.

If you cannot locate either of these books in the bookstore, ask your bookstore manager to order them for you.

COPYRIGHT ©1977, 1980

1983, 1986 By WEST PUBLISHING COMPANY

COPYRIGHT ©1989 By WEST PUBLISHING COMPANY

50 W. Kellogg Boulevard

P.O. Box 64526

St. Paul, MN 55164-1003

All rights reserved

Printed in the United States of America

96 95 94 93 92 91 90 89 8 7 5 5 4 3 2 1 0

Library of Congress Cataloging-in-Publication Data

Coon, Dennis.

Introduction to psychology.

Bibliography: p.

Includes index.

1. Psychology. I. Title.

BF121.C625 1989 150 88-33859

ISBN 0-314-47349-1

COPY EDITING: Janet Greenblatt

ARTWORK: John & Jean Foster, Barbara Barnett, Marsha Dohrmann

COMPOSITION: Parkwood Composition Service, Inc.

COVER: Stanton Macdonald-Wright, "Subjective Time," Oil on canvas, 53" × 46", 1958. Courtesy Joseph Chowning Gallery, San Francisco.

Acknowledgments

The author is indebted to the following for permission to reproduce copyrighted materials.

Fig. 1-2(upper right) © Art Sweezy, Stock Boston; (upper left) © Bruce Rosenblum, The Picture Cube; (lower right) © 1987 Lynn Johnson, Black Star; (lower left) © Susan Van Etten, The Picture Cube.

Fig. 1-4 © Susan Kuklin, Photo Researchers.

Fig. 1-5 Brown Brothers.

Fig. 1-6 Brown Brothers.

Fig. 1-7 Brown Brothers.

Fig. 1-8 United Press International.

Fig. 1-9 The Bettmann Archive.

Fig. 1-10 © Ted Polumbaum.

Fig. 2-1 © Richard Wood, The Picture Cube.

Fig. 2-3 National Geographic Society Magazine. Photo by Baron Hugo van Lawick.

P. 35 Cartoon courtesy of Peter Mueller.

Fig. 2-9 Mike Kagan, Monkmeyer Press.

Fig. 2-11 Photo by Lynn Goldsmith/LGI © 1986.

Fig. 3-10 Courtesy Richard Haier, University of California, Irvine.

Fig. 3-18 © Michael Serino, The Picture Cube.

Fig. 4-10 (left) © Harvey Eisner, Taurus; (right) © David M. Campione, Taurus.

Fig. 4-13 © Jeffry W. Myers, Stock Boston.

Fig. 4-16 © Jon L. Barken, The Picture Cube.

Fig. 4-27 NASA.

Fig. 5-1 Photo by Kevin McMahon.

Fig. 5-4 © E. R. Degginger, Animals, Animals.

Fig. 5-8 Enrico Ferdrelli/DOT.

Fig. 5-10 B. Julesz. *Foundations of Cyclopean Perception*.

Copyright © 1971, University of Chicago Press.

Fig. 5-12 M. C. Escher "Still Life and Street" © 1988

M. C. Escher Heirs/Cordon Art—Baarn, Holland. Collection Haags Gemeentemuseum, The Hague.

Fig. 5-13 From "Pictorial Perception and Culture" by J. B. Derogowski. Copyright © 1972 by *Scientific American*, Inc. All rights reserved.

Fig. 5-16 Baron Wolman.

Fig. 5-17 © Dan Francis, Mardan Photography.

Fig. 5-22 From "Cognitive Determinants of Fixation Location During Picture Viewing" by G. R. Loftus & N. H. Mackworth, *Journal of Experimental Psychology*, 4, 1987, 565-572.

Fig. 5-23 Erdelyi, M. H. and A. G. Applebaum, "Cognitive Masking: The Disruptive Effects of an Emotional Stimulus Upon the Perception of Contiguous Neutral Items." *Bulletin of the Psychonomic Society*. 1973, 1, 59-61.

Fig. 5-24 Al Held, *The Big N*. (1965), Synthetic polymer paint on canvas, 9³/₈" X 9". Collection, The Museum of Modern Art, New York. Mrs. Armand P. Bartos Fund.

