

IN SEARCH OF THE HUMAN MIND

SECOND EDITION

ROBERT J. STERNBERG YALE UNIVERSITY

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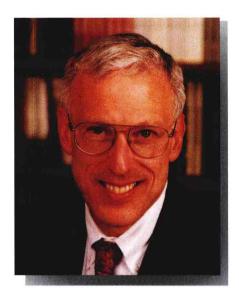
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ABOUT THE AUTHOR



Robert J. Sternberg is IBM Professor of Psychology and Education in the Department of Psychology at Yale University. He was graduated

summa cum laude, Phi Beta Kappa, with a BA from Yale in 1972, receiving honors with exceptional distinction in psychology. He received the PhD in psychology in 1975 from Stanford University and an honorary doctorate from the Complutense University of Madrid in 1994.

Sternberg has won several scholarships and fellowships, including a National Merit Scholarship to attend Yale, where he won the Wohlenberg Prize; a National Science Foundation Fellowship to attend Stanford, where he received the Sidney Siegel Memorial Award; and a Guggenheim Fellowship while a faculty member at Yale. He also has won several other awards, including the Early Career and McCandless Awards of the American Psychological Association, the Outstanding Book and Research Review Awards of the American Educational Research Association, the Cattell Award of the Society of Multivariate Experimental Psychologists, and the International Award of the Association of Portuguese Psychologists. He is a Fellow of the American Psychological Association, American Psychological Society, the American Academy of Arts and Sciences, and the American Association for the Advancement of Science. Sternberg has taught introductory psychology for 20 years.

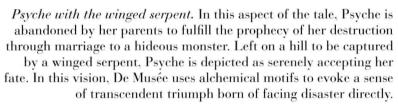
Sternberg has been editor of the *Psychological Bulletin* and president of Divisions 1 (General Psychology) and 15 (Educational Psychology) of the American Psychological Association. He is the author of more than 600 books, book chapters, and articles, and has held more than \$10 million in research grants and contracts. He is incoming editor of *Contemporary Psychology*:

ABOUT THE ART

The myth of Psyche is an important element in this text. Through Psyche's story we come to see how her innate characteristics and life experiences—curiosity, love, loyalty, trials and tribulations, and final triumph into immortality—can parallel our own search for human understanding. The internationally renowned artist Christina De Musée was specially commissioned by Harcourt Brace to create the stunning part openers for the second edition of *In Search of the Human Mind*. Working in an amalgam of classical motifs, gold and jewel tones, and an elegant, contemporary style, De Musée creates timeless images of the mythical character from whom psychology took its name.



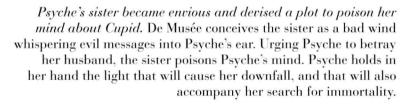
Psyche was beautiful in countenance and spirit. Psyche's beauty was the source of her downfall as well as her triumph. Psyche is portrayed as the embodiment of innocence and beauty, existing eternally among flowers indicative of youth and growth.







Cupid made Psyche his wife, but remained secretive about his identity and appearance. Captivated by Psyche's beauty, Cupid disregarded his mother's instructions to destroy her. He marries her, but keeps his identity hidden. De Musée explores the mysteries of human relationships in this scene evocative of the dual aspects of humanity—our hidden natures as well as the face we present to the world.







Psyche holds the lamp to reveal Cupid's identity. Cupid is revealed as the beautiful god, and Psyche is awestruck by his beauty and her own betrayal. In the myth, at the moment of revelation, Psyche pierces her finger on one of Cupid's arrows and immediately falls more deeply in love with her mysterious husband.

Psyche and the golden fleece. Venus sent Psyche out into the world to endure trials and tribulations as a punishment for both her beauty and her betrayal of Cupid. One of the tests was to obtain golden wool from a band of fierce sheep. Psyche used elements of nature to subdue the wild sheep and returned with the prized golden fleece, to Venus's dismay.



The mission of *In Search of the Human Mind* is to teach introductory psychology students to understand and to think about the field as psychologists do—to learn that, in the search for understanding of the human mind, psychology is both a product and a process. The text equally embraces biological, cognitive, developmental, social-psychological, and clinical paradigms to demonstrate this balance.

The second edition of *In Search of the Human Mind* represents a dialectical progression in my own thinking, and perhaps one for the field as well. It uniquely synthesizes two evolutionary approaches—of organisms and of ideas—in a single text.

