



Psychology

Themes & Variations
Briefer Version | 9e



Wayne Weiten

Ninth Edition

Psychology

Themes and Variations

BRIEFER VERSION

Wayne Weiten

University of Nevada, Las Vegas



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Wayne Weiten

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T. J., this one is for you

About the Author

Wayne Weiten is a graduate of Bradley University and received his Ph.D. in social psychology from the University of Illinois, Chicago in 1981. He has taught at the College of DuPage and Santa Clara University and currently teaches at the University of Nevada, Las Vegas. He has received distinguished teaching awards from Division Two of the American Psychological Association (APA) and from the College of DuPage. He is a Fellow of Divisions 1 and 2 of the American Psychological Association and a Fellow of the Midwestern Psychological Association. In 1991 he helped chair the APA National Conference on Enhancing the Quality of Undergraduate Education in Psychology, and in 1996–1997 he served as president of the Society for the Teaching of Psychology. In 2006, one of the five national teaching awards given annually by the Society for the Teaching of Psychology was named in his honor. He currently is serving as president of the Rocky Mountain Psychological Association. Weiten has conducted research on a wide range of topics, including educational measurement, jury decision-making, attribution theory, pressure as a form of stress, cerebral specialization, and the technology of textbooks. He is also the author of *Psychology: Themes & Variations* (2013, 9th ed.) and a co-author of *Psychology Applied to Modern Life: Adjustment in the Twenty-First Century* (with Dana S. Dunn and Elizabeth Yost Hammer, 2012, 10th ed.). Weiten has also created an educational CD-ROM titled *PsykTrek: A Multimedia Introduction to Psychology*.

To the Instructor

Psychology is an exciting, dynamic discipline that has grown by leaps and bounds in recent decades. This progress has been reflected in the field's introductory texts, which have grown longer and longer. However, the length of the introductory psychology course generally has not changed. Hence, an increasing number of professors are reporting that they find it difficult to cover the wealth of material found in the typical introductory text. With this situation in mind, I decided to write a briefer version of *Psychology: Themes and Variations* to help meet the needs of those teachers who would like a challenging, but concise, introductory text.

If I had to sum up in a single sentence what I hope will distinguish this text, the sentence would be this: I have set out to create a *paradox* instead of a *compromise*.

Let me elaborate. An introductory psychology text must satisfy two disparate audiences: professors and students. Because of the tension between the divergent needs and preferences of these audiences, textbook authors usually indicate that they have attempted to strike a compromise between being theoretical versus practical, comprehensive versus comprehensible, research oriented versus applied, rigorous versus accessible, and so forth. However, I believe that many of these dichotomies are false. As Kurt Lewin once remarked, "What could be more practical than a good theory?" Similarly, is rigorous really the opposite of accessible? Not in my dictionary. I maintain that many of the antagonistic goals that we strive for in our textbooks only *seem* incompatible and that we may not need to make compromises as often as we assume.

In my estimation, a good introductory textbook is a paradox in that it integrates characteristics and goals that appear contradictory. With this in mind, I have endeavored to write a text that is paradoxical in three ways. First, in surveying psychology's broad range of content, I have tried to show that our interests are characterized by diversity *and* unity. Second, I have emphasized both research *and* application and how they work in harmony. Finally, I have aspired to write a book that is challenging to think about *and* easy to learn from. Let's take a closer look at these goals.

Goals

1. *To show both the unity and the diversity of psychology's subject matter.* Students entering an introductory psychology course are often unaware of the immense diversity of subjects studied by psychologists. I find this diversity to be part of psychology's charm, and throughout the book I highlight the enormous range of questions and issues addressed by psychology. Of course, our diversity proves disconcerting for some students, who see little continuity among such disparate areas of research as physiology, motivation, cognition, and abnormal behavior. Indeed, in this era of specialization, even some psychologists express concern about the fragmentation of the field.

However, I believe that there is considerable overlap among the subfields of psychology and that we should emphasize their common core by accenting the connections and similarities among them. Consequently, I portray psychology as an integrated whole rather than as a mosaic of loosely related parts. A principal goal of this text, then, is to highlight the unity in psychology's intellectual heritage (the themes), as well as the diversity of psychology's interests and uses (the variations).

2. *To illuminate the process of research and its intimate link to application.* For me, a research-oriented book is not one that bulges with summaries of many studies but one that enhances students' appreciation of the logic and excitement of empirical inquiry. I want students to appreciate the strengths of the empirical approach and to see scientific psychology as a creative effort to solve intriguing behavioral puzzles. For this reason, the text emphasizes not only *what* we know (and don't know) but *how* we attempt to find

out. It examines methods in some detail and encourages students to adopt the skeptical attitude of a scientist and to think critically about claims regarding behavior.

Learning the virtues of research should not mean that students cannot also satisfy their desire for concrete, personally useful information about the challenges of everyday life. Most researchers believe that psychology has a great deal to offer those outside the field and that psychologists should share the practical implications of their work. In this text, practical insights are carefully qualified and closely tied to data, so that students can see the interdependence of research and application. I find that students come to appreciate the science of psychology more when they see that worthwhile practical applications are derived from careful research and sound theory.

3. *To make the text challenging to think about and easy to learn from.* Perhaps most of all, I have sought to create a book of ideas rather than a compendium of studies. I consistently emphasize concepts and theories over facts, and I focus on major issues and tough questions that cut across the subfields of psychology (for example, the extent to which behavior is governed by nature, nurture, and their interaction), as opposed to parochial debates (such as the merits of averaging versus adding in impression formation). Challenging students to think also means urging them to confront the complexity and ambiguity of our knowledge. Thus, the text doesn't skirt gray areas, unresolved questions, and theoretical controversies. Instead, readers are encouraged to contemplate open-ended questions, to examine their assumptions about behavior, and to apply psychological concepts to their own lives. My goal is not simply to describe psychology but to stimulate students' intellectual growth.

However, students can grapple with “the big issues and tough questions” only if they first master the basic concepts and principles of psychology—ideally, with as little struggle as possible. In my writing, I never let myself forget that a textbook is a tool for teaching. Accordingly, I have taken great care to ensure that the book's content, organization, writing, illustrations, and pedagogical aids work in harmony to facilitate instruction and learning.

Admittedly, these goals are ambitious. If you're skeptical, you have every right to be. Let me explain how I have tried to realize the objectives I have outlined.

Special Features

This text has a variety of unusual features, each contributing in its own way to the book's paradoxical nature. These special features include unifying themes, Personal Application sections, Critical Thinking Application sections, Reality Checks, a didactic illustration program, an integrated running glossary, Concept Checks, Key Learning Goals, and Practice Tests.

UNIFYING THEMES

Chapter 1 introduces seven key ideas that serve as unifying themes throughout the text. The themes serve several purposes. First, they provide threads of continuity across chapters that help students see the connections among various areas of research in psychology. Second, as the themes evolve over the course of the book, they provide a forum for a relatively sophisticated discussion of enduring issues in psychology, thus helping to make this a “book of ideas.” Third, the themes focus a spotlight on a number of basic insights about psychology and its subject matter that should leave lasting impressions on your students. In selecting the themes, the question I asked myself (and other professors) was, “What do I really want students to remember five years from now?” The resulting themes are grouped into two sets.

THEMES RELATED TO PSYCHOLOGY AS A FIELD OF STUDY

Theme 1: Psychology is empirical. This theme is used to enhance the student's appreciation of psychology's scientific nature and to demonstrate the advantages of empiricism over uncritical common sense and speculation. I also use this theme to encourage

the reader to adopt a scientist's skeptical attitude and to engage in more critical thinking about information of all kinds.

Theme 2: Psychology is theoretically diverse. Students are often confused by psychology's theoretical pluralism and view it as a weakness. I don't downplay or apologize for our field's theoretical diversity because I honestly believe that it is one of our greatest strengths. Throughout the book, I provide concrete examples of how clashing theories have stimulated productive research, how converging on a question from several perspectives can yield increased understanding, and how competing theories are sometimes reconciled in the end.

Theme 3: Psychology evolves in a sociohistorical context. This theme emphasizes that psychology is embedded in the ebb and flow of everyday life. The text shows how the spirit of the times has often shaped psychology's evolution and how progress in psychology leaves its mark on our society.

THEMES RELATED TO PSYCHOLOGY'S SUBJECT MATTER

Theme 4: Behavior is determined by multiple causes. Throughout the book, I emphasize, and repeatedly illustrate, that behavioral processes are complex and that multifactorial causation is the rule. This theme is used to discourage simplistic, single-cause thinking and to encourage more critical reasoning.