P. 133 Kapleau, Phillip. *The Three Pillars of Zen*, Harper & Row, 1966.

Fig. 6-3 Yale Joel, LIFE Magazine, © Time Inc.

Fig. 6-4 © 1981 Martin M. Potker, Taurus.

Fig. 6-6 Courtesy of Healthdyne, Inc.

Fig. 6-7 Wide World Photos.

Table 6-2 Stanford Hypnotic Scale, adapted from Weitzenhoffer and Hilgard. Stanford University Press, 1959.

Fig. 6-8 Dan Francis, Mardan Photography.

Fig. 6-9 Dan Francis, Mardan Photography.



(Acknowledgments continued following index)

● Contents in Brief

● Part One

An Introduction to Psychology and Psychologists 1

Chapter 1

Psychology and Psychologists 2

APPLICATIONS: The Psychology of Studying 18

EXPLORATION: Pseudo-psychologies—Palms, Planets, and Personality 23

Chapter 2

Research Methods in Psychology 28

APPLICATIONS: Psychology in the News—Notes on Reading the Popular Press 42

EXPLORATION: Smile, You're on Candid Camera!—The Ethics of Psychological Research 45

● Part Two

Foundations of Human Consciousness 49

Chapter 3

The Brain, Biology, and Behavior 50

APPLICATIONS: Handedness—If Your Brain Is Right, What's Left? 73

EXPLORATION: Electrical Stimulation of the Brain—The Promise and Peril of Brain Control 76

Chapter 4

Sensation and Reality 80

APPLICATIONS: Controlling Pain—This Won't Hurt a Bit 106

EXPLORATION: Sensation in Space—Adapting to an Alien Environment 108

Chapter 5

Perceiving the World 112

APPLICATIONS: Perception and Objectivity—Believing Is Seeing 142

EXPLORATION: Extrasensory Perception—Do You Believe in Magic? 134

Chapter 6

States of Consciousness 139

APPLICATIONS: Exploring and Using Your Dreams 167

EXPLORATION: Drug Abuse—Many Questions, Few Answers 170

● Part Three

Learning and Cognition 175

Chapter 7

Conditioning and Learning I 176

APPLICATIONS: Managing Behavior—Conditioning in Everyday Situations 196

EXPLORATION: Behavioral Self-Management 199

Chapter 8

Conditioning and Learning II 203

APPLICATIONS: Good Ways to Break Bad Habits 221

EXPLORATION: Modeling and Television—The Tube as Teacher 224

Chapter 9

Memory 228

APPLICATIONS: Mnemonics—Memory Magic 250

EXPLORATION: How Many Types of Memory Are There? 252

Chapter 10**Cognition and Creativity 256**

APPLICATIONS: Steps to Better Thinking and Problem Solving 274

EXPLORATION: Artificial Intelligence 278

● Part Four

Motivation, Adjustment, and Health 281

Chapter 11**Motivation 282**

APPLICATIONS: Behavioral Dieting—Fat Chance for a Slim Future 302

EXPLORATION: Anorexia and Bulimia—Hungering for Control 304

Chapter 12**Emotion 308**

APPLICATIONS: Coping with Depression—A Problem for Everyone 329

EXPLORATION: Love—Stalking an Elusive Emotion 331

Chapter 13**Health, Stress, and Coping 335**

APPLICATIONS: Stress Management 352

EXPLORATION: Meditation—The Twenty-Minute Vacation 356

● Part Five

Human Development and Personality 361

Chapter 14**Child Development 362**

APPLICATIONS: Making the Most of a Magic Time of Life 387

EXPLORATION: The Brave New World of Genetics and Reproduction 389

Chapter 15**From Birth to Death: Life-Span Development 393**

APPLICATIONS: Parenting—The World's Most Important Job 412

EXPLORATION: Approaching Death—New Pathways 416

Chapter 16**Dimensions of Personality 420**

APPLICATIONS: Shrinking Violets and Bashful Beaux—Understanding Shyness 436

EXPLORATION: Identical Twins—Twin Personalities? 439

Chapter 17**Theories of Personality 443**

APPLICATIONS: The Search for Self-Actualization 461

EXPLORATION: Self-Monitoring—Which Me Do You See? 463

Chapter 18**Intelligence 467**

APPLICATIONS: Intelligence in Perspective—Are Intelligence Tests Intelligent? 484

