The background of the cover is a complex collage. It features several overlapping rectangular panels. One panel in the center-left shows a close-up of a human eye, rendered in shades of blue and green with a textured, almost painterly quality. To the right of this, another panel shows a close-up of a human mouth, rendered in warm, reddish-brown tones. The overall background is a mix of dark, muted colors like purple, blue, and green, with various textures and patterns that suggest a psychological or artistic theme.

BASIC PSYCHOLOGY

Fifth
Edition

Henry Gleitman
Alan J. Fridlund
Daniel Reisberg

BASIC PSYCHOLOGY



Fifth Edition

Henry Gleitman
Alan J. Fridlund
Daniel Reisberg

Copyright © 2000, 1996, 1992, 1987, 1983 by W. W. Norton & Company, Inc.
All rights reserved
Printed in the United States of America

Editor: Jon Durbin
Developmental Editor and Project Editor: Jane Carter
Director of Manufacturing—College Division: Roy Tedoff
Photograph Editor: Ruth Mandell
Editorial Assistant: Sam Subity
Book and Cover Designer: Antonina Krass
Compositor: TSI Graphics
Manufacturer: Courier, Kendallville

The text of this book is composed in Stone Serif with the display set in Matrix Wide and Matrix Tall.

Cover illustration: Kim Sailors/Superstock

Further acknowledgments and credits appear on pp. C93–C99, which constitute a continuation of the copyright page.

Library of Congress Cataloging-in-Publication Data

Gleitman, Henry.

Basic psychology/Henry Gleitman, Alan J. Fridlund, Daniel Reisberg.—5th ed.
p. cm.

Includes bibliographical references and index.

ISBN 0-393-97609-2 (pbk.)

1. Psychology. I. Fridlund, Alan J. II. Reisberg, Daniel. III. Title.
BF121.G57 1999 98-37425

CIP

Rev.

W. W. Norton & Company, Inc., 500 Fifth Avenue, New York, N.Y. 10110
www.wwnorton.com

W. W. Norton & Company Ltd., 10 Coptic Street, London WC1A 1PU

2 3 4 5 6 7 8 9 0

To our wives and children

Lila, Amy, and Friderike

Ellen, Claire, Jason, Jacob, and Solomon

Preface

Like any other discipline, psychology advances and develops, and, in our view, the pace of development in psychology has been astonishing. Our understanding of many themes has advanced considerably beyond what we knew just a few years ago—with new insights, new evidence, and new theories. And, as the field advances, so must all attempts to describe it. It is this, more than any other consideration, that created the need for this new edition, and these advances, together with the suggestions of the many students and colleagues who have used this text, prompted a number of the changes that we describe below.

In addition, this volume is now coauthored for the first time. Alan Fridlund and Daniel Reisberg played an important role as advisors on the previous editions, but up until now, this book has in important ways been Henry Gleitman's alone. This change in authorship has been driven by the increasing breadth and sophistication of our field, which make it difficult for any one individual to have mastered the full span of psychology and to write about this enormous range of material with the precision of an expert. By pooling our knowledge, we believe we can provide the depth and richness that our field now demands.

With multiple authors, though, it was crucial that this book not lose the integrity and cohesion that have been among its hallmarks from the very first edition. With this aim in mind, we say with pride that this edition has been a full collaboration, with all three of us deeply involved in every chapter. Each of us has brought his own background and experience to the project, but we have tried our very best to weave these strands together to ensure a unified and cohesive treatment. That unity is enhanced by our shared allegiance to the broad aims that have always characterized this book, and we list some of these aims in the next section.

The Overall Aim: Cohesion in a Diverse Field

In writing *Basic Psychology*, Gleitman sought to present the field in all its diversity, while conveying the sense in which it is a coherent intellectual enterprise. In pursuit of this goal, he did several important things:

1. To present the different subareas of psychology, he organized the book around five main questions: How do humans (and where relevant, nonhuman animals) act, how do they know, how do they interact, how do they develop, and how do they differ from each other?