Theme 5: People's behavior is shaped by their cultural heritage. This theme is intended to enhance students' appreciation of how cultural factors moderate psychological processes and how the viewpoint of one's own culture can distort one's interpretation of the behavior of people from other cultures. The discussions that elaborate on this theme do not simply celebrate diversity. They strike a careful balance: accurately reflecting the research in this area while highlighting both cultural variations and similarities in behavior.

Theme 6: Heredity and environment jointly influence behavior. Repeatedly discussing this theme permits me to explore the nature versus nurture issue in all its complexity. Over a series of chapters, students gradually learn how biology shapes behavior, how experience shapes behavior, and how scientists estimate the relative importance of each. Along the way, students will gain an in-depth appreciation of what we mean when we say that heredity and environment interact.

Theme 7: Our experience of the world is highly subjective. All of us tend to forget the extent to which we view the world through our own personal lens. This theme is used to explain the principles that underlie the subjectivity of human experience, to clarify its implications, and to repeatedly remind readers that their view of the world is not the only legitimate view.

After introducing all seven themes in Chapter 1, I discuss different sets of themes in each chapter as they are relevant to the subject matter. The connections between a chapter's content and the unifying themes are highlighted in a standard section near the end of the chapter, in which I reflect on the "lessons to be learned" from the chapter. The discussions of the unifying themes are largely confined to these sections, titled "Reflecting on the Chapter's Themes." I have not tried to make every chapter illustrate a certain number of themes. Rather, the themes were allowed to emerge naturally, and I found that two to five surfaced in any given chapter. The chart on the next page shows which themes are highlighted in each chapter. Color-coded icons near the beginning of each "Reflecting on the Chapter's Themes" section indicate the specific themes featured in each chapter.

PERSONAL APPLICATIONS

To reinforce the pragmatic implications of theory and research stressed throughout the text, each chapter includes a Personal Application section that highlights the practical side of psychology. Each Personal Application devotes two to three *pages* of text (rather

Unifying Themes Highlighted in Each Chapter							
Chapter	THEME						
	1 Empiricism	2 Theoretical Diversity	3 Sociohistorical Context	4 Multifactorial Causation	5 Cultural Heritage	6 Heredity and Environment	7 Subjectivity of Experience
1. The Evolution of Psychology							
2. The Research Enterprise in Psychology							
3. The Biological Bases of Behavior							
4. Sensation and Perception							
5. Variations in Consciousness							
6. Learning							
7. Human Memory							
8. Cognition and Intelligence							
9. Motivation and Emotion							
10. Human Development Across the Life Span							
11. Personality							
12. Social Behavior							
13. Stress, Coping, and Health							
14. Psychological Disorders							
15. Treatment of Psychological Disorders							

than the usual box) to a single issue that should be of special interest to many of your students. Although most of the Personal Application sections have a “how to” character, they continue to review studies and summarize data in much the same way as the main body of each chapter. Thus, they portray research and application not as incompatible polarities but as two sides of the same coin. Many of the Personal Applications—such as those on finding and reading journal articles, understanding art and illusion, and improving stress management—provide topical coverage unusual for an introductory text.

CRITICAL THINKING APPLICATIONS

A great deal of unusual coverage can also be found in the Critical Thinking Applications that follow the Personal Applications. Conceived by Diane Halpern (Claremont McKenna College), a leading authority on critical thinking, these applications are based on the assumption that critical thinking skills can be taught. They do not simply review research critically, as is typically the case in other introductory texts. Instead, they introduce and model a host of critical thinking skills, such as looking for contradictory evidence or alternative explanations; recognizing anecdotal evidence, circular reason-

ing, hindsight bias, reification, weak analogies, and false dichotomies; evaluating arguments systematically; and working with cumulative and conjunctive probabilities.

The specific skills discussed in the Critical Thinking Applications are listed in the accompanying table (see page x), where they are organized into five categories using a taxonomy developed by Halpern (1994). In each chapter, some of these skills are applied to topics and issues related to the chapter's content. For instance, in the chapter that covers drug abuse (Chapter 5), the concept of alcoholism is used to highlight the immense power of definitions and to illustrate how circular reasoning can seem so seductive. Skills that are particularly important may surface in more than one chapter, so students see them applied in a variety of contexts. For example, in Chapter 7 students learn how hindsight bias can contaminate memory, and in Chapter 11 they see how hindsight can distort analyses of personality. Repeated practice across chapters should help students spontaneously recognize the relevance of specific critical thinking skills when they encounter certain types of information. The skills approach taken to critical thinking and the content it has spawned are unprecedented for an introductory psychology text.

REALITY CHECKS

Each chapter includes three or four Reality Checks, which address common misconceptions related to psychology and provide direct refutations of the misinformation. These Reality Checks are sprinkled throughout the chapters, appearing adjacent to the relevant material. Examples of misconceptions that are dispelled include the myth that B. F. Skinner raised his daughter in a Skinner box, which led to her becoming severely disturbed (Chapter 1); the notion that people use only 10% of their brains (Chapter 3); the assumption that people who are color blind see the world in black and white (Chapter 4); and the idea that it is dangerous to awaken someone who is sleepwalking (Chapter 5).

Most of the misconceptions covered in these Reality Checks were addressed in previous editions, but not with direct refutations. In other words, accurate information was provided on the issues, but usually without explicitly stating the misconception and providing a rebuttal. Why the change in strategy? The impetus was a fascinating article in *Teaching of Psychology* by Patricia Kowalski and Annette Taylor (2009). This article summarized evidence that students typically come into introductory psychology with a variety of misconceptions and that, for the most part, they tend to leave the course with their misconceptions intact. To see if this problem could be ameliorated, they tested the impact of direct refutations on students' misconceptions in the introductory course. Their data suggested that explicit repudiations of erroneous ideas reduce students' misconceptions more effectively than the simple provision of correct information. With that evidence in mind, I decided to craft this new feature that explicitly confronts and disputes common fallacies that range from oversimplified to profoundly inaccurate. Because the Reality Checks mostly supplement the normal coverage in the text, I chose to keep them concise. For the most part, they can be found in the margins of the pages.

A DIDACTIC ILLUSTRATION PROGRAM

When I first outlined my plans for this text, I indicated that I wanted every aspect of the illustration program to have a genuine didactic purpose and that I wanted to be deeply involved in its development. In retrospect, I had no idea what I was getting myself into, but it has been a rewarding learning experience. In any event, I have been intimately involved in planning every detail of the illustration program. I have endeavored to create a program of figures, diagrams, photos, and tables that work hand in hand with the prose to strengthen and clarify the main points in the text.

The most obvious results of our didactic approach to illustration are the Illustrated Overviews that combine tabular information, photos, diagrams, and sketches to provide exciting overviews of key ideas in the areas of methods, sensation and perception, learning, personality theory, psychopathology, and psychotherapy. But I hope you will also notice the subtleties of the illustration program. For instance, diagrams of important

Taxonomy of Skills Covered in the Critical Thinking Applications	
Verbal Reasoning Skills	
Understanding the way definitions shape how people think about issues	Chapter 5
Identifying the source of definitions	Chapter 5
Avoiding the nominal fallacy in working with definitions and labels	Chapter 5
Recognizing and avoiding reification	Chapter 8
Argument/Persuasion Analysis Skills	
Understanding the elements of an argument	Chapter 9
Recognizing and avoiding common fallacies, such as irrelevant reasons, circular reasoning, slippery slope reasoning, weak analogies, and false dichotomies	Chapters 9 and 10
Evaluating arguments systematically	Chapter 9
Recognizing and avoiding appeals to ignorance	Chapter 8
Understanding how Pavlovian conditioning can be used to manipulate emotions	Chapter 6
Developing the ability to detect conditioning procedures used in the media	Chapter 6
Recognizing social influence strategies	Chapter 12
Judging the credibility of an information source	Chapter 12
Skills in Thinking as Hypothesis Testing	
Looking for alternative explanations for findings and events	Chapters 1, 8, and 10
Looking for contradictory evidence	Chapters 1, 3, and 8
Recognizing the limitations of anecdotal evidence	Chapters 2 and 15
Understanding the need to seek disconfirming evidence	Chapter 7
Understanding the limitations of correlational evidence	Chapters 10 and 13
Understanding the limitations of statistical significance	Chapter 13
Recognizing situations in which placebo effects might occur	Chapter 15
Skills in Working with Likelihood and Uncertainty	
Utilizing base rates in making predictions and evaluating probabilities	Chapter 13
Understanding cumulative probabilities	Chapter 14
Understanding conjunctive probabilities	Chapter 14
Understanding the limitations of the representativeness heuristic	Chapter 14
Understanding the limitations of the availability heuristic	Chapter 14
Recognizing situations in which regression toward the mean may occur	Chapter 15
Understanding the limits of extrapolation	Chapter 3
Decision-Making and Problem-Solving Skills	
Using evidence-based decision making	Chapter 2
Recognizing the bias in hindsight analysis	Chapters 7 and 11
Seeking information to reduce uncertainty	Chapter 13
Making risk-benefit assessments	Chapter 13
Generating and evaluating alternative courses of action	Chapter 13
Recognizing overconfidence in human cognition	Chapter 7
Understanding the limitations and fallibility of human memory	Chapter 7
Understanding how contrast effects can influence judgments and decisions	Chapter 4
Recognizing when extreme comparitors are being used	Chapter 4