POINTS OF CHANGE

The second edition has evolved in four key ways, based on feedback received from professors and students who used the first edition.

- 1. Focus: Psychology as a Natural Science and a Social Science. Psychology is presented in the second edition as both a natural and a social science. The difference is not just one of a few words in the introductory chapters. The amount of natural-scientific, and especially biological, material has been increased in order to balance more closely natural-and social-scientific aspects of the field. Both viewpoints are presented and their interactions explored.
- 2. Theme: The Evolution of Ideas and of Organisms. A major theme of the first edition was the evolution of ideas as expressed through the dialectic—the process of ideas progressing from one point of view, to an opposing view, to a synthesis of the two, then becoming the basis for a new point of view to be opposed. The dialectical approach both enables students to understand current ideas in psychology and to understand the evolution of these ideas over time. This emphasis on the evolution of ideas—on psychology as an evolving field—continues in the second edition.

The new edition introduces a second evolutionary theme, namely, that of the biological evolution of organisms as a basis for understanding psychological principles. The second edition of *In Search of the Human Mind* thus interweaves two key evolutionary themes—the evolution of ideas and of organisms. Each chapter contains material that shows how human behavior can be understood as an adaptation to the environment. Evolutionary psychology is also introduced as a new paradigm in the study of psy-

chology. The rapidly emerging study of memetics—the transmission of ideas—suggests that, in some sense, certain principles of evolution that apply to biological organisms may apply to culturally generated ideas as well. This interweaving of two key evolutionary themes results in a text that is fully rather than partially evolutionary in its approach.

- 3. Length. In order to transform the book into one that can be more in harmony with the goals and requirements of both one- and two-semester courses, the textual material has been reduced by approximately 20%. This reduction was accomplished by judicious editing to remove extraneous detail in response to reviewers' suggestions.
- 4. Currency of Theory and Research. The explosion of knowledge in psychology in recent years has given rise to new theories, research, and paradigms that are reshaping the field. In Search of the Human Mind, second edition, is totally current with respect to these new developments. Thus, the book contains several hundred new references, most of them from the 1990s, and many of them from the mid-1990s. The goal is to achieve a closer balance between coverage of classical theories and research, on the one hand, and current theories and research on the other, and to show students how rapidly and, I believe, successfully the field is evolving.

POINTS OF CONTINUITY

The twenty chapters of the book are organized into six major parts, addressing the nature of psychology, basic biological and cognitive processes, higher cognitive processes, developmental, social–psychological, and clinical processes. An appendix demonstrates statistical methods by having students survey their classmates and analyze the data. A glossary fully defines key terms from the text, and a comprehensive reference list, as well as detailed name and subject indexes, make the book easy to use for study and reference.

The second edition of *In Search of the Human Mind* retains additional key features of the first edition that our research revealed to be most successful in teaching students, of which all features have been updated.

1. Psyche Myth. The myth of Psyche and her search for Cupid remains central in the book as a metaphor for the notion of psychology as continually in a process of search. The art program illustrating

Psyche and her search, however, has been updated and modified in a way that emphasizes the continuity of psychology's search. (See page VI, About the Art, for a description of the unique art program of internationally renowned artist Christina De Musée.) Part openers in the first edition illustrated different visions of Psyche. The second edition part opener illustrations now symbolize the evolution of psychological thought by showing the progression of Psyche's search for Cupid and immortality.

- 2. Triarchic Questions. Students think and learn in different ways: All students—regardless of their preferred learning styles—benefit from absorbing material in a variety of different ways. Thus, analytical, creative, and practical thought questions appear in the second edition, as in the first, in order to assist students in learning and thinking about the material from three complementary perspectives. In response to user feedback, the number of questions has been reduced, and questions have been changed as needed to make them more user-friendly. The triarchic emphasis uniquely meets the needs of different kinds of learners in the introductory psychology course.
- 3. Integrated Multicultural and Cross-Cultural Emphases. The second edition embraces the use and expansion of fully integrated multicultural and cross-cultural material that will help students understand that these perspectives are not something separate from the core of psychology but an integral part of it.
- 4. Scientific, Literary, and Artistic Masterworks. As in the first edition, major scientific discoveries outside of psychology, excerpts from literary masterpieces, and master works of art are infused into the book to show how other disciplines beyond psychology share a common goal with psychology and help psychologists in their search for the human mind.