EXPLORATION: The Larry P. Case—"Six-Hour Retardates" 488

● Part Six

Abnormal Behavior and Therapies 493

Chapter 19**Maladaptive Behavior: Deviance and Disorder 494**

APPLICATIONS: Suicide: Life in Balance 512

EXPLORATION: Psychology and the Law—The "Twinkie Defense" 517

Chapter 20**Major Mental Disorders 521**

APPLICATIONS: On Being Sane in Insane Places 539

EXPLORATION: Who Is "Crazy" and What Should Be Done about It? 541

Chapter 21**Insight Therapy 544**

APPLICATIONS: Seeking Professional Help—When, Where, and How? 558

EXPLORATION: A Therapist Named Eliza 562

Chapter 22**Behavior Therapy 565**

APPLICATIONS: Self-Management—Applying Behavioral Principles to Yourself 576

EXPLORATION: Self-Directed Behavior Change—A Case Study 579

● Part Seven

Self and Society 583

Chapter 23

Social Psychology I 584

APPLICATIONS: Assertiveness Training—Standing Up for Your Rights 602

EXPLORATION: Social Traps—The Tragedy of the Commons 604

Chapter 24

Social Psychology II 608

APPLICATIONS: Helping—Promoting Prosocial Behavior 625

EXPLORATION: Sociobiology—Do Genes Guide Social Behavior? 628

Chapter 25

Sexuality and Gender 631

APPLICATIONS: Sexual Problems 647

EXPLORATION: Touching—Does It Always Have Sexual Implications? 654

Chapter 26

Applied Psychology 656

APPLICATIONS: Vocational Choice and Occupational Survival—Charting Your Course in the World of Work 676

