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PREFACE

TO THE STUDENT

The psychology of human memory and cognition is fascinating, dealing with questions and ideas that are inherently interesting: how we think, reason, remember, and use language, to name just a few. When cognitive psychologists talk research at conventions, they are agitated, intense, and full of energy. In contrast to this enthusiasm, however, undergraduate texts often portray the field as dull, too concerned with the minutiae of experimental method and technical jargon and not concerned enough with the interesting issues. Without slighting the empirical foundation of the field, we have tried to capture some of the excitement of the area. All professors want their students to understand the material, of course, but we also want you to appreciate cognitive psychology as one of the most interesting and memorable topics of your student career. Several features of the text are designed to accomplish this:

- To engage your interest and understanding, examples of the main points are sprinkled throughout the text. Each of the chapters has a box that asks you to “Prove It.” This feature gives you a demonstration project that can be done quickly to illustrate the points being made.
- Mastering the terminology of a new field can be difficult. To help you with the jargon, critical terms are boldfaced in the text and defined immediately in italicized print. Each chapter’s terms are listed at the end of the chapter.
- Each major section of a chapter ends with a brief Section Summary. This, along with the listing of glossary terms at the end of each chapter, should help you check your understanding and memory as you study. Note that some people find it helpful to read the Section Summaries first as a preview of the section’s content.
- We use a more colloquial style than is customary in the field (or in texts in general), using the first person, posing direct questions to you, inserting parenthetical commentary, and so on. Our students have told us that these features make the text more enjoyable to read; one said, “It’s interesting—not like a textbook,” which we take as a compliment. Some professors may expect a more formal, detached style, of course. We would rather have you read and remember the material than have you cope with a text selected because of a carefully pedantic style. Besides, you will have plenty of time to deal with boring texts in graduate school.
- Although “how people think” is a topic that is likely to be of basic interest to just about everyone, most of you will not end up being cognitive scientists. So, although the material is written to be useful to people going on to a career some field of cognition, the exposition is also written to given insights to applications outside of formal cognitive science, in careers that more of you are likely to pursue.
TO THE INSTRUCTOR

Like the first five editions, this sixth edition is directed primarily toward undergraduates at the junior and senior level, who are probably taking their first basic course in memory and cognition. It has also been used successfully in introductory graduate surveys, especially when first-year students need a more thorough background in memory and cognition. There is much continuity between the fifth edition of *Cognition* and this one: The foundation areas in cognition are still covered thoroughly, as you’ll see in the Table of Contents.

But this revision has several new features that you’ll want to note:

- There continue to be tremendous increases in the study of memory and cognition with the technologies and perspectives of cognitive neuroscience. This was reflected in prior editions, and this emphasis continues to grow in the sixth edition. There is now a chapter largely devoted to issues of cognitive neuropsychology. These discussions of neuroscience are further integrated within the individual chapter topics, along with a reference to Brodmann areas to help students more easily understand where processes may be occurring in the cortex.

- **Two new chapters** have been added to the text to cover emerging emphases in the field. Chapter 13 covers cognition and emotion, and Chapter 14 is on cognitive development. These are capstone chapters that recapitulate the topics in the text and can be used as desired, or not, by individual instructors wanting to give different flavors or emphases in their course. These chapters are also added because they cover topics that will be of interest to a broader range of students. Chapter 14 is an online-only chapter: it is exclusively available within MyPsychLab (0-205-98653-6) and in all eText versions of *Cognition* 6th ed.

- The text has been thoroughly updated, adding and expanding on important topics and developments that are central to the field across a range of topics. As always, there has also been some careful pruning of topics and streamlining of presentation to make room for the new material. Specific example changes include:
  
  Chapter 1: More concise presentation of the history of cognitive psychology; inclusion of a broad overview of cognitive science, and how cognitive psychology relates to the wider range of topic areas.

  Chapter 2: More in-depth and extensive introduction to issues and methods of cognitive neuroscience; reference to brain areas by using Brodmann areas that are illustrated inside the front cover, and referenced throughout the text; introduction to connectionism placed here.

  Chapter 3: Neuroimaging links to Gestalt grouping principles; links to dorsal stream processing in pattern perception; influences of embodied cognition on perception expanded.

  Chapter 4: Updated discussion of attention capture processes; inclusion of inhibition of return concept, and its relation to embodied cognition; discussion of mind wandering.

  Chapter 5: Deeper consideration of the regulation of working memory resources; embodied effects of mental rotation; evidence of changes in working memory abilities.
Chapter 6: Inclusion of the benefits of survival processing on memory; consideration of the testing effect; discussion of the HERA model.

Chapter 7: Expanded discussion of embodied semantic memory; connectionism moved to integrate with the rest of the chapter.