IN CONCLUSION: A PERSONAL DIALECTIC

Many years ago, when my career was just starting, I was approached by another psychologist at Yale and asked to collaborate on an introductory psychology text that would emphasize an evolutionary approach to psychology. Committed then as I am now to an evolutionary approach, I agreed and we commenced the collaboration. Unfortunately, the collaboration ended when we discovered that each of us meant a different thing by evolution: The other psychologist meant biological evolution, and I meant the evolution of ideas. The other psychologist undertook a text focused on biological evolution, and I, some years later, undertook the first edition of *In Search of the Human Mind* to focus on the evolution of ideas.

The second edition of *In Search of the Human Mind* represents dialectical progress in my own thinking—synthesizing the evolution of organisms and of ideas in a single text. Thus, the process of formulating this approach is a good example of a major theme of the text. We can be grateful that biological evolution has advanced humans to the point where we can develop in our thinking through the dialectical evolution of ideas.

ANCILLARY PACKAGE

In support of *In Search of the Human Mind*, the ancillary package builds on solid pedagogical theory to serve the needs of the introductory psychology student and instructor and to take full advantage of the latest in technology.

- The Study Guide by Bernard C. Beins (Ithaca College) is rigorously designed to provide practice at identifying, understanding, and integrating important psychological ideas presented in the main text. Students will learn to apply the concepts in creative. practical, and analytic ways. Each chapter lists specific goals and objectives, helps students review the material through a variety of questions, reinforces terminology with matching exercises, and encourages students to synthesize the information through shortanswer questions of varying levels of difficulty that reflect the triarchic theory. The Study Guide provides a progress test for each chapter and features a cumulative final exam to foster synthesis of the material. The second edition of the Study Guide has been reformatted to be slimmer and easier to use without sacrificing coverage. As an APA fellow and secretary of Division Two, Teaching of Psychology, Bernard Beins is involved extensively with the issues regarding the introductory psychology course. He has published numerous articles and has given various presentations on the subject of enhancing the learning experience.
- The **Instructor's Manual** has been extensively revised by Susann Doyle and Ellen Pastorino (Gainesville College). Building on the work of Edward P. Kardas (Southern Arkansas University), who prepared the first edition, Doyle and Pastorino have streamlined the organization of the second edition Instructor's Manual, providing actual outlines for lectures, a convenience for time-constrained professors, as well as creative ideas for class discussion, activities, outside resources, teaching tips, handouts, and writing exercises. Activities and exercises are integrated with the major themes of the main text: the triarchic theory of intelligence and the evolution of ideas as well as organisms.
- The Testbank closely supports the theme of critical thinking from the textbook, the Study Guide, and

the Instructor's Manual. Each chapter contains 180 convergent, multiple-choice items and 45 divergent, short-essay items. Two-thirds of the convergent items are conceptual (the remaining one-third are factual), and all are rated by difficulty and keyed to the section and the page in the textbook where the concept is discussed. The divergent items ask students to answer questions in essay format to bring out the triarchic forms of thinking. Answer guidelines give instructors key concepts to look for in the students' essays. The testbank was written by Bernard C. Beins (Ithaca College).

Computerized versions of the Testbank are available in DOS 3.5-inch. Windows, and Macintosh versions. The Testbank software EXAMaster+TM offers three unique features to the instructor. EasyTest creates a test from a single screen in just a few easy steps. Instructors choose parameters, then either select questions from the database or let EasyTest randomly select them. FullTest offers a range of options that includes selecting, editing, adding, or linking questions or graphics; random selection of questions from a wide range of criteria; creating criteria; blocking questions; and printing up to 99 different versions of the same test and answer sheet. EXAMRecord TM records, curves, graphs, and prints out grades according to criteria the instructor selects. Grade distribution displays as a bar graph or plotted graph.

For the instructor without access to a computer, or who has questions about the software, Harcourt Brace College Publishers (800-447-9457) offers two services. *RequesTest* provides a software specialist who will compile questions according to the instructor's criteria and mail or fax the test master within 48 hours. The *Software Support Hotline* (800-447-9457) is available to answer questions Monday through Friday, 9 a.m. to 5 p.m., Central time.

• The **Overhead Transparencies** come in two packages: 75 illustrations and tables, specially selected from *In Search of the Human Mind*, supplement the more than 200 transparencies in the Harcourt Brace Introductory Psychology Transparency package. Each acetate, with accompanying guide, is in full color.