concepts (conditioning, synaptic transmission, EEGs, experimental design, and so forth) are often repeated in several chapters (with variations) to highlight connections among research areas and to enhance students' mastery of key ideas. Numerous easy-to-understand graphs of research results underscore psychology's foundation in research, and photos and diagrams often bolster each other (for example, see the treatment of classical conditioning in Chapter 6). Color is used carefully as an organizational device, and visual schematics help simplify hard-to-visualize concepts (see, for instance, the figure explaining reaction range for intelligence in Chapter 8). All of these efforts have gone toward the service of one master: the desire to make this an inviting book that is easy to learn from.

INTEGRATED RUNNING GLOSSARY

An introductory text should place great emphasis on acquainting students with psychology's technical language—not for the sake of jargon, but because a great many of our key terms are also our cornerstone concepts (for example, *independent variable*, *reliability*, and *cognitive dissonance*). This text handles terminology with a running glossary embedded in the prose itself. The terms are set off in **blue boldface italics**, and the definitions follow in **blue, boldface roman** type. This approach retains the two advantages of a conventional running glossary: vocabulary items are made salient, and their definitions are readily accessible. However, it does so without interrupting the flow of discourse, while eliminating redundancy between text matter and marginal entries.

CONCEPT CHECKS

To help students assess their mastery of important ideas, Concept Checks are sprinkled throughout the book. In keeping with my goal of making this a book of ideas, the Concept Checks challenge students to apply ideas instead of testing rote memory. For example, in Chapter 6 the reader is asked to analyze realistic examples of conditioning and identify conditioned stimuli and responses, reinforcers, and schedules of reinforcement. Many of the Concept Checks require the reader to put together ideas introduced in different sections of the chapter. For instance, in Chapter 4 students are asked to identify parallels between vision and hearing. Some of the Concept Checks are quite challenging, but students find them engaging, and they report that the answers (available in Appendix A in the back of the book) are often illuminating.

KEY LEARNING GOALS AND REVIEWS OF KEY LEARNING GOALS

To help students organize, assimilate, and remember important ideas, each major section of every chapter begins with a succinct, numbered set of Key Learning Goals. The Key Learning Goals are found adjacent to the level-one headings that begin each major section. The Key Learning Goals are thought-provoking learning objectives that should help students focus on the key issues in each section. These learning goals provide the organization for the Review of Key Learning Goals found at the end of the chapter. This is a highly detailed summary of the chapter that addresses the issues posed in the Key Learning Goals. Where appropriate, the Reviews of Key Learning Goals also include figures, diagrams, and photos from the chapter to further reinforce important concepts and principles.

PRACTICE TESTS

In addition to the answers to the Concept Checks, Appendix A at the back of the book includes a Practice Test for each chapter in the text. These 12-item multiple-choice Practice Tests should give students realistic assessments of their mastery of specific chapters and valuable practice taking the type of test that many of them will face in the classroom (if the instructor uses the Test Bank). This feature grew out of some research that I conducted on students' use of textbook pedagogical devices (see Weiten, Guadagno, & Beck, 1996). This research indicated that students pay scant attention to some standard peda-

gological devices. When I grilled my students to gain a better understanding of this finding, it quickly became apparent that students are very pragmatic about pedagogy. Essentially, their refrain was “We want study aids that will help us pass the next test.” With this mandate in mind, I devised the Practice Tests. They should be useful, as I took most of the items from Test Banks for previous editions.

In addition to the special features just described, the text includes a variety of more conventional, “tried and true” features. The back of the book contains a standard *alphabetical glossary*. Opening *outlines* preview each chapter, I make frequent use of *italics for emphasis*, and I depend on *frequent headings* to maximize organizational clarity. The preface for students describes these pedagogical devices in more detail.

Content

The text is divided into 15 chapters, which follow a traditional ordering. The chapters are not grouped into sections or parts, primarily because such groupings can limit your options if you want to reorganize the order of topics. The chapters are written in a way that facilitates organizational flexibility, as I always assumed that some chapters might be omitted or presented in a different order.

The topical coverage in the text is relatively conventional, but there are some subtle departures from the norm. For instance, Chapter 1 presents a relatively “meaty” discussion of the evolution of ideas in psychology. This coverage of history lays the foundation for many of the crucial ideas emphasized in subsequent chapters. The historical perspective is also my way of reaching out to the students who find that psychology isn’t what they expected it to be. If we want students to contemplate the mysteries of behavior, we must begin by clearing up the biggest mysteries of them all: “Where did these rats, statistics, synapses, and genes come from, what could they possibly have in common, and why doesn’t this course bear any resemblance to what I anticipated?” I use history as a vehicle to explain how psychology evolved into its modern form and why misconceptions about its nature are so common.

I also devote an entire chapter (Chapter 2) to the scientific enterprise—not just the mechanics of research methods but the logic behind them. I believe that an appreciation of the nature of empirical evidence can contribute greatly to improving students’ critical thinking skills. Ten years from now, many of the “facts” reported in this book will have changed, but an understanding of the methods of science will remain invaluable. An introductory psychology course, by itself, isn’t going to make a student think like a scientist, but I can’t think of a better place to start the process.

As its title indicates, this book is a condensed version of my introductory text, *Psychology: Themes and Variations*. I have reduced the word count of this book to 70% of the word count of the full-length version. How was this reduction accomplished? It required a great many difficult decisions, but fortunately, I had excellent advice from a team of professors who served as consultants. About 40% of the reduction came from deleting entire topics, such as psychophysics, intellectual disability, latent learning, and so forth. However, the bulk of the reduction was achieved by compressing and simplifying coverage throughout the book. I carefully scrutinized the parent book sentence by sentence and forced myself to justify the existence of every study, every example, every citation, every phrase. The result is a thoroughly *rewritten* text, rather than one that was *reassembled* through “cut and paste” techniques.

Changes in the Ninth Edition

A good textbook must evolve with the field of inquiry it covers. Although the professors and students who used the first eight editions of this book did not clamor for alterations, there are some changes. I have already described the Reality Checks, which are new to this edition. Another new element is that each chapter-opening spread includes a puzzling paradox related to the upcoming content of the chapter. These paradoxes are brief

brain teasers that hopefully will provoke some thought and create a little intrigue as students embark on their reading of each chapter.

You may also notice that for the first time in nine editions, I have altered the order of the chapters. It is not a major reorganization. I have simply moved the chapter on Social Behavior up from Chapter 15 to Chapter 12. Why? Although some instructors juggle chapter order, most seem to assign the chapters in sequence. Many of us often fall behind our planned schedule and struggle to get through all the chapters we intended to cover. This reality means that the chapter on social psychology probably gets dropped more often than other chapters because it comes at the end of the book. I think that this is an unfortunate situation in that the chapter on social psychology includes some of the most inherently interesting and important material in the course. So, after mulling it over for years, I decided it should no longer suffer the fate of being the last chapter. Of course, that means that another chapter has to become the precarious, final chapter. As you will see, that fate now falls to the chapter on the Treatment of Psychological Disorders. Admittedly, this material is also important. But the text includes two chapters on clinical psychology—the chapter on disorders (14) and the one on treatment (15)—so even if the chapter on treatment gets dropped, students can have a healthy exposure to clinical psychology. This shift also means that the chapters on personality (11) and social psychology (12) fall together, which seems appropriate given the enormous overlap and historical kinship between these subfields.

You will also find a variety of other changes in this edition, including four new chapter-opening vignettes (in Chapters 3, 10, 12, and 14). The graphic design of the text has been refreshed and improved in a variety of ways. For instance, the beginning of each chapter features more dramatic illustrations. In the line art, we have increased the use of color-coded text, and wherever possible, we have replaced drawings of humans with actual photos that are integrated into our graphics and diagrams. And we have strived to make the photo program more engaging by adding a host of silhouetted images that are woven into the text columns, creating a more modern, magazine-style look. We have also refreshed the treatments of the level-one headings and the Concept Checks. Perhaps most dramatic, we have shifted from a two-column page design to one-column design, resulting in a simpler, cleaner, less-cluttered look. To help make room for the one-column design, we have removed the interim summaries that were sprinkled through the chapters and replaced them with one detailed summary, organized by Key Learning Goals, at the end of the chapter. And to accommodate this two-page Review of Key Learning Goals, we have moved the Practice Tests to Appendix A.