Chapter 8: Discussion of propositions tightened up; discussion of the process of reconsolidation; discussion of cultural schemas for the reminiscence bump.

Chapter 9: Added material on tongue twisters.

Chapter 10: Expanded discussions of gesture and conversation.

Chapter 11: Update perspectives on the SNARC effect; text on automatic decision making.

Chapter 12: Inclusion of embodied influences on problem solving; expanded discussion of analogical reasoning.

As in the first five editions, we have tried to strike a balance between basic, core material and cutting-edge topics. As cognitive psychology continues to evolve, it is important to maintain some continuity with older topics and evidence. Students need to understand how we got here, and instructors cannot be expected to start from scratch each time they teach the course. I’ve preserved the overall outline and organization of the text, while updating the sections to reflect newer material.

INSTRUCTOR SUPPLEMENTS


- The test item file comes with the Pearson MyTest (ISBN 0-205-98700-1), a powerful assessment generation program that helps instructors easily create and print quizzes and exams. Questions and tests can be authored online, allowing instructors ultimate flexibility and the ability to efficiently manage assessments anytime, anywhere. For more information, go to www.pearsonmytest.com.

- MyPsychLab (ISBN: 0-205-98653-6). Available at www.mypsychlab.com, this learning and assessment tool can be used to supplement a traditional lecture course or to administer a course entirely online. Instructors decide the extent of integration—from independent self-assessment for students to total course management. Students benefit from an easy-to-use site where they can test themselves on key content, track their progress, and make use of individually tailored study plans. MyPsychLab is an all-inclusive tool, including a Pearson eText, plus teaching and learning resources organized by chapter in the form of videos, simulations, animations, assessments, and other tools to engage students and reinforce learning. Fully customizable and easy to use, MyPsychLab meets the individual teaching and learning needs of every instructor and every student. To package MyPsychLab with the student text, use ISBN 0-205-99165-3.

- Simulations. Students participate in virtual classic psychology experiments and research-based inventories with the MyPsychLab Simulations. The simulations help reinforce your classroom teachings and textbook.
• **MyClassPrep.** Available for instructors within MyPsychLab, this exciting new instructor resource makes lecture preparation easier and less time consuming. MyClassPrep collects the very best class preparation resources—art and figures from our leading texts, videos, lecture activities, classroom activities, demonstrations, and much more—in one convenient online destination. You can search through MyClassPrep’s extensive database of tools by content topic or by content type. You can select resources appropriate for your lecture, many of which can be downloaded directly; or you can build your own folder of resources and present from within MyClassPrep.

**STUDENT SUPPLEMENTS**

• **MyPsychLab.** With this exciting new tool students are able to self-assess using embedded diagnostic tests and instantly view results along with a customized study plan.

The customized study plan will focus on the student’s strengths and weaknesses, based on the results of the diagnostic testing, and present a list of activities and resources for review and remediation, organized by chapter section. Some study resources intended for use with portable electronic devices are made available exclusively through MyPsychLab, such as key terms flashcards and video clips. Students will be able to quickly and easily analyze their own comprehension level of the course material and study more efficiently, leading to exceptional exam results!

An access code is required and can be purchased at www.pearsonhighered.com or at www.mypsychlab.com.

• **CourseSmart eTextbook (ISBN: 0-205-98709-5).** CourseSmart offers students an online subscription to *Cognition, 6th edition* at up to 60% savings. With the CourseSmart eTextbook, students can search the text, make notes online, print out reading assignments that incorporate lecture notes, and bookmark important passages. Ask your Pearson sales representative for details or visit www.coursesmart.com.

We hope that the balance between classic research and current topics, the style we have adopted, and the standard organization we have used will make the text easy to teach from and easy for students to read and remember. More important, we hope that you will find our portrayal of the field of cognitive psychology useful. As always, we are delighted to receive the comments and suggestions of those who use this text, instructors and students alike. You can contact G.A. Radvansky by writing in care of the Department of Psychology, University of Notre Dame, Notre Dame, IN 46556, or e-mail him at gradvans@nd.edu. You can contact Mark Ashcraft by writing in care of the Psychology Department, University of Nevada Las Vegas, 4505 S. Maryland Pkwy, Box 455030, Las Vegas, NV 89154-5030, or e-mail him at mark.ashcraft@unlv.edu.
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And, in addition to our undergraduate classes, who have tested many of the ideas and demonstrations in the text, we’d like to thank a few special students who have helped in a variety of ways, from reading and critiquing to duplicating and checking references: Mike Faust, David Fleck, Elizabeth Kirk, David Cope-land, Don Seyler, Tom Wagner, Paul Korzenko, and Jeremy Krause. We’re very grateful to all.

Gabriel A. Radvansky
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