2. To provide intellectual cohesion, he considered each topic against the backdrop of one or two major ideas that could serve as an organizing and unifying framework. Thus, the chapter on the biological bases of behavior showcases Descartes' conception of the organism as a machine, and the next chapter treats various aspects of motivated behavior as manifestations of negative feedback. In addition, several overarching themes are carried over from chapter to chapter. For example, the various chapters that deal with cognition ("Sensory Processes," "Perception," "Memory," "Thought and Knowledge," and "Language") all consider variations on the two controversies of nature versus nurture and psychological atomism versus organization.

3. In many cases, the integration he sought required taking a step backward to look at psychology's intellectual history, for a number of the field's endeavors are hard to explain unless one points out the paths that led up to them. Why did Thorndike study cats in puzzle boxes? Why did his conclusions have such an important effect on American psychology? Why were they challenged by Köhler and Tolman? It still pays to take a serious look at the work of such pioneers before turning to the present. Much as a river's water is clearer when it is taken from its source, so issues that have become more and more complex as detail has been piled upon detail become more lucid when traced back to their origin.

General Organization

The foregoing themes are all preserved from earlier editions. At the same time, much is new. In the last two decades, psychology has developed a rich partnership with the neurosciences, and much of this new and exciting material is now included. Likewise, our field has benefited in recent years from an increased understanding of non-Western cultures and how the feelings, thoughts, and behavior of people in these cultures differ from those of people in the West. Our discussion of many topics in this edition now reflects the power of these cross-cultural comparisons. Similarly, evolutionary considerations, often fueled by comparisons across species, have provided new insights into many psychological questions, and this is also emphasized in this new edition.

All three of these emphases—neuroscientific developments, cross-cultural comparisons, and evolutionary insights—were included in previous editions of *Basic Psychology*, but our treatment of them in the Fifth Edition is much expanded. This might have entailed a celebration of these new domains by setting them off in their own chapters, distinct from the discussion contained elsewhere in the text. But we have chosen not to do this because we believe that students are not well served by placing these topics in a sort of intellectual quarantine, separate from the issues and arguments that constitute the rest of psychology. Instead, we have woven these new materials into the overall narrative, where they can illuminate, and be illuminated by, long-standing psychological claims and evidence.

For this reason, the structure of the book remains largely as it was in earlier editions, despite the introduction of a very large quantity of new material. Thus, after the introductory chapter, this book is still divided into five parts that reflect the perspectives from which most psychological phenomena can be regarded: "Action," "Cognition," "Social Behavior," "Development," and "Individual Differences." In brief outline, they cover the following topics:

Part I: Action

This part focuses on overt behavior and its physiological basis. It begins by considering the biological underpinnings of human and animal action, leading to a discussion of the nervous system and its operation (Chapter 2) and some basic phenomena of motivation (Chapter 3). It then asks how organisms can modify their behavior to adapt to new circumstances, a topic that leads to a discussion of classical and instrumental conditioning, modern learning theory, and more recent cognitive approaches to learning (Chapter 4).

Chapter 2 ("Biological Bases of Behavior") has been extensively revised for this edition. The chapter now begins by explaining the methods by which the nervous system is investigated, then turns to the evolution and development of the nervous system. And the section on the physiology of neurotransmission has been updated and clarified. Chapter 3 ("Motivation") uses the concept of potentiation as an overall organizational principle; this chapter has been extensively updated, particularly in light of new findings about the mechanisms of hunger. Chapter 4 ("Learning") stresses modern approaches to learning, including work on contingency and cognitive approaches to classical and instrumental conditioning. And a new section on the neural basis for learning has been added.


Part II: Cognition

This part deals with knowledge and how it is gained and used. It begins by asking how the senses provide us with information about the world outside (Chapter 5) and how this information is organized and interpreted to lead to the perception of objects and events (Chapter 6). Further questions concern the way this knowledge is stored in memory and retrieved when needed (Chapter 7), the way it is organized and used in thinking (Chapter 8), and the way it is communicated to others through the medium of language (Chapter 9).