Of course, the book has been thoroughly updated to reflect recent advances in the field. One of the exciting things about psychology is that it is not a stagnant discipline. It continues to move forward at what seems a faster and faster pace. This progress has necessitated a host of specific content changes that you'll find sprinkled throughout the chapters. Also reflecting this progress, over 900 of the reference citations in the book are new to this edition. Following is a partial list of specific changes in each chapter of the ninth edition.

CHAPTER 1: THE EVOLUTION OF PSYCHOLOGY

- Introduction of new text feature called Reality Checks, which are sprinkled throughout the book
- New table highlighting popular myths about psychology
- Condensed coverage of psychology's history
- New coverage discussing Watson's expulsion from academia and his successful application of psychology to advertising
- New Reality Check on the rumor that Skinner's daughter was raised in a Skinner box and grew up to be highly dysfunctional
- New data on the rise of the cognitive and neuroscience perspectives since the 1950s
- New Reality Check on the notion that psychology has always been part of the mental health system

- New Reality Check on the oversimplification that psychology equals the study of the mind
- New Reality Check on the belief that psychology and psychiatry are largely the same
- Profiles of new research on the importance of study habits to college success
- Streamlined coverage of improving reading in the Personal Application

CHAPTER 2: THE RESEARCH ENTERPRISE IN PSYCHOLOGY

- New Reality Check on how often social scientists use random sampling
- New example of naturalistic observation research focusing on how drivers make decisions at yellow lights
- Additional example illustrating an innovative, new way to conduct naturalistic observation
- Added example of case study research focusing on assessing the effectiveness of a specific therapy
- Interesting, new example of survey research showing how the amount of time people watch TV relates to social class and their health
- New Reality Check on correlation and causation
- New discussion of the importance and value of meta-analysis
- New coverage of Arnett's (2008) critique of American psychology for its excessive reliance on American participants, thus ignoring 95% of the world's population
- Expanded analysis of placebo effects
- New Reality Check on the belief that placebo effects are weak effects
- New discussion of halo effects in making ratings in questionnaire research
- Critical Thinking Application discusses new research on the powerful influence of anecdotal evidence

CHAPTER 3: THE BIOLOGICAL BASES OF BEHAVIOR

- New Reality Check on the idea that neurons do all the information processing in the nervous system
- Streamlined discussion of neurotransmitters and behavior
- New research on endorphins and the “runner's high”
- New Reality Check on the myth that people use only 10% of their brains
- Revised take on the role of the cerebellum
- New discussion of the possible evolutionary significance of hemispheric specialization in the brain
- New research relating weak cerebral lateralization to lower IQ and vulnerability to schizophrenia
- New coverage of the role of oxytocin in pair bonding
- New research on oxytocin's influence on empathy and trust
- New coverage of recent findings in epigenetics
- Streamlined Personal Application on the significance of hemispheric specialization
- New research showing that musicians have more bilateral hemispheric organization than others
- New research suggesting that music training may be related to enhanced cognitive performance
- New Reality Check on the belief that people are either right-brained or left-brained
- New Reality Check explaining that playing classical music for children will not enhance their brain development

CHAPTER 4: SENSATION AND PERCEPTION

- New Reality Check on the myth that reading in the dark or sitting close to the TV will damage one's vision
- Expanded discussion of the evolutionary significance of face-detecting cells in the brain
- New Reality Check on the notion that people who are color blind see the world in black and white

- New theory on how exposure to colors can influence psychological functioning
- New research on how the color red undermines achievement strivings but enhances men's attraction to women
- New discussion of how 3D movies manipulate the perception of depth
- New research on how depth perception can be skewed by people's motivational states
- New discussion of how portable music players can cause hearing loss
- Revised coverage of pitch perception
- New Reality Check on the classic tongue map
- New discussion of the possibility that umami should be viewed as a fifth basic taste
- New research on humans' ability to track faint scents
- New research on how contextual factors modulate the experience of pain
- New Reality Check on the belief that humans have just five senses

CHAPTER 5: VARIATIONS IN CONSCIOUSNESS

- New research reporting the counter-intuitive finding that older adults may need less sleep than younger adults
- New data on whether growing older, by itself, leads to poor sleep in the elderly
- New research on ethnicity and sleep complaints
- New data linking REM sleep to neurogenesis
- New findings suggesting that REM sleep may enhance creativity
- New Reality Check on the notion that the effects of sleep deprivation are insignificant
- New Reality Check on the belief that it is dangerous to awaken sleepwalkers
- New Reality Check dispelling the idea that a shocking dream could be fatal
- Added distinction between focused attention and open monitoring approaches to meditation
- New findings suggesting that meditation can increase one's tolerance of pain
- New research suggesting that meditation has the potential to modify brain structure
- New Reality Check dispelling the myth that hypnotized individuals can perform feats that they could never perform otherwise
- New research on napping and performance

CHAPTER 6: LEARNING

- New Reality Check on the notion that Pavlov's demonstration of classical conditioning relied on a bell
- New section on evaluative conditioning as a form of classical conditioning
- New discussion of what happened to Little Albert in the aftermath of Watson and Rayner's landmark study, including new evidence on Little Albert's identity
- New discussion of the effects of delayed reinforcement
- New Reality Check explaining that rewarding a behavior every time is not the best way to ensure that it will last
- New Reality Check explaining that negative reinforcement and punishment are not the same thing
- New findings on the negative effects of corporal punishment in children
- Condensed discussion of biological constraints on conditioning
- New discussion of B. F. Skinner's theory of noncontingent reinforcement as an explanation for superstitious behavior
- New coverage of how superstitious behavior can be analyzed in terms of normal cognitive biases and errors that promote irrational reasoning
- Coverage of new research showing that superstitious beliefs can actually influence people's performance
- Added discussion of how exposure to media violence may desensitize people to the effects of aggression in the real world
- New research on how desensitization to aggression may undermine helping behavior

CHAPTER 7: HUMAN MEMORY

- New research on why cell phone conversations sap attention and impair driving
- New research on how the motivation to remember affects encoding
- New Reality Check questioning the conventional wisdom on the capacity of short-term memory
- New findings on the nature and significance of working memory capacity
- Expanded discussion of hypnosis and memory
- New Reality Check disputing the idea that hypnosis can enhance memory retrieval
- New research on the power of the misinformation effect
- New Reality Check explaining that memory is not like a mental videotape
- New Reality Check on the notion that forgetting is due to the decay of memory traces
- Streamlined coverage of the repressed memories controversy
- New work distinguishing two groups that report recovered memories of abuse that differ in the likelihood of corroboration
- Condensed coverage of the neural circuitry of memory
- Expanded discussion of how H.M.'s case contributed to the understanding of memory
- Increased coverage of the testing effect on memory

CHAPTER 8: COGNITION AND INTELLIGENCE

- New research on the incubation effect in problem solving
- Expanded coverage of cultural disparities in cognitive style
- Updated research on choice overload and its roots
- New Reality Check on the assumption that the more choices people have, the better
- Streamlined coverage of making choices about preferences
- New coverage of the deliberation-without-attention effect, showing that intuitive, unconscious decisions can yield greater post-decision satisfaction
- New Reality Check disputing the idea that good decision making depends on careful, systematic deliberation
- New evidence on the relationship between intelligence and vulnerability to cognitive bias and error, showing that even very bright people are not immune to irrational thinking
- Condensed discussion of evolutionary analyses of flaws in decision making
- New data on how students' self-perceptions of their abilities influence their academic performance
- Addition of Stanovich's criticism of how IQ tests do not assess rational thinking
- New Reality Check on the notion that IQ tests measure mental ability in a truly general sense
- New research on the correlation between IQ and the size of specific areas in the brain
- New research on the association between IQ and the volume of gray and white matter in the brain
- Compressed discussion of Sternberg's theory of intelligence
- New research on how people with higher intelligence tend to live longer
- New discussion of the possible mechanisms underlying the relationship between intelligence and mortality
- New research on how living abroad appears to enhance creativity

CHAPTER 9: MOTIVATION AND EMOTION

- Additional data on how the quantity of food available influences the amount eaten
- New findings on the effects of the presence of others on eating behavior
- New material on how food advertisements influence eating behavior
- New Reality Check on whether eating at night fosters weight gain
- New findings on gender disparities in orgasmic consistency and interest in sex
- New research on gender differences in interest in sex, as related to age