EXPLORATION: Space Psychology—Life on the High Frontier 679

Appendix A Careers in Psychology 683

Appendix B Statistics 688

Glossary G-1

References R-1

Index I-1

● Contents

● Part One

An Introduction to Psychology and Psychologists 1

Chapter 1

Psychology and Psychologists 2

Chapter Preview: Why Study Psychology 2

Psychology: Psych = Mind; Logos = Knowledge or Study 3

Behavior 3

Empiricism 3

Science 4

Animals 6

Psychology's Goals 7

A Brief History of Psychology's Brief History 8

Structuralism 8

Functionalism 9

Behaviorism: Stimulus-Response Psychology 9

Gestalt Psychology 10

HIGHLIGHT 1–1: Women in Psychology 10

Psychoanalytic Psychology 10

Humanistic Psychology 11

Psychology Today 12

Psychologists—Guaranteed Not To Shrink 13

How To Be a Psychologist—Let Us Count the Ways 14

Developmental Psychology 15

Learning 16

Personality 16

Sensation and Perception 16

Comparative Psychology 16

Physiological Psychology 16

Social Psychology 16

Giving Psychology Away—An Introduction to Applications 17

APPLICATIONS: The Psychology of Studying 18

EXPLORATION: Pseudo-psychologies—Palms, Planets, and Personality 23

Chapter Summary 26

Questions for Discussion 26

Chapter 2

Research Methods in Psychology 28

Chapter Preview: From Common Sense to Controlled Observation 28

Scientific Method—Can a Horse Add? 29

Research Methods 31

Naturalistic Observation—Psychology Steps Out! 31

Effects of the Observer 31

Correlational Studies—In Search of the Perfect Relationship 32

HIGHLIGHT 2–1: Relationships in Psychology 33

The Psychology Experiment—Where Cause Meets Effect 35

Field Experiments 37

Significance 37

HIGHLIGHT 2–2: Could You Repeat That, Please? 37

Placebo Effects—Sugar Pills and Salt Water 37

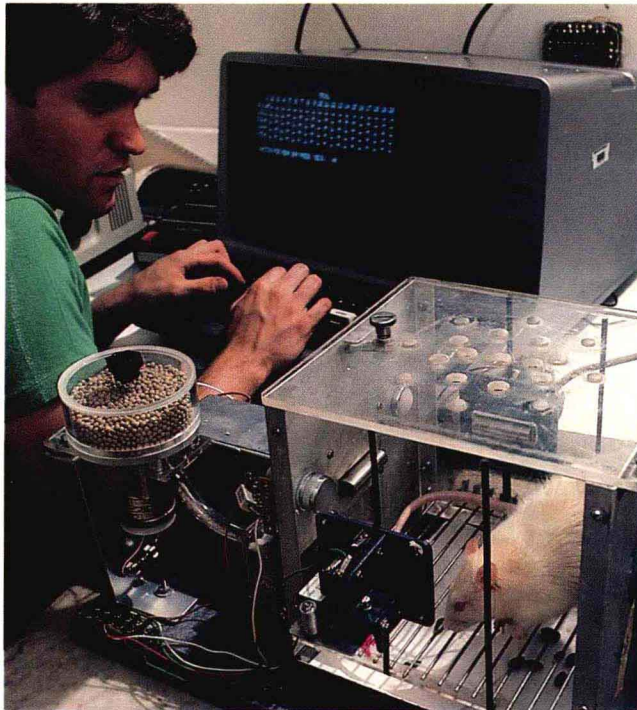
The Experimenter Effect 38

The Clinical Method—Data by the Case 39

Survey Method—Here, Have a Sample 40

Summary and A Look Ahead 40





APPLICATIONS: Psychology in the News—Notes on
Reading the Popular Press 42

EXPLORATION: Smile, You're on Candid Camera!—The
Ethics of Psychological Research 45

Chapter Summary 46

Questions for Discussion 47

● Part Two

Foundations of Human Consciousness 49

Chapter 3

The Brain, Biology, and Behavior 50

Chapter Preview: Worlds Within Worlds Within Worlds 50

Neurons—Building a “Biocomputer” 51

Parts of a Neuron 51

The Nerve Impulse 51

Neurotransmitters 53

Neural Regulators 54

**A Brief Tour of the Nervous System—Wired for
Action 54**

Neurons and Nerves 54

The Nervous System 55

HIGHLIGHT 3–1: Brain Grafts 55

The Peripheral Nervous system 55

The Spinal Cord 57

**The Cerebral Cortex—My, What a Big Brain You
Have! 58**

Corticalization 58

Cerebral Hemispheres 59

Hemispheric Specialization 59

“Split Brains” 59

HIGHLIGHT 3–2: The Brain at Work 60

Right Brain/Left Brain 61

Cerebral Maps of Reality 62

The Occipital Lobes 63

The Parietal Lobes 64

The Temporal Lobes 64

The Frontal Lobes 64

Associative Areas 64

Brain Injuries 64

Aphasia 65

“Mindblindness” 65

The Subcortex—At the Core of the (Brain) Matter 66

The Hindbrain 66

Reticular Formation 67

The Forebrain 68

The Limbic System 68

The Brain in Perspective—Beyond the Biocomputer 69

Redundancy 69

Plasticity 69

Potential 69

**The Endocrine System—Slow but Sure Messenger
Service 69**

HIGHLIGHT 3–3: A Short Topic 71

APPLICATIONS: Handedness—If Your Brain Is Right,
What's Left? 73

EXPLORATION: Electrical Stimulation of the Brain—The
Promise and Peril of Brain Control 76