MULTIMEDIA AND INTERACTIVE SOFTWARE

• The Explorer, the accompanying CD-ROM prepared by John Mitterer (Brock University), is an innovative learning tool that allows students to explore and understand the realm of psychology in an interactive, Web browser-based, multimedia environment. The Explorer runs under an Internet browser, assuring full World Wide Web access to hundreds of carefully chosen psychology Web sites. Further, The Explorer allows students to interactively explore the

dynamic processes illustrated graphically in the text, with a wave of the mouse. In addition to further explorations of graphic material contained on the CD-ROM, *The Explorer* allows students to repeat experiments on classic psychological phenomena such as the Stroop effect, or the Müller-Lyer illusion, among many others. Never losing focus on the content of the textbook and Sternberg's unique approach to teaching introductory psychology, *The Explorer* is totally integrated with *In Search of the Human Mind* and its accompanying ancillary package. In addition, the CD-ROM allows students to test their mastery of the material in a series of test questions hyperlinked to the relevant section of *In Search of the Human Mind*.

- The Instructor's Explorer CD-ROM allows you to integrate multimedia into your lectures. Projection quality simulations, demonstrations, and experiments from The Explorer enhance the teaching of key concepts in psychology.
- Dynamic Concepts in Psychology II, a highly successful videodisc developed by John Mitterer (Brock University), covers every major concept of introductory psychology. Media include animated sequences, video footage, still images, and demonstrations of well-known experiments. A modular format allows instructors to tailor the program to their course. LectureActive presentation software (Windows, Macintosh) accompanies Dynamic Concepts in Psychology II. This software gives instructors the ability to preprogram classroom presentations as well as to import material from other multimedia sources, such as other videodiscs. CD-ROM's. or your own hard drive.
- Psychology MediaActiveTM, a CD-ROM-based psychology image bank to be used with commercially available presentation packages like PowerPointTM and AstoundTM, as well as Harcourt Brace's Lecture-ActiveTM 2.0 for IBM and Macintosh.
- The Whole Psychology Catalog: Instructional Resources to Enhance Student Learning, 1997, by Michael B. Reiner, Kennesaw State College. Instructors can easily supplement course work and assignments with this recently updated manual. It has perforated pages containing experiential exercises, questionnaires, and visual aids. Each activity is classified by one of eight learning goals central to the teaching of psychology. Also included in the new version is an informative section on using the Internet and the World Wide Web.
- The Harcourt Brace Multimedia Library provides additional media for instructors to use in the classroom. The Library includes videos from Films for the Humanities and Sciences and Pyramid Films, as well as series such as The Brain Teaching Modules, The Mind Video Modules, Discovering Psychology telecourse. Childhood, Seasons of Life, and Time to

Grow. Contact your local Harcourt Brace representative for qualifying details and further information.

World Wide Web—For up-to-date instructor's resources, student's resources, and links to dynamic Web sites that will enhance your teaching and learning about psychology, visit us on the World Wide Web at http://www.hbcollege.com.

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I would like especially to thank my introductory psychology students for putting up with me over the years as I tried out the materials in class. My undergraduate advisor, Endel Tulving, and my graduate advisor, Gordon Bower, both profoundly affected how I think about psychology, as did Wendell Garner as a faculty mentor at Yale.

Finally, I thank my wife, Alejandra Campos; my children, Seth and Sara; and my group of collaborators at Yale for the support they have always shown me in my work.

RJS

Using *In Search of the Human Mind*: A Guide to Learning From Your Textbook

In Search of the Human Mind, second edition, is designed to give you a thorough introduction to the principles of psychology and to illuminate and illustrate the many concepts, terms, and examples that will be presented in the psychology course.