Chapter 5 ("Sensory Processes") contains a discussion of evolution and sensory equipment. The section on signal detection had been shortened and simplified. Chapter 6 ("Perception") contains a new section on the neural bases of form perception, as well as a new discussion of the evolutionary significance of redundant mechanisms in perception. Chapter 7 ("Memory") focuses primarily on episodic memory, including the modern emphasis on encoding and retrieval, the role of schemas in memory, and the difference between explicit and implicit memory. A new section explores what we can learn from the neuropsychology of memory, and, with that, the various forms of amnesia. Chapter 8 ("Thought and Knowledge") begins with the database on which thinking rests, including analogical representations (mental imagery) and symbolic representations. The chapter now also includes a discussion of how education can improve critical thinking. And it concludes with a discussion of the relation between cognition and consciousness. Chapter 9 ("Language") explores what it means to know a language and also how a language is learned. New sections examine the relation between language and thought, and place language in a social context by examining the role of the extralinguistic in guiding understanding.

Part III: Social Behavior

This part concerns our interactions with others. It begins with a discussion of built-in social tendencies in humans and animals, a topic to which ethology and evolutionary theory have made major contributions (Chapter 10). It then turns



to modern social psychology, considering how people try to understand the social situation in which they find themselves, how they interpret their own internal states and emotions, and how they interact with others (Chapters 11 and 12).

There have been several changes in this section. In Chapter 10 ("The Biological Bases of Social Behavior") the consideration of natural selection, the evolution of behavior, alternative mating systems and strategies, and "fitness" have been expanded and updated. Chapter 11 ("Social Cognition and Emotion") continues to focus on the way individuals interpret social events, including discussions of attitudes and attitude change, impressions of others, attribution, and the interpretation of one's own internal states, but it now also has an expanded discussion of emotions and facial expression, as well as a new section detailing how cultural comparisons produce dramatic insights into key phenomena in attribution, person perception, and compliance. Also included is a section on the neural basis of emotion, emphasizing the role of the amygdala in emotional appraisal. Chapter 12 ("Social Interaction") continues to treat the way individuals deal with others. In addition to discussions of social exchange, attraction and love, conformity, obedience, and crowd behavior, it also includes discussions of leadership and social dilemmas.

Part IV: Development

This section contains two chapters on development. Chapter 13 ("Physical and Cognitive Development") focuses on Piagetian and more recent, post-Piagetian approaches to mental growth and includes material on social cognition in infants and preschoolers, including studies of false beliefs and their bearing on the child's development of a "theory of mind." Chapter 14 ("Social Development") discusses such topics as moral development, empathy, sex, and gender. Among new developments treated in this chapter are an updated discussion of the effects of institutional day care, a new treatment of the psychological consequences of divorce, and a consideration of the physical aggression observed in boys versus the relational aggression observed in girls.

Part V: Individual Differences

This part begins with a chapter on mental testing in general and intelligence testing in particular (Chapter 15) and then continues with two chapters on personality assessment and theory (Chapters 16 and 17). It then turns to issues of psychopathology and asks how mental disorders arise (Chapter 18) and how they can be treated (Chapter 19). The section concludes with an examination of the relationship between these many differences among people and physical health (Chapter 20).

Chapter 15 ("Intelligence") is updated in various ways, including a section on recent attempts to understand intelligence in terms of the role of working memory and attention. Recent discussions of intelligence and race are also discussed, as is the impact of social environment on intelligence. Chapter 16 ("Personality I") considers methods of personality assessment and discusses trait theory and behavioral-cognitive theory as two of five theoretical approaches to personality, with particular attention to the trait-situation controversy and to recent attempts to look for biological and genetic bases of personality differences. Chapter 17 ("Personality II") takes up three other theoretical approaches to personality—the

psychodynamic, humanistic, and sociocultural. It includes a full treatment of psychoanalytic formulations, beginning with Freud's original theories, continuing with more recent psychodynamic approaches, and concluding with a discussion of technical and sociopolitical critiques of psychoanalysis.