- New research on the developmental roots of sexual orientation
- New Reality Check on the notion that people high in the need for achievement tend to be big risk takers
- New coverage on the inaccuracy of affective forecasting
- Added coverage of a classic study of affective forecasting (Dunn, Wilson, & Gilbert, 2003)
- New Reality Check on the accuracy of lie detectors
- New research on whether emotional facial expressions are innate
- New coverage of classic study by Dutton and Aron (1974) on two-factor theory of emotion
- Revised discussion of the relationship between income and subjective well-being, including a recent study by Kahneman and Deaton (2010)
- New research on the connection between social activity and happiness

CHAPTER 10: HUMAN DEVELOPMENT ACROSS THE LIFE SPAN

- New chapter-opening vignette focusing on developmental transitions in the life of Angelina Jolie
- Revised statistics and terminology on the threshold of viability
- New Reality Check on the wisdom of social drinking during pregnancy
- Added coverage of the effects of maternal emotions during prenatal development
- Added coverage of the effects of environmental toxins during prenatal development
- New section on fetal origins of adult diseases, such as diabetes and heart disease
- New Reality Check on bonding at birth and later attachment
- New findings on how the search for identity often continues beyond adolescence
- New data on how self-esteem changes over the course of adulthood
- New Reality Check on the prevalence of the midlife crisis
- New data suggesting that cohabitation may no longer be a risk factor for marital dissolution
- New Reality Check on the arrival of children and marital satisfaction
- New data on how older adults tend to feel an average of 13 years younger than they are
- Revised coverage of protective factors for Alzheimer's disease
- New discussion of whether cognitive training programs can slow cognitive decline in the elderly
- New data on gender differences in math achievement
- New findings on how fetal testosterone levels relate to subsequent gender-typing
- New research on the developmental significance of father absence

CHAPTER 11: PERSONALITY

- Expanded description of the Big Five traits
- New Reality Check on the influence of the unconscious
- Added sublimation to the roster of defense mechanisms covered
- Condensed coverage of Jung and Adler
- Expanded critique of Freudian theory
- New Reality Check on the power of situational forces
- New discussion of a proposed revision of Maslow's hierarchy of needs
- Streamlined coverage of behavioral genetics research
- New Reality Check questioning the assumption that parents exert great influence over their children's personality
- Revised critique of biological models of personality
- Revised Illustrated Overview of personality theory now includes information on the assumptions of each approach
- New discussion of the history of narcissism as a personality trait
- New findings on the nature, correlates, and social consequences of narcissism
- New research on how levels of narcissism have increased in recent decades
- Streamlined coverage of terror management theory

CHAPTER 12 (FORMERLY 15): SOCIAL BEHAVIOR

- New introductory vignette focuses on how modern technology is altering the fabric of social relationships
- New research on effects of brains versus beauty as related to income
- New data on the accuracy of inferences about personality based on “thin slices of behavior”
- Compressed coverage of attribution processes
- New evidence on the matching hypothesis based on real-world behavior at HOTorNOT.com website
- New findings on how similarity affects friendship formation
- New Reality Check on whether opposites attract in romantic relationships
- Condensed discussion of the dynamics of interpersonal attraction
- New coverage of the use of a “scientific approach” to matching people based on compatibility at eHarmony.com and similar websites
- New coverage of research on the correlation between attitudes and actual behavior
- New Reality Check on how well attitudes predict behavior
- Introduces the distinction between implicit and explicit attitudes
- New coverage of how the Implicit Association Test (IAT) measures implicit attitudes
- New discussion of the correlates of implicit prejudice
- New coverage of the mere exposure effect
- New Reality Check on the notion that familiarity breeds contempt
- New coverage of Burger’s recent partial replication of Milgram’s study
- New discussion of the effects of modern technology on the evolving nature of groups
- New discussion of how dividing the world into ingroups versus outgroups contributes to prejudice

CHAPTER 13 (FORMERLY 12): STRESS, COPING, AND HEALTH

- Highlighted discussion of the distinction between primary and secondary appraisal of stress, with new graphic
- New data on pressure and heart disease
- New Reality Check on the idea that stress is always imposed on people from outside forces
- New research on how positive emotions predict greater longevity
- New graphic illustrating Selye’s general adaptation syndrome
- New coverage of gender differences in stress reactions
- New Reality Check on the belief that stress is always harmful
- Report of new meta-analysis of the surprisingly strong association between social support and longevity
- New findings on cultural disparities in the type of social support people prefer
- Added coverage of the effects of second-hand smoke
- New Reality Check on the significance of failing in efforts to quit smoking
- New data on trends in exercise habits and the link between exercise and mortality
- Streamlined coverage of behavioral factors and AIDS
- New discussion of the importance of good sleep habits for minimizing physiological vulnerability to stress
- New discussion of the importance of considering base rates when evaluating claims about the value of medications and other treatments

CHAPTER 14 (FORMERLY 13): PSYCHOLOGICAL DISORDERS

- New introductory vignette focusing on contemporary celebrities with obsessive-compulsive disorder
- New discussion of the influence of stigmatizing labels on the mentally ill
- New Reality Check on the belief that people with psychological disorders typically exhibit extremely bizarre behavior

- New Reality Check on the belief that people with psychological disorders are often dangerous and violent
- Multiple previews of proposed changes for DSM-5
- Added coverage of the debate about categorical versus dimensional approaches to describing disorders
- New data on the most common types of phobic fears
- New graphic on the most common types of compulsions seen in OCD patients
- Concept of anhedonia introduced in discussion of major depression
- New coverage of chronic depression
- New Reality Check on the notion that schizophrenia refers to a split personality
- Updated coverage of neurochemical factors in the etiology of schizophrenia
- New research on whether cannabis use may help precipitate schizophrenia in young people who are vulnerable to the disorder
- New discussion of how schizophrenia may be caused by a disruption of neural connectivity
- New coverage of autism, including recent findings on the dramatic increase in its prevalence
- New discussion of the etiology of autistic disorders, including the autism-vaccination controversy
- New Reality Check on the belief that vaccinations can cause autism

CHAPTER 15 (FORMERLY 14): TREATMENT OF PSYCHOLOGICAL DISORDERS

- New findings on the extent to which drug therapy has become the dominant mode of treatment for psychological disorders
- New data on the demographics of who seeks treatment
- New Reality Check on the notion that seeking therapy is a sign of weakness
- Inclusion of marriage and family therapists in coverage of professions providing mental health services
- New table comparing the various mental health professions
- New Reality Check on the belief that the typical therapy patient lies on a couch and talks about the past
- New summary of the core features of modern psychodynamic therapies
- New discussion of couples/marital therapy
- New coverage of family therapy
- New discussion of exposure therapies for anxiety disorders
- New research on the value of antidepressants in relation to the severity of patients' depression
- New Reality Check on the belief that psychological disorders are chronic and incurable
- New findings on how often psychiatrists prescribe multiple medications to patients
- New discussion of the value of treating patients with multiple approaches
- New discussion of the rise of eclecticism in therapy
- New evidence on ethnic disparities in mental health care
- New data on declining expenditures on mental health care and emerging shortages of psychiatric beds

PsykTrek: A Multimedia Introduction to Psychology

PsykTrek is a multimedia supplement that provides students with new opportunities for active learning and reaches out to “visual learners” with greatly increased efficacy. *PsykTrek* is intended to give students a second pathway to learning much of the content of introductory psychology. Although it does not cover all of the content of the introductory course, I think you will see that a great many key concepts and principles can be explicated *more effectively* in an interactive audiovisual medium than in a textbook.

PsykTrek consists of four components. The main component is a set of 65 *Interactive Learning Modules* that present the core content of psychology in a whole new way. These

tutorials include thousands of graphics, hundred of photos, hundreds of animations, approximately 4 hours of narration, 40 carefully selected videos, and about 160 uniquely visual concept checks and quizzes. The 10 *Simulations* allow students to explore complex psychological phenomena in depth. They are highly interactive, experiential demonstrations that will enhance students' appreciation of research methods. The *Multimedia Glossary* allows students to look up over 800 psychological terms, access hundreds of pronunciations of obscure words, and pull up hundreds of related diagrams, photos, and videos. The *Video Selector* permits students (or faculty) to directly access the video segments that are otherwise embedded in the Interactive Learning Modules.