As you set out on your search for the human mind, this book will prepare you to look at and think about psychology differently than you might now be doing—it will prepare you to think as a psychologist does, by examining the many faces of psychology. Among those faces are:

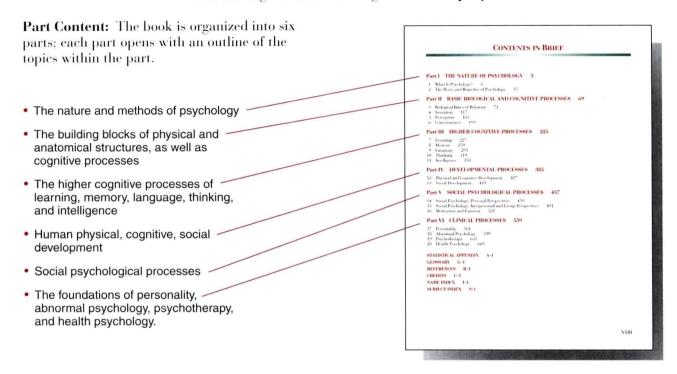
- Psychology is both a natural and a social science;
- psychology is the process of evolution of ideas and behavior;
- psychology encompasses a variety of viewpoints and methods;
- psychology represents a balance between theory and research.

The following pages will introduce you to the many features of *In Search of the Human Mind*, second edition, and show you how to use the learning aids provided to enhance your study of psychology.



VISUAL PSYCHOLOGY

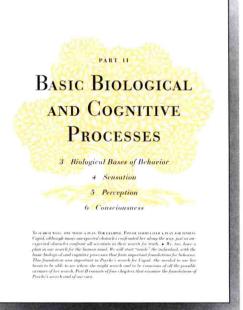
Sets the stage for understanding scientific inquiry.



The importance of studying psychology as both a natural science and as a social science is emphasized throughout, as are the evolution of ideas and evolution of behavior, multiple perspectives on ideas in psychology, and the need for a balance of theory and research.

Part Openers: Each part begins with a specially commissioned illustration by Christina De Musée of a different aspect of the mythological character Psyche, for whom psychology was named, and of the trials she endured in her search for Cupid, and ultimately, immortality.





OUTLINES, VIGNETTES, AND QUESTIONS

Outlines assist you in your search by surveying the main topics to be discussed. Vignettes give multiple perspectives on the same topic. Questions teach you to think as a psychologist does.

Chapter Outline: An annotated chapter outine introduces a preview of the chapter material in an organized and consistent format.

CHAPTER OUTLINE THE ENDOCRINE SYSTEM 107.
The endocrine system is a means by wh
mbotaness directly into the bloodstrone
emborane system are communication or

Opening Vignettes: These stories explore a topic from the view of literature or drama.

Chapter Content: Each topic is presented, covering the range from basic concepts to the more complex, and is based on the dialectic—thesis (statement) to antithesis (contrary statement) to synthesis (combination of the ideas in the statements).

Main Topics: Each main topic is introduced with a major idea. The main topics are amplified by pedagogy to help the student understand the basic concepts.

In Search of ... Questions: Help you ask the main question addressed in each section. By the end of the section, you should have a good idea of how psychologists have tried to answer this question.



VARIETY OF VIEWPOINTS

Triarchic Theory of Intelligence: Robert J. Sternberg, a noted researcher and lecturer in the fields of intelligence and learning, uses his theories of different ways of learning and thinking to help you understand basic principles.

Triarchic questions require analytical, practical, or creative thinking, or a combination of these kinds of thinking, about each topic.



Analytical



Creative



Practical



Figure 5-8

MULLIB-LALB MALL SIGN. If his hoof the line segments, a set h, e set d) is longer. Measure them. The principle of depth constancy may lead us to perceive the insecret facing ungles we being larger, as if they represent the "far"

Another illusion, which you may have seeksele-see to the Miller-Lyer Illusion, illustrated in Figure 5-5. In this illusion, too, we tread to vestered to be a seek of the seek of the seek of the tengths. In particular the vertical line segments in panels or and \(\epsilon\) empty experts the meaning and segments in panels \(\epsilon\) and \(\epsilon\) even begins at the fine segments in panels \(\epsilon\) and \(\epsilon\) even begins at the segments are of the same length. Psychologists are segments are of the same length, Psychologists are force explanation in that the diagonal lines at the ends of the vertical segments in panels \(\epsilon\) and \(\epsilon\) every even amplied to depth case similar to the ones we would see in our preriptions of the external even support of the external experiments of the external experiments of the external experiments and an experimental experiments.