Both Chapter 18 ("Psychopathology") and Chapter 19 ("Treatment of Psychopathology") include new psychobiological theories, new pharmacological approaches to treatment, and new approaches to the evaluation of treatment outcome. Chapter 19 also includes discussions of how the criteria for what makes a treatment "effective" have changed with the new emphasis on therapy accountability, managed care, and cost-containment measures.

New to this fifth edition of *Basic Psychology* is Chapter 20, "Health Psychology," which details the many ways that psychological factors can affect physical health. The chapter builds on psychological principles discussed in earlier chapters and uses key disorders (including eating disorders, coronary heart disease, ulcers, and AIDS) to illustrate how these principles apply to all aspects of illness, ranging from causation to symptom perception to treatment compliance.

Appendices

An entirely new appendix ("Methods of Scientific Research") has been added to this edition. This appendix covers experimental, correlational, and observational designs, and concludes with a discussion of research ethics. Many commonsense examples are employed throughout the appendix to convey the important message that the methods of scientific research can also be used to improve critical thinking in everyday life. Extensive cross-referencing to the rest of the volume makes it possible to use the appendix piece by piece over the course of the term or to present the appendix as a stand-alone unit either early or late in the semester.

A second appendix discusses the statistical methods used by psychologists to summarize and analyze their data. This appendix has been revised to maximize its clarity and accessibility, and also to ensure that it works well with the newly added appendix on research methods.

Exploring Contemporary Psychology

Also new to the fifth edition of *Basic Psychology* is the addition of special boxes, two per chapter, that examine selected topics in greater depth. In some cases, these boxes highlight new findings. In other cases, they explore how theories or methods described in the chapter can be applied to real-world problems. Overall, our intention was to focus on topics that would enrich and deepen students' understanding of the chapter materials.

Among the boxes are "When the Mind Breaks: The Misidentification Syndromes," in which we discuss the role of the amygdala in affective identification and what can go wrong when affective identification malfunctions; "Why Sex?" in which we analyze why so many organisms rely on sexual reproduction; "Recovered Memories," in which we consider the evidence for and against the repression of painful memories and how false "memories" are likely to be created; and "Dishwashers and Psychotherapy: The *Consumer Reports* Study," in which we review a consumer-based assessment of whether psychotherapy really works.

The Reader and the Book

It is sometimes said that students in the introductory course want to learn about things that are relevant to their own lives, and, in truth, this seems an entirely sensible view. Psychology deals with the nature of human experience and behavior, the hows and whys of what we do, think, and feel. How could an exploration of these topics *not* be relevant to someone's life? Everyone has perceived, learned, remembered, and forgotten, has been angry and afraid and in love, has given in to group pressure and stood up to it. In short, everyone has experienced most of the phenomena that psychology tries to explain. This being so, psychology cannot fail to be relevant.

But we can easily lose sight of this relevance amid the torrent of facts, theories, and techniques that constitute our field. To keep what is relevant in view, therefore, we rely on a liberal use of everyday examples and metaphors to provide a succession of bridges between the psychological phenomena we discuss and the reader's own life.

In this effort, our most important guide has been our own experience as teachers (with a combined total of over eighty years in the classroom). This experience leaves us with no doubt that one of the best ways of learning something is to teach it, for in trying to explain something to others, you first have to clarify it for yourself. This holds for the subject matter of every course we have ever taught, but most especially for the introductory course. Students in an advanced course will come at you with tough and searching questions; they want to know about the evidence that bears on a theory of, say, color vision, language acquisition, or the placebo effect and about how that evidence was obtained. But students in an introductory course ask the toughest questions of all. They ask why anyone would ever want to know about color vision (or language acquisition or the placebo effect) in the first place. And they also ask what any one topic has to do with any other. They ask such questions because they—unlike advanced students—have not as yet accepted the premises of the field. They wonder whether the emperor is really wearing any clothes. As a result, they make us ask ourselves again and again what the field of psychology is all about—what the emperor's clothes are really like when you look at them closely.