Chapter Summary 78

Questions for Discussion 79

Chapter 4

Sensation and Reality 80

Chapter Preview: Sensation—A Window on the World 80

**General Properties of Sensory Systems—What You See Is
What You Get 81**

Psychophysics—Taking It to the Limit 82

Perceptual Defense and Subliminal Perception 83

Difference Thresholds 83

HIGHLIGHT 4–1: Rock Music: Subliminal Messages or
Subliminal Myths? 84

Vision—Catching Some Rays 85

Dimensions of Vision 85

Structure of the Eye 85

Focusing 85

Visual Problems 85

Light Control 87

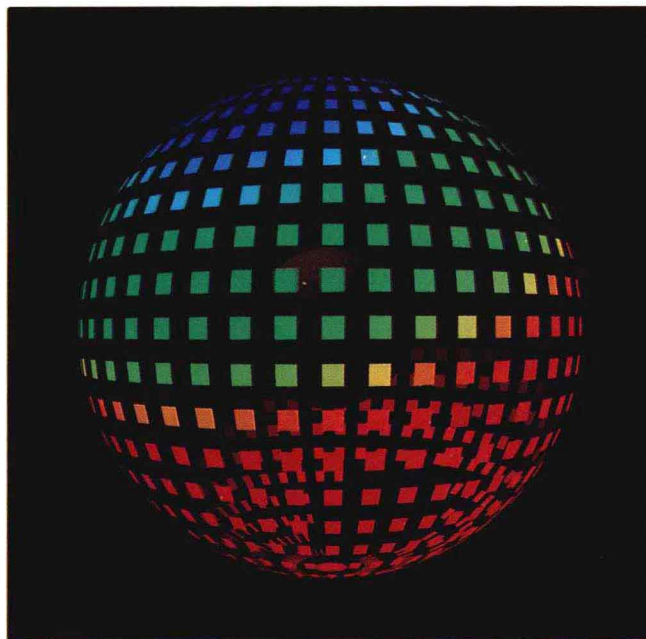
Rods and Cones 88

HIGHLIGHT 4–2: How the Brain Sees the World 88

<i>Visual Acuity</i>	89
<i>Peripheral Vision</i>	89
Color Vision—There's More to It Than Meets the Eye	90
Color Theories	90
Color Blindness and Color Weakness	92
Dark Adaptation—Let There Be Light!	93
Hearing—Good Vibrations	96
Deafness	97
HIGHLIGHT 4–3: Artificial Hearing	98
Smell and Taste—The Nose Knows When the Tongue Can't Tell	99
The Sense of Smell	99
Taste	100
The Somesthetic Senses—Flying by the Seat of Your Pants	101
Adaptation, Attention, and Gating—Turning In and Turning Out	103
Sensory Adaptation	103
Selective Attention	103
Sensory Gating of Pain	104
APPLICATIONS: Controlling Pain—This Won't Hurt a Bit	106
EXPLORATION: Sensation in Space—Adapting to an Alien Environment	108
Chapter Summary	110
Questions for Discussion	111

Chapter 5 Perceiving the World 112

Chapter Preview: Murder!	112
Perceptual Constancies—Taming an Unruly World	113
Perceptual Grouping—Getting It All Together	114
Depth Perception—What If the World Were Flat?	118
Muscular Cues	119
Stereoscopic Vision	119
Pictorial Cues for Depth—A Deep Topic	120
Pictorial Depth Cues	120
The Moon Illusion	122
Perceptual Learning—What If the World Were Upside Down?	123
Perceptual Habits	123
Inverted Vision	124
Adaption Level	125
Illusions	126
Motives and Perception—May I Have Your . . .	
Attention!	128
Attention	18
Habituation	128
Motives	129
Perceptual Expectancies—On Your Mark, Get Set	129
Categories	130
APPLICATIONS: Perception and Objectivity—Believing Is Seeing	142



EXPLORATION: Extrasensory Perception—Do You Believe in Magic?	134
Chapter Summary	137
Questions for Discussion	138

Chapter 6 States of Consciousness 139

Chapter Preview: Living Nightmares	139
States of Consciousness—The Many Faces of Awareness	140
Sleep—A Nice Place to Visit	140
The Need for Sleep	141
Sleep Deprivation	141
Sleep Patterns	141
Stages of Sleep—The Nightly Roller-Coaster Ride	142
Stages of Sleep	143
Stage 1	143
Stage 2	144
Stage 3	144
Stage 4	144
Two Basic States of Sleep	144
Rem Sleep and Dreaming	144
Sleep Disturbances—Showing Nightly: Sleep Wars!	145
Sleepwalking and Sleepwalking	145
Nightmares and Night Terrors	145
Narcolepsy	146
Insomnia	146
Sleep Apnea	147
HIGHLIGHT 6–1: Behavioral Remedies for Insomnia	147
Dreams—A Separate Reality?	148