When considering this and other illusion remember that such illusions are relatively ran occurrences in our lives and often have to be countrived quite carefully to work. The large major ity of the time our perceptual apparatus readels us to perceive things such as size, in ways that are surprisingly socurate, even in the face of potential distortions (such as varying degrees of fog or rain). Our perceptual apparatus also enables us to per-



SHAPE CONSTANCY

Shape constainty refers to our perceiving an oldter serious includes convenient the shape of to serious lungs. For example, in Figure 2-N; vue we a recomplete does and does frame. 2-N; vue we a recomplete does and does frame, or serious serious serious serious serious conquenced Of course, the door does not seem to take on a different shaper in each panel I would be odd, undeed, if we perceived a does to be changing on the does not be entian does change as we open the door. If you look at the figure mindfully, you will see that the draws shape of the does is different in early panel. How do we know we are bodying will see that the draws shape of the does is different in early panel. How do we know we are bodying will see that the draws shape of the does is different in early panel. How do we know we are bodying will see that the draws shape of the does in differtent in early panel. How do we know we are bodying to make the state of the state of the state of the count in meth time we are always weight the same counter and the undrawing texture elements on the door to recognize directly that we are always bedang at the warm for perception.

LIGHTNESS CONSTAN

Lightness constancy refers to our perception that an object is evenly illuminated despite differences in the actual amount of light reaching our eyes. In fact, we are remarkably capable of compensating for differences in the actual amount of light that is

Teachment of Hallowinson, March

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them. With all the problems associated with drug uses you may worder why anyhody uses drugs. The are sever are as varied as are people time-leve. Some people take drugs to experiment, beding confident they are personally immune to additions or of une that they are personally immune to addition or of une that they also to take the drugs. Others bed on time that they plan to take the drugs. Others bed worden in the risks seem worth at Whatever the reasons for taking possession generally behaviored union generally the hamiful outnomes generally

Before we conclude this chapter, we consider

EXTRASENSORS PERCEPTION 21

chology—or to our verience—at all. ESP belongs to the earlin of paragoychology, a branch of paychology concerned with phenomena that are not presently explained by the application of known prevently explained by the application of known convinced that such phenomena (including ESP), exist, but many others are equally convinced that they do not vary. It ESP these exist, it is probably an altered state of consciousness because it seems unlikely that we would experience it is earned unlikely that we would experience it is a normal time.

as all, down four main alleged types of EM precognition, chair-onne relepsity, and psychokinesis. Precognition refers to perception of a funarcial precognition refers to perception of a funarcial processing of the precognition of the preciption of object to events for shach here it no apexample, a chair-co-att might claim to be able to example, a chair-co-att might claim to be able to determine a randomly elected number that was placed in a waled envelope. Dayd Bem and Larke Banston (1994) claim to be found extended to the precipitation of the data has been subject to dispute (Hyman 1994). Telepathy, probably the most commondy chaimed form of ESP, is the direct transfer of thought from one person to another without may visible form of extended the precipitation of the data for the prepertion to another without may visible form of extensive the subject to dispute from one person to another without may visible form of extent to the precipitation of the precipitation of the prepertion to another without may visible form of extensive the precipitation of the precipitation of the preter the precipitation of the precipitation of the pretries the precipitation of the precipitation of the pretries the precipitation of the precipitation of the precipitation of the pretries of the precipitation of the precipitation of the pretries of the precipitation of the precipitation of the pretries of the precipitation of the precipitatio

Extrasensory Perception



Some states of consciousness have been speculated but not proven to exist. One of these state is extractioned perception. As a breakdown of its maninglies, extracensory perception [ESP] is the term for apparent perception of phenomena that cannot be explained by known sensory and perceptual provesses. It is considered by some to be an altered state of consciousness. It is difficult for perchanging the properties of the properties of the proteologists to know where to place ESP in the field



You may wonder whether I believe in ESP, I just don't know. Scientific studies have not convinced me of its existence. My own view is that we need to remain open-minded and to reserve



Cultural Diversity: Examples of how the ideas and thinking of another culture may be quite different from our own are integrated throughout the text and shed light on how psychological processes manifest themselves in different cultures.

Cultural Experiences: These show how assumptions made about a topic can be affected by the diversity of cultures throughout the world.

Masterworks from art and literature explore psychological principles from other viewpoints, showing how great thinkers in many different disciplines formulate similar questions and answers about human nature.