This edition, as well as its predecessors, reflects our attempts to answer such questions and to answer them not only to satisfy our students but also to satisfy ourselves.

Supplementary Materials

To help serve the needs of students, instructors, and teaching assistants, several supplementary materials are available with this text.

1. For the student:

There is a complete study guide, prepared by John Jonides of the University of Michigan and Paul Rozin of the University of Pennsylvania. This study guide, a revised version of the guide the same authors wrote for previous editions of *Basic*

Psychology, should prove very useful to students who want some help and guidance in mastering the material in the text. Moreover, for every chapter, it provides experiments and observational studies that students can carry out on their own to get some first-hand experience with psychology's subject matter.

In addition, for this edition we introduce the Psychology webBOOK—an on-line study guide designed to reinforce key ideas presented within each chapter of the fifth edition. This guide provides chapter summaries, an interactive tutorial for each chapter, animated diagrams, on-line quizzes, Web exploration activities, and a glossary. (Passwords for this Web site can be packaged at a considerable discount with new copies of the text; they can also be ordered separately from W. W. Norton & Company.)

Interactive Psychology CD-ROM, a dual-platform program for both Windows and Macintosh, is also available. With this program students will experience the challenges, problems, and discoveries inherent in any psychological experiment as they create hypotheses, run trials, and devise solutions for studies that underscore basic principles covered in the text. The program also includes data collection and grading reports that can be monitored by the instructor. (Interactive Psychology on CD-ROM can be packaged at a considerable discount with new copies of the text; it can also be ordered separately from W. W. Norton & Company.)

2. For the instructor:

The instructor's manual, prepared by Ed Kako of the University of Pennsylvania, Kimberly Cassidy of Bryn Mawr College, Christine Massey of Swarthmore College, Hilary Schmidt of New Jersey Medical School, and Henry Gleitman, offers specific suggestions for every textbook chapter, including discussion topics, a bibliography, an annotated film and media guide, and classroom demonstrations. The demonstrations include materials—transparencies, student worksheets, data summaries, and detailed instructions for the teacher—for some thirty in-class experiments covering a range of topics that include the speed of the nervous impulse, perceptual demonstrations, the Stroop effect, reasoning problems, the perception of personality, and gender stereotypes. These demonstrations are adapted from those that we and our collaborators, Paul Rozin and Lila Gleitman (both of the University of Pennsylvania), have used in our own teaching.

A test-item file of approximately 3,000 questions has been prepared for the fifth edition by Su Boatright-Horowitz of the University of Rhode Island, Kingston, and Susan Rakowitz of Fairfield University. Paul Cornwell, late of Pennsylvania State University, Richard Day of McMaster University, and John Jonides of the University of Michigan have also contributed to this test bank. These questions cover all twenty chapters and the two appendices. Of course, this test-item file is also available on diskette in Windows and Macintosh formats and is free to all qualified adopters.

We continue to publish a set of over one hundred transparencies, many in color, and these are free to qualified adopters as well.

In addition, instructors may receive Norton Presentation Maker with Power Point slides, a practical, easy-to-use CD-ROM that allows instructors to create dynamic multimedia presentations quickly and easily, drawing on all the line art in the text, selected photos, brief excerpts from Norton's *Introduction to Psychology* video (described below), and some of the interactive tutorials from the student Web site. Norton Presentation Maker with Power Point slides is available to qualified adopters on request.

Newly available is the *Norton Introduction to Psychology* video, a fifty minute videocassette produced in cooperation with a team of six Norton authors: the three authors of this book as well as David Funder, Lyle E. Bourne, Jr., and Nancy Felipe Russo. These thirteen original short sequences can be integrated easily into lectures to introduce a topic, illustrate difficult or counterintuitive material, or emphasize a particularly important point. The contents of the video correspond roughly to the contents of *Basic Psychology*, Fifth Edition, and include

"Classical Research: Bandura's Bobo Doll Study," "The Brain and Behavior," "Sleep and Sleep Disorders," "Sensing and Perceiving Our World," "Limitations of Classical Learning Theory," "Methods and Mistakes in Memory," "Building Complex Cognitive Processes," "Detecting Lies Nonverbally," "Culture and Social Behavior," "Dimensions of Development," "Exploring Personality," "Stress and Health," and "Psychopathology: Dissociative Identity Disorder."

