

FIFTH EDITION

# PSYCHOLOGY

Darley / Glucksberg / Kinchla





# Psychology

FIFTH EDITION

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# Preface

As we embarked on this Fifth Edition, each of us began by surveying the text as though it were written by someone else. We looked at the structure as well as the content of the chapters and of the text as a whole. Only after we'd taken this bird's-eye view of the project did the actual revision work begin. In some cases our task was mainly to update; in others it was to make the underlying organization of the material more apparent to the student. We also tried to answer the tacit questions that run through the mind of any thinking undergraduate in an introductory course, no matter how motivated: "Why should I care about this? What does it have to do with psychology?"

We created two new elements to help students answer these questions. **Summing Up . . . Moving Forward** is the umbrella term for five topical essays that have been placed at points where the book (and the field of psychology) turns a corner. Rather than leave the student behind, we have developed these essays to serve the same function as a trusted guide—to provide notice of the turn and gently reorient the student to the new direction. For example, the essay that follows Chapter 10, *Thinking and Feeling: Two Determinants of Behavior*, provides students with an overview of the progression from conditioning to higher order learning that was covered in Chapters 5 through 10. But the tying together does not end there. The essay then expands the reader's perspective: "As sophisticated as our mental abilities are, they are not the only, and at times are not even the primary, determinants of our behavior. People are not merely information-processing machines; they are strongly influenced by their desires and feelings as well."

We are indebted to one of our Princeton colleagues, Deborah Prentice, for her thoughtful and beautifully written contribution. Without her assistance, these essays might have served little purpose, but as they now stand, they serve even better in

practice than they did in theory. We are certain you and your students will find them invaluable as well as meaningful.

The second new element are the **Study Outlines**, which replace the summaries of previous editions. By reiterating the Chapter Opening Outline and then providing a precis of the material discussed under each major heading, these Study Outlines make evident not just the key facts and concepts of the chapter, but their underlying structure as well. Some lecturers may even want to encourage their students to *read the Study Outline before reading the main body of the chapter*, as an aid in identifying the main points to be covered. Students will also find it helpful to turn to the Study Outline as a review device. And perhaps students will find, in this reacquaintance with the structure of the chapter, a subtle answer to the questions, "Why should I care?" and "What does this have to do with psychology?"

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## What's New: Some Important Changes

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The main thrust of any revision is to update the text material, beginning with discoveries that affect the existing text material. Only infrequently is there a major paradigm shift in a science. Many psychologists believe that recent work in *massively parallel computing systems* may portend such a shift in the field of psychology. This new *connectionist* or *neural network* view of human cognition is introduced in a variety of ways throughout this edition: in the chapter on sensation (Chapter 3), lateral inhibition of the retina is used as an example of parallel neural computing; in the chapter on memory (Chapter 7), a connectionist system for reading out loud is considered as an example of distributed memory.

Though this is arguably the most global new development in psychology, there have been a great many developments in other areas as well. Most of our revision efforts have been designed to incorporate these advances. Of course, there's a great deal of new material in each chapter. What follows is a selected list of some of the most significant changes in this edition:

**Chapter 1:** This introductory chapter includes a new section on the scope of psychology as well as one on how psychological theories are generated and tested. A new Highlight on Cognitive Science has been added.

**Chapter 2:** A new Highlight on Neural Networks and Massively Parallel Computers introduces students to these very exciting new topics.

**Chapter 3:** A new Highlight on A Connectionist Model of Edge Enhancement in Vision uses lateral inhibition as an example of a connectionist system.

**Chapter 4:** A connectionist model of letter recognition is shown to be similar to analysis-by-synthesis. The discussion of how we see pictures has been expanded with several up-to-date illustrations.

**Chapter 6:** This chapter was reorganized to distinguish more clearly the historically important *behavioristic view* of animal learning from the more modern *cognitive view*. It concludes by showing how one can take a purely behavioristic approach to human learning, but explains why the cognitive view is dominant today. (This sets the stage for the cognitive approach in the rest of the text and the behavior therapy section in Chapter 18.)

**Chapter 7:** Two new Highlights have been added: (1) The Biological Basis of Memory Associations and NMDA, and (2) Distributed Memory and Connectionist Systems. The latter explains how Lashley's ideas about distributed memory are consistent with knowledge storage in a connectionist system.