Dream Worlds	149
Dream Theories	149
<i>Psychodynamic Dream Theory</i>	149
<i>The Activation-Synthesis Hypothesis</i>	150
<i>A Look Ahead</i>	150
Hypnosis—Look into My Eyes	151
Stage Hypnosis	153
Sensory Deprivation—Life on a Sensory Diet	154
Disruptive Effects	154
Benefits of Sensory Restriction	154
<i>Sensory Enhancement</i>	154
<i>Relaxation</i>	154
<i>Changing Habits</i>	154
<i>Prospect</i>	155
Drug-Altered Consciousness—The High and Low of It	155
Facts about Drugs	155
<i>Patterns of Abuse</i>	158
Uppers—Amphetamines, Cocaine, Caffeine, Nicotine	158
<i>Amphetamines</i>	158
<i>Cocaine</i>	159
<i>Caffeine</i>	160
<i>Nicotine</i>	160
Downers—Barbiturates and Alcohol	162
Barbiturates	162
<i>Abuse</i>	162
Alcohol	162
<i>Abuse</i>	162
<i>Recognizing Problem Drinking</i>	162
HIGHLIGHT 6–2: The Development of a Drinking Problem	164
<i>Treatment</i>	164
Marijuana—What's in the Pot?	165
<i>Immediate Effects of Marijuana</i>	165

<i>Dangers of Marijuana Use</i>	165
<i>Health Risks</i>	166
APPLICATIONS: Exploring and Using Your Dreams	167
EXPLORATION: Drug Abuse—Many Questions, Few Answers	170
Chapter Summary	172
Questions for Discussion	173

● Part Three

Learning and Cognition 175

Chapter 7

Conditioning and Learning I 176

Chapter Preview: What Did You Learn in School Today?	176
--	-----

What Is Learning—Does Practice Make Perfect? 177

<i>Antecedents and Consequences</i>	178
-------------------------------------	-----

Classical Conditioning—Does the Name Pavlov Ring a Bell? 178

<i>Pavlov's Experiment</i>	178
----------------------------	-----

Elements of Classical Conditioning—Teach Your Little Brother to Salivate 179

<i>Acquisition</i>	179
<i>Higher-Order Conditioning</i>	180
<i>Extinction and Spontaneous Recovery</i>	180
<i>Generalization</i>	180
<i>Discrimination</i>	180

Classical Conditioning in Humans—An Emotional Topic 181

<i>Vicarious, or Secondhand, Conditioning</i>	182
---	-----

HIGHLIGHT 7–1: How Do You Feel About Space Music and Crawly Things? 183

Operant Conditioning—Can Pigeons Play Ping-Pong? 184

<i>Acquiring an Operant Response</i>	184
<i>Shaping</i>	185

HIGHLIGHT 7–2: Biological Constraints—The Reluctant Raccoon 186

<i>Extinction</i>	186
-------------------	-----

Operant Reinforcement—What's Your Pleasure? 187

Primary Reinforcement	187
Secondary Reinforcement	187
<i>Tokens</i>	188
<i>Generalized Reinforcers</i>	188
<i>Prepotent Responses</i>	188

Delay of Reinforcement 189

<i>Superstitious Behavior</i>	190
-------------------------------	-----

Partial Reinforcement—Las Vegas, a Human Skinner Box? 191

Schedules of Partial Reinforcement 181

<i>Fixed Ratio (FR)</i>	191
<i>Variable Ratio (VR)</i>	192
<i>Fixed Interval (FI)</i>	192
<i>Variable Interval (VI)</i>	192



Stimulus Control—Putting Habits on a Leash 193*Generalization 193**Discrimination 193***HIGHLIGHT 7-3: Stimulus Control 194***Coming Attractions 195***APPLICATIONS: Managing Behavior—Conditioning in Everyday Situations 196****EXPLORATION: Behavioral Self-Management 199**