Finally, as a new resource for this edition, instructors will be able to use the data obtained from student participation in many of the interactive tutorials available in the Psychology webBOOK described earlier. Each tutorial ends with a request for students to send their responses to the instructor or teaching assistant; in several cases, these responses are actually data derived from standard psychological procedures that we have reproduced in the tutorials (generally in shortened versions). Instructors can discuss these data with the class, putting the class's own results side by side with the published data discussed in the text.

Acknowledgments

There remains the happy task of thanking the many friends and colleagues who helped so greatly in the various phases of writing this book and its predecessors. Some read parts of the manuscript and gave valuable advice and criticism. Others talked to us at length about various issues in the field. We are very grateful to them all. The many helpers on earlier editions, and the main areas in which they advised us, are listed first. The names of those who guided us in the production of the present edition follow.

Biological Foundations

Elizabeth Adkins-Regan, Cornell University; Norman T. Adler, Yeshiva University; Robert C. Bolles, University of Washington; Brooks Carder; Dorothy Cheney, University of Pennsylvania; John D. Corbit, Brown University; Alan N. Epstein, late of the University of Pennsylvania; Steven Fluharty, University of Pennsylvania; Charles R. Gallistel, University of California, Los Angeles; Harvey J. Grill, University of Pennsylvania; Jerre Levy, University of Chicago; Martha McClintock, University of Chicago; Peter M. Milner, McGill University; Douglas G. Mook, University of Virginia; Allen Parducci, University of California, Los Angeles; Judith Rodin, University of Pennsylvania; Paul Rozin, University of Pennsylvania; Jonathan I. Schull, Rochester, New York; Robert Seyfarth, University of Pennsylvania; Paul G. Shinkman, University of North Carolina; Peter Shizgall, Concordia University; W. John Smith, University of Pennsylvania; Edward M. Stricker, University of Pittsburgh.

Learning

Ruth Colwill, Brown University; Frank Costin, University of Illinois; Richard B. Day, McMaster University; Paula Durlach, McMaster University; Richard C. Gonzales, Bryn Mawr College; Robert Henderson, University of Illinois; Werner

Honig, Dalhousie University; Francis W. Irwin, late of the University of Pennsylvania; Nicholas Mackintosh, Cambridge University; Robert Rescorla, University of Pennsylvania; Paul Rozin, University of Pennsylvania; Jonathan I. Schull, Rochester, New York; Barry Schwartz, Swarthmore College; Richard L. Solomon, late of the University of Pennsylvania; John Staddon, Duke University.

Sensation and Perception

Linda Bartoshuk, Yale University; Michael Gamble, Malaspina College; Julian E. Hochberg, Columbia University; Leo M. Hurvich, University of Pennsylvania; Dorothea Jameson, late of the University of Pennsylvania; R. Duncan Luce, University of California, Irvine; Neil A. MacMillan, Brooklyn College; James L. McClelland, Carnegie-Mellon University; Jacob Nachmias, University of Pennsylvania; Edward Pugh, University of Pennsylvania; Irwin Rock, late of the University of California, Berkeley; Burton S. Rosner, Oxford University; Robert Steinman, University of Maryland; Denise Varner, University of Washington; Brian Wandell, Stanford University; Jeremy M. Wolfe, Massachusetts Institute of Technology; James L. Zacks, Michigan State University.