**Chapter 8:** A new discussion of conveyed meaning in language and measuring the emotional meaning of words has been added.

**Chapter 9:** A discussion of some of the ways in which reasoning skills are taught in the real world has been added.

**Chapter 10:** The discussion of the limits of heritability within populations and among groups has been expanded, as has that on the gains in IQ attributed to early intervention and education.

**Chapter 11:** The chapter has been completely reorganized to cover both biological and social motives. It also includes a new discussion on the effects of insulin levels on hunger.

**Chapter 12:** The two motivation chapters have been reorganized and revised, so that motivation is now covered in Chapter 11 and a *new* chapter on emotion has been added as Chapter 12.

**Chapter 13:** A discussion of Carol Gilligan's work on moral development has been added.

**Chapter 15:** The discussions of models of personality now include a separate section evaluating each model's strengths and weaknesses and the assessment techniques and instruments most common to that perspective. The discussion of the trait model of personality has been greatly expanded.

**Chapter 16:** This chapter has been extensively revised and reorganized to include a greater emphasis on health psychology and new coverage of the physiological consequences of stress and psychosomatic illnesses. The section on coping includes a discussion of cognition as a mediator of anxiety as well as problem-focused and emotion-focused coping.

**Chapter 17:** The discussion of theoretical perspectives which have proven most fruitful in dealing with given disorders has been greatly expanded. Coverage of anxiety disorders has also been expanded.

**Chapter 19:** This chapter has been extensively revised and reorganized to focus more closely on Social Perception (its new title) and on the processes by which we form impressions, make attributions, and act on those perceptions.

**Chapter 20:** This chapter was also greatly revised and organized. It now includes a discussion of group influence, liking, and aggression, and expanded coverage of the differences between contagion and conformity.

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## The Instructor's Edition, an Added Resource

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We are pleased to note that Prentice Hall has bound an expanded Instructor's Manual into the front of this edition of the text. If you are holding an Instructor's Edition, you may have already leafed through it, for its material is sure to exert a strong attraction. Janet Proctor, a professor of psychology at Purdue University, has created an imaginative, rigorous, and useful teaching tool that provides a quick overview of the chapter, teaching tips which highlight areas that may pose problems for students, lecture suggestions with background information, and lecture and demonstration ideas.

## Everything You Want to Know About Supplements

Because the introductory course is frequently so all-encompassing, there is a full range of supplements designed to help you and your students. Your Prentice Hall representative or the Psychology Editor can provide you with details and ordering information; from hardware specifications to video library titles and running times. There is also a list and brief description of the supplements on the back of the Instructor's Edition. Here is what is available:

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Instructor's Edition  
Instructor's Resource Manual

Handout and Transparency Masters  
Test Item File  
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Prentice Hall Data Manager  
Micro Test III for Macintosh users  
Apple Test Generator  
Slide and Transparency Series  
Video Library  
The Contemporary View Program

### *Supplements for the Student*

Study Guide and Workbook  
A Guide to the Brain: A Graphic Workbook  
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We are proud to be part of the Contemporary View program, cosponsored by Prentice Hall and *The New York Times*. We hope that it will make the reading of textbooks and newspapers a more dynamic, involving process.

## Acknowledgments

What really makes a book are people, and in addition to relying on each other, we have benefited from the feedback of many colleagues over the years. Though this edition retains strengths that are often the result of contributions by reviewers of previous editions, we have only space enough to mention those who helped us work on this edition. We would, however, like to thank all those who served as reviewers.

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We are especially grateful to our development editor, Leslie Carr, for her enthusiasm and support during the revision process. Her efforts have added considerably to this fifth edition. We would also like to thank Serena Hoffman, our production editor, for her highly professional and creative work on this edition. We all feel that the production quality of this edition makes it easily the most visually appealing and readable revision of *Psychology* produced by Prentice Hall.