The key strength of *PsykTrek* is its ability to give students new opportunities for active learning outside of the classroom. For example, students can run themselves through re-creations of classic experiments to see the complexities of data collection in action. Or they can play with visual illusions in ways that will make them doubt their own eyes. Or they can stack color filters to demonstrate the nature of subtractive color mixing. *PsykTrek* is intended to supplement and complement *Psychology: Themes & Variations*. For instance, after reading about operant conditioning in the text, a student could work through three interactive tutorials on operant principles, watch four videos (including historic footage of B. F. Skinner shaping a rat), and then try to shape Morphy, the virtual rat, in one of the simulations.

PsykTrek is also available in an online format that can make student access easier than ever. All of the Interactive Learning Modules include a multiple-choice test, as well as an interactive quiz. We have also incorporated unit-level multiple-choice exams to permit students to better assess their mastery of content. And each unit includes a critical thinking exercise, written by Jeffrey Ricker (Scottsdale Community College).

Other Supplementary Materials

The teaching/learning package that has been developed to supplement *Psychology: Themes and Variations, Briefer Version* includes many other useful tools. The development of all its parts was carefully coordinated so that they are mutually supported.

INSTRUCTOR'S RESOURCE MANUAL (COORDINATED BY RANDOLPH A. SMITH AND BENJAMIN R. SMITH)

A talented roster of professors have contributed to the *Instructor's Resource Manual (IRM)* in their respective areas of expertise. The *IRM* was developed under the guidance of Randolph Smith, the former editor of the journal *Teaching of Psychology*, and Benjamin R. Smith. It contains a diverse array of materials designed to facilitate efforts to teach the introductory course and includes the following sections.

- *The Instructor's Manual*, by Randolph A. Smith (Lamar University) and Benjamin R. Smith, contains a wealth of detailed suggestions for lecture topics, class demonstrations, exercises, discussion questions, and suggested readings, organized around the content of each chapter in the text. It also highlights the connections between the text coverage and *PsykTrek* content and features an expanded collection of masters for class handouts.
- *Strategies for Effective Teaching*, by Joseph Lowman (University of North Carolina), discusses practical issues such as what to put in a course syllabus, how to handle the first class meeting, how to cope with large classes, and how to train and organize teaching assistants.
- *AV Media for Introductory Psychology*, by Russ Watson (College of DuPage), provides a comprehensive, up-to-date, critical overview of educational films relevant to the introductory course.
- *Introducing Writing in Introductory Psychology*, by Dana Dunn (Moravian College), discusses how to work toward enhancing students' writing skills in the context of the introductory course and provides suggestions and materials for specific writing assignments chapter by chapter.

- *Crossing Borders/Contrasting Behaviors: Using Cross-Cultural Comparisons to Enrich the Introductory Psychology Course*, by Ginny Zahn, Bill Hill, and Michael Reiner (Kennesaw State University), discusses the movement toward “internationalizing” the curriculum and provides suggestions for lectures, exercises, and assignments that can add a cross-cultural flavor to the introductory course.

TEST BANK (BY JEFF HOLMES)

A large, diversified, and carefully constructed *Test Bank* accompanies this text. The questions are closely tied to each chapter’s Key Learning Goals. The items are categorized as (a) factual, (b) conceptual/applied, (c) integrative, or (d) critical thinking questions. Data on item difficulty are included for many questions. For this edition, Jeff Holmes of Ithaca College carefully scrutinized every item for quality before he even began the update to accommodate the revised content of the text. And to keep item quality high, we decided to reduce the items per chapter to a more manageable number. I maintain that it is quicker, easier, and more efficient to select test questions from a reasonable number of items than to have to work through hundreds and hundreds of items that inevitably include superficial variations on the same questions.

POWERLECTURE™

The fastest, easiest way to build powerful, customized media-rich lectures, PowerLecture provides a collection of book-specific PowerPoint lecture and class tools to enhance the educational experience. For classroom presentations, the CD-ROM includes PowerPoint lecture outlines with key images from the text integrated, and a complete library of graphics and photos from the book. An electronic version of the entire Instructor’s Resource Manual is also found on the CD, making it easy to print or distribute handouts or exercises from the manual. The CD also includes an electronic version of the Test Bank. The *ExamView* software is user-friendly and allows teachers to insert their own questions and to edit those provided.

PSYCHOLOGY COURSEMATE

Psychology CourseMate is an online learning resource for your students. It includes

- An interactive eBook
- Interactive teaching and learning tools, including:
 - quizzes
 - flashcards
 - concept charts
 - videos
 - and more
- Engagement Tracker, a first-of-its-kind tool that monitors student engagement in the course

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Whether you want to Web-enable your class or put an entire course online, WebTutor delivers. Visit webtutor.cengage.com to learn more.

VIDEO RESOURCES

A wealth of video materials relevant to teaching the introductory psychology course are available from Cengage Learning including the following.

ABC VIDEOS: INTRODUCTORY PSYCHOLOGY

These videos from the ABC television network feature short, high-interest clips about current studies and research in psychology. They are perfect for starting discussions or enriching lectures. Topics include brain damage, measuring IQ, sleep patterns, obsessive-compulsive disorder, obedience to authority, rules of attraction, and much more.

Volume I ISBN: 0-495-50306-1

Volume II ISBN: 0-495-59637-X

Volume III ISBN: 0-495-60490-9

INTRODUCTORY PSYCHOLOGY, BBC MOTION GALLERY VIDEO

Introductory Psychology, Vol. 1 drives home the relevance of course topics through short, provocative clips of current and historical events. Perfect for enriching lectures and engaging students in discussion, many of the segments on this volume have been gathered from BBC Motion Gallery. The 14 short (1–6 minutes) videos include topics such as emotional intelligence, attachment disorder, women and stress, and teen depression. Ask your Cengage Learning representative for a complete list of contents.

Vol. 1 ISBN: 978-1-111-35260-8

WADSWORTH PSYCHOLOGY: RESEARCH IN ACTION

The *Research in Action* videos feature the work of research psychologists to give students an opportunity to learn about cutting-edge research—not just who is doing it, but how it is done and how and where the results are being used. By taking students into the laboratories of both established and up-and-coming researchers, and by showing research results being applied outside of the laboratory, these videos offer insight into both the research process and the many ways in which real people's lives are affected by research in the fields of psychology and neuroscience. The 46 videos in this series feature interviews with many of the field's most prominent researchers, including David Barlow, Roy Baumeister, Sheldon Cohen, Larry Squire, Claude Steele, Elizabeth Loftus, and Mark Snyder.

Vol. 1 DVD ISBN: 0-495-59520-9

Vol. 2 DVD ISBN: 0-495-59813-5

REVEALING PSYCHOLOGY

The *Revealing Psychology* video (available on DVD) is ideal for both classroom presentation and online study. The clips include a refreshed and innovative Candid Camera–like segment depicting people in socially challenging situations, with a focus on applications of concepts and experimental variations; classic experiments in real-world context with a new look and feel; and personal profiles with interviews of real people talking about their lives in ways that illustrate social psychological concepts such as conformity, personal space, and group polarization.

ISBN: 0-547-01453-8

GUEST LECTURE SERIES

The *Guest Lecture Series* features many talented teachers sharing their teaching tips and best practices on a wide range of topics, including Rational Emotive Behavior Theory, Blogging as an Effective Tool, Demonstrations on Taste, Dramatizing Perspectives in Psychology, How to Teach Writing in Psychology, and more. This series focuses on the teaching-learning process and is intended to help faculty in their course preparation and planning.