Cognition

Lynn A. Cooper, Columbia University; Robert G. Crowder, Yale University; Lila R. Gleitman, University of Pennsylvania; Douglas Hintzman, University of Oregon; Francis C. Keil, Yale University; Deborah Kemler, Swarthmore College; Stephen M. Kosslyn, Harvard University; John Jonides, University of Michigan; Michael McCloskey, Johns Hopkins University; Douglas Medin, University of Illinois; Morris Moscovitch, University of Toronto; Ulric Neisser, Cornell University; Daniel N. Osherson, Massachusetts Institute of Technology; David Premack, Emeritus, University of Pennsylvania; Miriam W. Schustack, University of California, San Diego; Myrna Schwartz, Moss Rehabilitation Hospital; Michael Turvey, University of Connecticut; Rose T. Zacks, Michigan State University.

Language

Sharon L. Armstrong, Drake University; Anne Fowler, Bryn Mawr College; John Gilbert, University of British Columbia; Roberta Golinkoff, University of Delaware; Barbara Landau, University of Delaware; Elissa Newport, University of Rochester; Ruth Ostrin, Medical Research Council, Cambridge, England; Ted Suppala, University of Rochester; Kenneth Wexler, Massachusetts Institute of Technology.

Social Psychology

Solomon E. Asch, late of the University of Pennsylvania; Joel Cooper, Princeton University; Phoebe C. Ellsworth, University of Michigan; Frederick J. Evans, Carrier Foundation, Bellemead, New Jersey; Larry Gross, University of Pennsylvania;

Michael Lessac; Clark R. McCauley, Jr., Bryn Mawr College; Stanley Milgram, late of City College of the City University of New York; Martin T. Orne, University of Pennsylvania; Albert Pepitone, University of Pennsylvania; Dennis Regan, Cornell University; Lee Ross, Stanford University; John Sabini, University of Pennsylvania; Philip R. Shaver, University of California, Davis; R. Lance Shotland, Pennsylvania State University.

Development

Justin Aronfreed, University of Pennsylvania; Thomas Ayres, Clarkson College of Technology; Renée Baillargeon, University of Illinois; Edwin Boswell, Ardmore, Pennsylvania; Anne L. Brown, University of Illinois; Adele Diamond, Eunice Kennedy Shriver Center; Carol S. Dweck, Columbia University; Margery B. Franklin, Sarah Lawrence College; Rochel Gelman, University of California, Los Angeles; Frederick Gibbons, Iowa State University; Ellen Gleitman, Devon, Pennsylvania; Susan Scanlon Jones, Indiana University; Ed Kako, University of Pennsylvania; Philip J. Kellman, University of California, Los Angeles; Ellen Markman, Stanford University; Elizabeth Spelke, Massachusetts Institute of Technology; Douglas Wallen, Mankato State University; Sheldon White, Harvard University.

Intelligence

Jonathan Baron, University of Pennsylvania; James E. Crow, University of Wisconsin; Daniel B. Keating, University of Minnesota; Robert Sternberg, Yale University.

Personality

Hal Bertilson, Saint Joseph's University; Jack Block, Massachusetts Institute of Technology; Nathan Brody, Wesleyan University; Peter Gay, Yale University; Lewis R. Goldberg, University of Oregon, Eugene; Ruben Gur, University of Pennsylvania; Judith Harackiewicz, Columbia University; John Kihlstrom, University of California, Berkeley; Lester B. Luborsky, University of Pennsylvania; Carl Malmquist, University of Minnesota; Jerry S. Wiggins, University of British Columbia.

Psychopathology

Lyn Y. Abramson, University of Wisconsin; Lauren Alloy, Temple University; Kayla F. Bernheim, Livingston County Counseling Services; John B. Brady, University of Pennsylvania; Gerald C. Davison, University of Southern California; Leonard M. Horowitz, Stanford University; Steven Mathysse, McLean Hospital; Sue Mineka, Northwestern University; Ann James Premack, Somis, California; Rena Repetti, University of California, Los Angeles; Martin E. P. Seligman, University of Pennsylvania; Larry Stein, University of California, Irvine; Hans H. Strupp, Vanderbilt University; Paul L. Wachtel, College of the City University of New York; Ingrid I. Waldron, University of Pennsylvania; Richard Warner,

University of Southern California; David R. Williams, University of Pennsylvania; Julius Wishner, late of the University of Pennsylvania; Lisa Zorilla, University of Pennsylvania.