THEORIES OF PERCEPTION







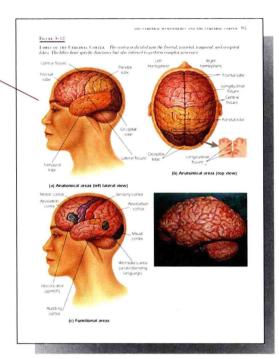


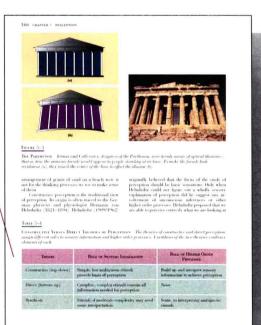
VISUAL SUMMARIES

Visual summaries provide creative ways of presenting text information for visual learners.

Tables and Figures: The liberal use of tables and figures assists you by giving a visual explanation of important information.







TYING IT ALL TOGETHER

Summary and Key Terms						
Designed to help you master the material presented in the text, these features provide a summary of the main points and a list of key words and concepts covered in the chapter.				divided up say among multiple tasks [Kalmerman, 1973.] For example suppose that you were divid- go you food attentions among the act of talking you food attentions among the act of talking on the suppose of the sup	In our, current models of selective attention complastive that we being to bear unables attentional resources, using more than use sensory modelity, on tack that repude disable attention, modelity, on tack that repude disable attention, from the sum of to parts. As Cestall psychologists pointed out mostly a coursy age, the preregular series functions soudcefully as an intact whole disable disabl	
				SCHMARY		
	type) in ar minds coording to Auch we comparing the earn tern to features say 11. Notifier template to models of pattern p fully account for co-	often 178 these to form phese to form to form phese to for	in hing, se justient his come (prosent partern his come (prosent hing, as pattern hy to did the pattern his convention of the pattern his convention his con	passes from one level of processing to the next, and attentional resource theories, conding to which people have a fixed and of attentional resources (perhaps modula- by sensory modalities) that they allowed cording to the perceived requirements of	se il	
	of the situation in w	hich bearing	1	given task		
Analyses, Creative Explorations, and	active theories 185		_	and 178 Ponzo illusion 170	NE.	
Practical Applications: Questions that apply Sternberg's Triarchic Theory of Intelligence and	aguesia 105 aguesia 105 attention 186		figure-grou Gestalt app	roach 178 proximal stimulus 169		
that encourage you to view the chapter material	binocular depth caes binocular disparity. I cocktail party phenor complex cells: 181			In Search of the Human Minds		
in a variety of ways.	complex cells 181 constructive perceptic context effects 183 contour 168	ď	8	CREATIVE EXPLORATIONS, AND PRACTICE	AL APPLICATIONS	
	direct perception 16 direct perception 16			Compare and contrast direct (or passive) and con- tion as they might be applied to smell, taste, or the	amerive (or active) theories of percep-	
• Amaludiani	feature-detector appr feature-matching 16 figure 178	,	(6)	What are the main limitations of template-matchin		
Analytical		— 6	3	This chapter contains many examples of perceptu- learned, design an illusion. Try showing someone y	al illusions. Based on what you have consillusion to test whether it works	
 Creative 	e de suite de la		+	Explain why your illusion did or did not work. Make up the plot of a move that uses some feature gence or disparity optical illusions, etc.) is the ba- might be a murder mystery with an eyewimess are	of conserve the state of the st	
Practical				might be a murder mystery with an eyewitness acc perceptual dlusion.)	sount that is based on some kind of	
Charting the Dialectic: Provides an overview of the key theories and research, areas of disagreement, and the resulting synthesis.		— @	3	Hubel and Wood have moted that their discoveries cause of the technologies available to them. What only pleasant but over important is your delity is would your life be different without that technolog or 'high coch' index put a few examples of an This chapter included quite a few examples of a works of art? What appears of visual perception are these works of art?	current to thinking ske you find not perform a task, with clother How 8°. It does not have to be a complex What are a few down favorities is called into play when you observe	
Thesis		_	T	profes of perception show the dialectic community of	not fields of unchalors. The theory	
Antithesis			ke Di	constructive perception, first advanced in the ninete nsors information is the foundation for perception at second particles of simulation would not make an access that render these patterns meaningful. In con-	to us were it not for the thinking	
			**	olds that all the information you used to make sense usory receptors. For vision, therefore, the retima has be perception of the environment. Attempts have been regardion of these two positions, creating a synthesis	of what you perceive comes through enemded all information needed for	
Synthesis			144	exception) and antithesis (direct perception). The di- ter of perception as well—in partern recognition of (s) example, can be contrasted with template-matchin ear mode to integrate the two points of view.	lectical operation can be seen in other	