ISBN: 0-547-00401-X

Acknowledgments



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Brief Contents

Chapter 1 The Evolution of Psychology 1

PERSONAL APPLICATION Improving Academic Performance 23
CRITICAL THINKING APPLICATION Developing Critical Thinking Skills:
An Introduction 26

Chapter 2 The Research Enterprise in Psychology 30

PERSONAL APPLICATION Finding and Reading Journal Articles 56
CRITICAL THINKING APPLICATION The Perils of Anecdotal Evidence:
“I Have a Friend Who . . .” 58

Chapter 3 The Biological Bases of Behavior 62

PERSONAL APPLICATION Evaluating the Concept of “Two Minds
in One” 93
CRITICAL THINKING APPLICATION Building Better Brains: The Perils
of Extrapolation 96

Chapter 4 Sensation and Perception 100

PERSONAL APPLICATION Appreciating Art and Illusion 132
CRITICAL THINKING APPLICATION Recognizing Contrast Effects:
It’s All Relative 136

Chapter 5 Variations in Consciousness 140

PERSONAL APPLICATION Addressing Practical Questions About Sleep
and Dreams 169
CRITICAL THINKING APPLICATION Is Alcoholism a Disease? The Power
of Definitions 172

Chapter 6 Learning 176

PERSONAL APPLICATION Achieving Self-Control Through
Behavior Modification 207
CRITICAL THINKING APPLICATION Manipulating Emotions:
Pavlov and Persuasion 210

Chapter 7 Human Memory 214

PERSONAL APPLICATION Improving Everyday Memory 240
CRITICAL THINKING APPLICATION Understanding the Fallibility of
Eyewitness Accounts 244

Chapter 8 Cognition and Intelligence 248

PERSONAL APPLICATION Measuring and
Understanding Creativity 282
CRITICAL THINKING APPLICATION The Intelligence Debate, Appeals
to Ignorance, and Reification 284

Chapter 9 Motivation and Emotion 288

PERSONAL APPLICATION Exploring the Ingredients
of Happiness 314
CRITICAL THINKING APPLICATION Analyzing Arguments: Making
Sense out of Controversy 318

Chapter 10 Human Development Across the Life Span 322

PERSONAL APPLICATION Understanding Gender Differences 351
CRITICAL THINKING APPLICATION Are Fathers Essential to Children’s
Well-Being? 356

Chapter 11 Personality 360

PERSONAL APPLICATION Understanding Personality
Assessment 389
CRITICAL THINKING APPLICATION Hindsight in Everyday Analyses of
Personality 392

Chapter 12 Social Behavior 396

PERSONAL APPLICATION Understanding Prejudice 426
CRITICAL THINKING APPLICATION Analyzing Credibility and Social
Influence Tactics 430

Chapter 13 Stress, Coping, and Health 434

PERSONAL APPLICATION Improving Coping and Stress
Management 458
CRITICAL THINKING APPLICATION Thinking Rationally About Health
Statistics and Decisions 462

Chapter 14 Psychological Disorders 466

PERSONAL APPLICATION Understanding Eating Disorders 495
CRITICAL THINKING APPLICATION Working with Probabilities in
Thinking About Mental Illness 498

Chapter 15 Treatment of Psychological Disorders 502

PERSONAL APPLICATION Looking for a Therapist 529
CRITICAL THINKING APPLICATION From Crisis to Wellness—But Was It
the Therapy? 532

Appendix A Practice Tests and Answers to the Concept Checks A-1

Appendix B Statistical Methods A-21

Appendix C The Psychology of Environmental Sustainability A-29

Glossary G-1

References R-1

Credits C-1

Name Index I-1

Subject Index I-14

1

The Evolution of Psychology



Psychology's Early History 3

A New Science Is Born

The Battle of the "Schools" Begins: Structuralism Versus Functionalism

Freud Brings the Unconscious into the Picture

Watson Alters Psychology's Course as Behaviorism Makes Its Debut

Skinner Questions Free Will as Behaviorism Flourishes

The Humanists Revolt

1 Psychology's Modern History 11

Psychology Comes of Age as a Profession

Psychology Returns to Its Roots: Renewed Interest in Cognition and Physiology

Psychology Broadens Its Horizons: Increased Interest in Cultural Diversity

Psychology Adapts: The Emergence of Evolutionary Psychology

Psychology Moves in a Positive Direction

Psychology Today: Vigorous and Diversified 15

Research Areas in Psychology

Professional Specialties in Psychology

Seven Unifying Themes 18

Themes Related to Psychology as a Field of Study

Themes Related to Psychology's Subject Matter

PERSONAL APPLICATION • Improving Academic Performance 23

Developing Sound Study Habits

Improving Your Reading

Getting More out of Lectures

CRITICAL THINKING APPLICATION • Developing Critical Thinking Skills: An Introduction 26

The Skills and Attitudes of Critical Thinking

The Need to Teach Critical Thinking

An Example

Review of Key Learning Goals 28

2

The Research Enterprise in Psychology 30



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Looking for Laws: The Scientific Approach to Behavior 31

Goals of the Scientific Enterprise
Steps in a Scientific Investigation
Advantages of the Scientific Approach

Looking for Causes: Experimental Research 36

Independent and Dependent Variables
Experimental and Control Groups
Extraneous Variables
Variations in Designing Experiments
Advantages and Disadvantages of Experimental Research

Looking for Links: Descriptive/Correlational Research 41

The Concept of Correlation
Naturalistic Observation
Case Studies
Surveys
Advantages and Disadvantages of Descriptive/Correlational Research

Looking for Flaws: Evaluating Research 47

Sampling Bias

Illustrated Overview: Key Research Methods in Psychology 48

Placebo Effects
Distortions in Self-Report Data
Experimenter Bias

Looking at Ethics: Do the Ends Justify the Means? 52

The Question of Deception
The Question of Animal Research
Ethical Principles in Research

Reflecting on the Chapter's Themes 55

PERSONAL APPLICATION • Finding and Reading Journal Articles 56

The Nature of Technical Journals
Finding Journal Articles
Reading Journal Articles

CRITICAL THINKING APPLICATION • The Perils of Anecdotal Evidence: "I Have a Friend Who . . ." 58

Review of Key Learning Goals 60

3

The Biological Bases of Behavior 62

Communication in the Nervous System 63

Nervous Tissue: The Basic Hardware

The Neural Impulse: Using Energy to Send Information

The Synapse: Where Neurons Meet

Neurotransmitters and Behavior

Organization of the Nervous System 71

The Peripheral Nervous System

The Central Nervous System

The Brain and Behavior 74

Looking Inside the Brain: Research Methods

The Hindbrain

The Midbrain

The Forebrain

The Plasticity of the Brain

Right Brain/Left Brain: Cerebral Specialization 81

Bisecting the Brain: Split-Brain Research

Hemispheric Specialization in the Intact Brain

The Endocrine System: Another Way to Communicate 85

Heredity and Behavior: Is It All in the Genes? 86

Basic Principles of Genetics

Detecting Hereditary Influence: Research Methods

The Interplay of Heredity and Environment

The Evolutionary Bases of Behavior 89

Darwin's Insights

Later Refinements to Evolutionary Theory

Behaviors as Adaptive Traits

Reflecting on the Chapter's Themes 92

PERSONAL APPLICATION • Evaluating The Concept of "Two Minds in One" 93

Cerebral Specialization and Cognitive Processes

Complexities and Qualifications

CRITICAL THINKING APPLICATION • Building Better Brains: The Perils of Extrapolation 96

The Key Findings on Neural Development

The Tendency to Overextrapolate

Review of Key Learning Goals 98

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4

Sensation and Perception 100



The Visual System: Essentials of Sight 101

The Stimulus: Light

The Eye: A Living Optical Instrument

The Retina: The Brain's Envoy in the Eye

Vision and the Brain

Viewing the World in Color

Effects of Color on Behavior

The Visual System: Perceptual Processes 112

Perceiving Forms, Patterns, and Objects

Perceiving Depth or Distance

Perceptual Constancies in Vision

The Power of Misleading Cues: Visual Illusions

The Auditory System: Hearing 121

The Stimulus: Sound

Human Hearing Capacities

Sensory Processing in the Ear

Auditory Perception: Theories of Hearing

The Other Senses: Taste, Smell, and Touch 125

Taste: The Gustatory System

Smell: The Olfactory System

Touch: Sensory Systems in the Skin

Reflecting on the Chapter's Themes 129

Illustrated Overview: The Five Major Senses 130

PERSONAL APPLICATION • Appreciating Art and Illusion 132

CRITICAL THINKING APPLICATION • Recognizing Contrast Effects: It's All Relative 136

Review of Key Learning Goals 138

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5

Variations in Consciousness

140



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On the Nature of Consciousness 141

Variations in Levels of Awareness
Consciousness and Brain Activity

Biological Rhythms and Sleep 143

The Role of Circadian Rhythms
Ignoring Circadian Rhythms
Realigning Circadian Rhythms

The Sleep and Waking Cycle 145

Cycling Through the Stages of Sleep
Age, Culture, and Sleep
Doing Without: Sleep Deprivation
Sleep Loss and Health
Problems in the Night: Sleep Disorders

The World of Dreams 155

The Contents of Dreams
Culture and Dreams
Theories of Dreaming

Hypnosis: Altered Consciousness or Role Playing? 158

Hypnotic Induction and Phenomena
Theories of Hypnosis

Meditation: Seeking Higher Consciousness 161

Altering Consciousness with Drugs 163

Principal Abused Drugs and Their Effects
Factors Influencing Drug Effects
Mechanisms of Drug Action
Drug Dependence
Drugs and Health

Reflecting on the Chapter's Themes 168

PERSONAL APPLICATION • Addressing Practical Questions About Sleep and Dreams 169

Common Questions About Sleep
Common Questions About Dreams

CRITICAL THINKING APPLICATION • Is Alcoholism a Disease? The Power of Definitions 172