Intellectual History

Mark B. Adams, University of Pennsylvania; David DeVries, New York University; Claire E. Gleitman, Ithaca College; Alan C. Kors, University of Pennsylvania; Elisabeth Rozin, Upper Darby, Pennsylvania; John Sabini, University of Pennsylvania; Harris B. Savin, Philadelphia, Pennsylvania.

Several colleagues reviewed the fourth edition of *Psychology* carefully to give us guidance on the fifth editions of *Psychology* and *Basic Psychology*. These include Emir Andrews, Memorial University; Gregory Ball, Johns Hopkins University; Mary Crawford, West Chester University; and Kathie Galotti, Carleton College.

Other colleagues read and commented on draft chapters of *Psychology*, Fifth Edition, and we're grateful for their input: Su Boatright-Horowitz, University of Rhode Island; Shelly Cohen, Carnegie-Mellon University; Bruce Goldstein, University of Pittsburgh; Mark Hauser, Harvard University; John Henderson, Michigan State University; and James Russell, Boston College.

Finally, a small number of friends and colleagues deserve special thanks for their roles in many contexts, including—but not limited to—this edition. First, our thanks to Wendy and Art Kohn and everyone else at Kwamba Studios, for their fine work on the new Web site and video.

Thanks also to Neil A. Macmillan, who wrote "Statistics: The Description, Organization, and Interpretation of Data," an appendix for *Basic Psychology*, with a fine sense of balance between the twin demands of the subject matter and expositional clarity.


Lila R. Gleitman not only wrote Chapter 9, "Language," she also has read virtually every chapter in every edition of this text and in all cases has done what she always does with the things we think and write about: She makes them better.

Paul Rozin has likewise read every chapter of the book, and his insightful and wide-ranging comments testify to his extraordinary breadth of knowledge and depth of thought. He has helped us see many facets of the field in a new way, especially those that involve issues of evolutionary and cultural development.

Friderike Heuer and Amy Jaffey have also served as advisors, consultants, and critics, helping us to find ways to think and write about difficult issues. Their intellectual and personal support have been immeasurably valuable; the book is far better for their input.

Further thanks go to many people at W. W. Norton & Company: To Irene Cheung for her enormous labors on the electronic media—especially the Norton Presentation Maker and the webBOOK; to Roy Tedoff, who managed the production of the book with his usual aplomb; to Antonina Krass, whose brilliance as a book designer always astounds us; to Ruth Mandel, who provided her sharp artistic eye in the supervision of the photo and art research and gave so generously of her time in so many useful and pleasant discussions; to Roberta Flechner, for her remarkable efforts in arranging the layouts; and to Sam Subity and Mark Henderson, who helped in many ways on various editorial aspects of the book.

We are especially indebted to four highly competent and indefatigable Norton editors. The first is April Lange, whose masterly work on the ancillaries and enormous help in creating the webBOOK made it possible for us to offer such extensive support to students and teachers. The second is Cathy Wick, who provided invaluable advice and continual encouragement and whose personal



contact with many psychology instructors throughout the country was of enormous benefit to us in shaping this book. The third is Jon Durbin, who stepped in to guide this book gracefully and energetically through the latter stages of completion. The fourth is Jane Carter, a person of superb literary taste and judgment, who combines the skills of a first-rate organizer with those of a fine critic. We hope they all know how deeply we appreciate them.

Our final thanks go to Norton's chairman of the board, Donald Lamm. Neither Fridlund nor Reisberg has had the pleasure of working closely with Lamm, but the loss plainly is theirs, and even by proxy, they are aware of and immensely grateful for his talents and his enormous and continuing contribution to this book. As Gleitman has put it, "Age has not withered nor custom staled his infinite variety. His ideas are as brilliant and outrageous as ever; his puns are as bad as ever. And my esteem and affection for him are as great as ever."

Merion, Pennsylvania
Santa Barbara, California
Portland, Oregon

May 1999

B A S I C

PSYCHOLOGY

Fifth Edition