John M. Darley  
 Sam Glucksberg  
 Ronald A. Kinchla

# About the Authors

**John Darley** is a professor of psychology at Princeton University. He received his B.A. from Swarthmore College and his M.S. and Ph.D. degrees from the Department of Social Relations at Harvard University, where he worked with Elliot Aronson. Before coming to Princeton University he taught for four years in the graduate program of the Washington Square unit of New York University. His own research is in social psychology, and over the years has included work on bystander responses to emergencies, the dynamics of self-fulfilling prophecies, and stereotyping and prejudice. John Darley recently co-authored the chapter on environmental psychology in the *Handbook of Social Psychology*.

**Sam Glucksberg** was born in Montreal, Canada, and moved to New York City, where he attended The Bronx High School of Science, City College of New York, and, finally, New York University, where he received his Ph.D. in experimental psychology in 1960. He then spent three years in the army with the Human Engineering Laboratories at Aberdeen Proving Ground, Maryland, where he worked on basic human engineering research problems. He joined the faculty of Princeton University in 1963, where he has been ever since. He has served as chairman of the psychology department, as chair of an NIMH research review committee, and as consulting editor on numerous journals, including *American Scientist*, *Cognitive Psychology*, and *Developmental Psychology*. He is now editor of the *Journal of Experimental Psychology: Learning, Memory and Cognition*. His research focuses on cognitive processes, with emphasis on language and thought processes.

**Ron Kinchla** has been a professor of psychology at Princeton since 1969. He received his B.A. and Ph.D. degrees from the University of California, Los Angeles, followed by postdoctoral research on human perception at Stanford University and the NASA Ames Research Center. Before coming to Princeton he taught at New York University in Greenwich Village and McMaster University in Ontario, Canada. He has published numerous research articles and book chapters on visual and auditory perception, attention, and mathematical psychology. He has been a reviewer or consulting editor on a number of journals including *Perception and Psychophysics*, *The Journal of Mathematical Psychology*, *The Journal of Experimental Psychology*, and *Psychological Review*. He has also been a member of The Advisory Committee of the International Society for Studies of Attention and Performance. He is presently Director of Graduate Studies in the Psychology Department at Princeton and is working on a book relating the study of perception and memory.



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## Resistance to Psychological Understanding

**P**SYCHOLOGY spans vast fields of study. Its definition, “the science of human thought and behavior,” conveys the core of the discipline, but not its scope. To give you a better sense of that, we will describe the activities of a selection of psychologists.

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## The Scope of Psychology

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### *Psychologists in Action*

Dr. Adams is a psychologist. He works with people who have psychological problems. As well as teaching classes in his specialization of clinical psychology, he is the associate director of the college counseling center. A student comes to the center complaining that she feels depressed and lethargic. She has also had difficulty sleeping and her appetite is poor. Another student is suffering from a far more pervasive psychological disturbance. He has recently begun to act strangely. He is often withdrawn, but occasionally bursts into almost incoherent speech. He believes that there is a widespread plot against him; that his professors are spying on him for the college authorities and the police. Lately he has noticed that the food served to him in the college cafeteria tastes peculiar, and he thinks that “they” are trying to poison him. He was referred to Dr. Adams after creating a disturbance in the cafeteria.

Dr. Adams is a *clinical psychologist*, a credentialed expert in the understanding and treatment of the problems people have with daily life. He is likely to meet with each of these students individually for several sessions. In the case of the more troubled young man, he may recommend ongoing treatment, possibly off-campus. Other clinical psychologists work with people seeking help in such places as mental-health clinics, state hospitals, community centers, and private offices. Some clinical psychologists devote all of their time to treating disturbed people, but others do research that attempts to identify the causes of the disturbances they see and the best treatments for those disturbances.

Dr. Adams is the kind of psychologist most people imagine when they think of psychologists. However, many psychologists do not see patients or work with people at all, though their goal is to further our understanding of human behavior and mental life. They may do research on vision or learning, or they may study the biochemical functions of the brain. Two of the Highlights in this chapter concern the various settings, both practical and applied, in which psychologists work.

For example, Professor Benson is a *physiological psychologist*, and she has never done counseling in her life. When not teaching students, she works in a laboratory, surrounded by complex (and expensive) pieces of equipment. She is seeking to understand the physiology of addiction. To acquire such under-

• Umberto Boccioni, *A Fight in the Arcade* (1882–1916). Collection Jesi, Milan.