Chapter Summary 201

Questions for Discussion 202

Chapter 8**Conditioning and Learning II 203**

Chapter Preview: Mark the Shark 203

Conditioning in Perspective—Great Expectations 204

Two-Factor Learning 204

Information 204

Feedback 205

*Learning Aids 205***Punishment—Putting the Brakes on Behavior 207***Negative Reinforcement Versus Punishment 207*

Variables Affecting Punishment 208

*Using Punishment Wisely 208***HIGHLIGHT 8-1: If You Must Punish, Here's How 209**

Side Effects of Punishment 209

*Escape and Avoidance 210**Aggression 210***Cognitive Learning—Beyond Conditioning 211***Cognitive Maps 211**Latent Learning 211**Discovery Learning 212***Modeling—Do as I Do, Not as I Say 213**

Observational Learning 213

*Imitating Models 213**The World According to TV 214***HIGHLIGHT 8-2: Life After TV: A Natural Experiment 216****Learning Principles in Action—Biofeedback 216***Electronic Yoga? 216*

Applications of Biofeedback 217

*Alpha Control 217***Learning Principles in Action—Learning Skills****Skillfully 217**

Skillful Skill Learning 218

*Practice Effects 219**Transfer of Training 219***APPLICATIONS: Good Ways to Break Bad Habits 221****EXPLORATION: Modeling and Television—The Tube as Teacher 224**

Chapter Summary 226

Questions for Discussion 226

Chapter 9**Memory 228**

Chapter Preview: "What the Hell's Going On Here?" 228

Stages of Memory—Do You Have a Mind Like a Steel Trap? Or a Sieve? 229

Sensory Memory 229

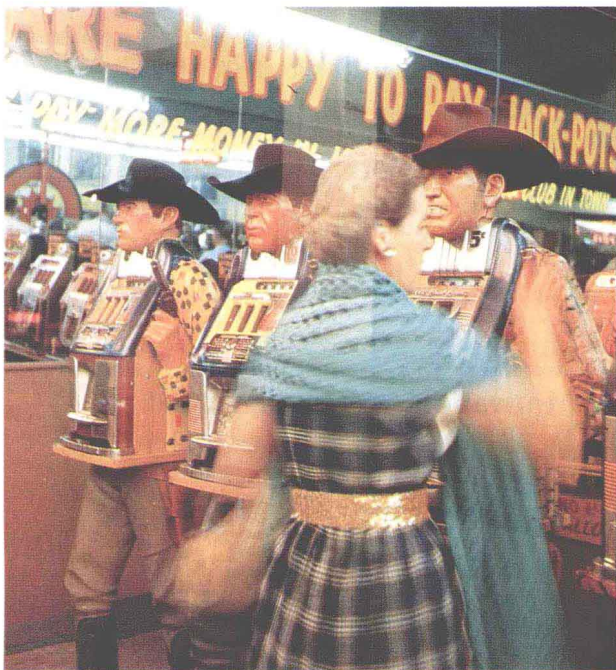
Short-Term Memory 229

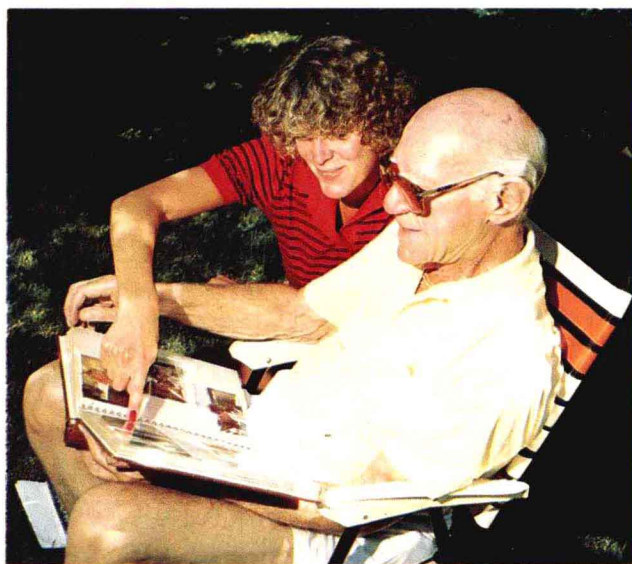
Long-Term Memory 230

Dual Memory 231

Short-Term Memory—Do You Know the Magic Number? 231*Recoding 232**Rehearsal 232***Long-Term Memory—Where the Past Lives 232***Permanence 233**Constructing Memories 233**Organization 233***HIGHLIGHT 9-1: Hypnosis, Imagination, and Memory 234****Measuring Memory—The Answer Is on the Tip of My Tongue 235***Recall 235**Recognition 236**Relearning 237**Redintegration 237***Eidetic Imagery—Picture This! 237***Internal Images 237***HIGHLIGHT 9-2: Can Exceptional Memory Be Learned? 239****Why We, Uh, Let's See; Why We, Uh . . . Forget! 240**

Encoding Failure 240





Decay	241
<i>Disuse</i>	241
Cue-Dependent Forgetting	241
<i>State-Dependent Learning</i>	241
Interference	242
<i>Order Effects</i>	243
Repression	243
Flashbulb Memories	244
Memory Formation—Some “Shocking” Findings	244
<i>Drugs and Consolidation</i>	245
<i>From STM to LTM</i>	245
<i>The Brain and Memory</i>	245
How to Improve Your Memory—Keys to the Memory	
Bank	246
<i>Knowledge of Results</i>	246
<i>Recitation</i>	246
<i>Overlearning</i>	247
<i>Selection</i>	247
<i>Spaced Practice</i>	247
<i>Organization</i>	247
<i>Whole versus Part Learning</i>	247
<i>Serial Position</i>	247
<i>Sleep</i>	247
<i>Review</i>	247
<i>Cues</i>	248
<i>Using a Strategy To Aid Recall</i>	248
HIGHLIGHT 9–3: Memory Detectives	248
APPLICATIONS: Mnemonics—Memory Magic	250
EXPLORATION: How Many Types of Memory Are There?	2523
Chapter Summary	253
Questions for Discussion	254

Chapter 10 Cognition and Creativity 256

Chapter Preview: Chess, Anyone?	256
What Is Thinking?—It’s All in Your Head!	257
<i>Some Basic Units of Thought</i>	258
HIGHLIGHT 10–1: How Intelligent Are Animals?	258
Mental Imagery—Does a Frog Have Lips?	259
Muscular Imagery	260
Concepts—I’m Positive, It’s a Whatchamacallit.	260
Language—Give Us a Sign, Washoe	262
The Structure of Language	263
<i>Talking Chimps</i>	264
Problem Solving—Getting an Answer in Sight	265
Mechanical Solutions	265
Solutions by Understanding	265
<i>Heuristics</i>	266
<i>Ideal Problem Solving</i>	266
Insightful Solutions	266
<i>The Nature of Insight</i>	267
<i>Fixations</i>	267
HIGHLIGHT 10–2: Common Barriers to Creative Thinking	268
Creative Thinking—Fluency, Flexibility, and Originality	269
HIGHLIGHT 10–3: Daydreams, Fantasy, and Creativity	269
<i>Stages of Creative Thought</i>	270
<i>The Creative Personality</i>	271
Intuition—Mental Short Cut? Or Dangerous Detour?	272
<i>Intuition</i>	272
<i>Representativeness</i>	272
HIGHLIGHT 10–4: Creativity Profile	272
<i>Underlying Odds</i>	272
<i>Framing</i>	273
<i>Conclusion</i>	273
APPLICATIONS: Steps to Better Thinking and Problem Solving	274
EXPLORATION: Artificial Intelligence	278
Chapter Summary	279
Questions for Discussion	280

● Part Four

Motivation, Adjustment, and Health 281

Chapter 11 Motivation 282

Chapter Preview: Flight of the Gossamer Albatross	282
<i>Motivation</i>	282
Motivation—Forces That Push and Pull	283