The Power to Make Definitions
Definitions, Labels, and Circular Reasoning

Review of Key Learning Goals 174

6

Learning 176

Classical Conditioning 177

Pavlov's Demonstration: "Psychic Reflexes"

Terminology and Procedures

Classical Conditioning in Everyday Life

Basic Processes in Classical Conditioning

Operant Conditioning 186

Skinner's Demonstration: It's All a Matter of Consequences

Terminology and Procedures

Basic Processes in Operant Conditioning

Reinforcement: Consequences That Strengthen Responses

Patterns of Reinforcement

Positive Reinforcement Versus Negative Reinforcement

Punishment: Consequences That Weaken Responses

Changing Directions in the Study of Conditioning 198

Recognizing Biological Constraints on Conditioning

Recognizing Cognitive Processes in Conditioning

Observational Learning 201

Basic Processes

Observational Learning and the Media Violence Controversy

Illustrated Overview: Three Types of Learning 204

Reflecting on the Chapter's Themes 206

PERSONAL APPLICATION • Achieving Self-Control Through Behavior Modification 207

Specifying Your Target Behavior

Gathering Baseline Data

Designing Your Program

Executing Your Program

CRITICAL THINKING APPLICATION • Manipulating Emotions: Pavlov and Persuasion 210

Classical Conditioning in Advertising

Classical Conditioning in Business Negotiations

Classical Conditioning in the World of Politics

Review of Key Learning Goals 212

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7

Human Memory 214



Encoding: Getting Information into Memory 216

The Role of Attention

Levels of Processing

Enriching Encoding

Storage: Maintaining Information in Memory 219

Sensory Memory

Short-Term Memory

Long-Term Memory

Retrieval: Getting Information out of Memory 223

Using Cues to Aid Retrieval

Reinstating the Context of an Event

Relying on Schemas

Reconstructing Memories

Source Monitoring

Forgetting: When Memory Lapses 227

How Quickly We Forget: Ebbinghaus's Forgetting Curve

Measures of Forgetting

Why We Forget

The Repressed Memories Controversy

In Search of the Memory Trace: The Physiology of Memory 234

The Anatomy of Memory

The Neural Circuitry of Memory

Systems and Types of Memory 237

Declarative Versus Procedural Memory

Semantic Versus Episodic Memory

Prospective Versus Retrospective Memory

Reflecting on the Chapter's Themes 240

PERSONAL APPLICATION • Improving Everyday Memory 240

Engage in Adequate Rehearsal

Schedule Distributed Practice and Minimize Interference

Engage in Deep Processing and Organize Information

Enrich Encoding with Mnemonic Devices

CRITICAL THINKING APPLICATION • Understanding the Fallibility of Eyewitness Accounts 244

The Contribution of Hindsight Bias

The Contribution of Overconfidence

Review of Key Learning Goals 246

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8

Cognition and Intelligence 248



Problem Solving: In Search of Solutions 250

Types of Problems
Barriers to Effective Problem Solving
Approaches to Problem Solving
Culture, Cognitive Style, and Problem Solving

Decision Making: Choices and Chances 257

Making Choices About Preferences
Heuristics in Judging Probabilities
Common Flaws in Reasoning About Decisions
Evolutionary Analyses of Fast and Frugal Heuristics

Measuring Intelligence 264

A Brief History
What Do Modern IQ Scores Mean?
Do Intelligence Tests Have Adequate Reliability?
Do Intelligence Tests Have Adequate Validity?
Do Intelligence Tests Predict Vocational Success?
Are IQ Tests Widely Used in Other Cultures?

Heredity and Environment as Determinants of Intelligence 269

Evidence for Hereditary Influence
Evidence for Environmental Influence
The Interaction of Heredity and Environment
Cultural Differences in IQ Scores

New Directions in the Study of Intelligence 277

Exploring Biological Correlates of Intelligence
Investigating Cognitive Processes in Intelligent Behavior
Expanding the Concept of Intelligence

Reflecting on the Chapter's Themes 281

PERSONAL APPLICATION • **Measuring and Understanding Creativity** 282

The Nature of Creativity
Measuring Creativity
Correlates of Creativity

CRITICAL THINKING APPLICATION • **The Intelligence Debate, Appeals to Ignorance, and Reification** 284

Review of Key Learning Goals 286

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9

Motivation and Emotion 288



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Motivational Theories and Concepts 290

Drive Theories
Incentive Theories
Evolutionary Theories

The Motivation of Hunger and Eating 291

Biological Factors in the Regulation of Hunger
Environmental Factors in the Regulation of Hunger

Sexual Motivation and Behavior 295

The Human Sexual Response
Evolutionary Analyses of Human Sexual Motivation
The Mystery of Sexual Orientation

Achievement: In Search of Excellence 302

Individual Differences in the Need for Achievement
Situational Determinants of Achievement Behavior

The Elements of Emotional Experience 304

The Cognitive Component
The Physiological Component
The Behavioral Component
Culture and the Elements of Emotion

Theories of Emotion 310

James-Lange Theory
Cannon-Bard Theory
Schachter's Two-Factor Theory
Evolutionary Theories of Emotion

Reflecting on the Chapter's Themes 314

PERSONAL APPLICATION • Exploring the Ingredients of Happiness 314

How Happy Are People?
Factors That Do Not Predict Happiness
Moderately Good Predictors of Happiness
Strong Predictors of Happiness
Conclusions About Subjective Well-Being

CRITICAL THINKING APPLICATION • Analyzing Arguments: Making Sense out of Controversy 318

The Anatomy of an Argument
Common Fallacies
Evaluating the Strength of Arguments

Review of Key Learning Goals 320

10

Human Development Across the Life Span 322



Progress Before Birth: Prenatal Development 324

The Course of Prenatal Development
Environmental Factors and Prenatal Development

The Wondrous Years of Early Childhood 327

Exploring the World: Motor Development
Early Emotional Development: Attachment
Learning to Communicate: Language Development

Personality and Cognitive Development in Childhood 332

Becoming Unique: Personality Development
The Growth of Thought: Cognitive Development
The Development of Moral Reasoning

The Transition of Adolescence 341

Physiological Changes
Neural Development
The Search for Identity
Emerging Adulthood as a New Developmental Stage

The Expanse of Adulthood 344

Personality Development
Transitions in Family Life
Aging and Physiological Changes
Aging and Neural Changes
Aging and Cognitive Changes

Reflecting on the Chapter's Themes 350

PERSONAL APPLICATION • Understanding Gender Differences 351

How Do the Sexes Differ in Behavior?
Biological Origins of Gender Differences
Environmental Origins of Gender Differences
Conclusion

CRITICAL THINKING APPLICATION • Are Fathers Essential to Children's Well-Being? 356

The Basic Argument
Evaluating the Argument

Review of Key Learning Goals 358

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11

Personality 360

The Nature of Personality 362

Defining Personality: Consistency and Distinctiveness

Personality Traits: Dispositions and Dimensions

The Five-Factor Model of Personality Traits

Psychodynamic Perspectives 364

Freud's Psychoanalytic Theory

Jung's Analytical Psychology

Adler's Individual Psychology

Evaluating Psychodynamic Perspectives

Behavioral Perspectives 372

Skinner's Ideas Applied to Personality

Bandura's Social Cognitive Theory

Mischel and the Person-Situation Controversy

Evaluating Behavioral Perspectives

Humanistic Perspectives 375

Rogers's Person-Centered Theory

Maslow's Theory of Self-Actualization

Evaluating Humanistic Perspectives

Biological Perspectives 379

Eysenck's Theory

Behavioral Genetics and Personality

The Evolutionary Approach to Personality

Evaluating Biological Perspectives

Contemporary Empirical Approaches to Personality 383

Narcissism

Illustrated Overview: Major Theories of Personality 384

Terror Management Theory

Culture and Personality 387

Reflecting on the Chapter's Themes 389

PERSONAL APPLICATION • Understanding Personality Assessment 389

Self-Report Inventories

Projective Tests

CRITICAL THINKING APPLICATION • Hindsight in Everyday Analyses of Personality 392

The Prevalence of Hindsight Bias

Hindsight and Personality

Other Implications of "20-20 Hindsight"

Review of Key Learning Goals 394

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12

Social Behavior 396



Person Perception: Forming Impressions of Others 398

Effects of Physical Appearance

Stereotypes

Subjectivity in Person Perception

An Evolutionary Perspective on Bias in Person Perception

Attribution Processes: Explaining Behavior 400

Internal Versus External Attributions

Attributions for Success and Failure

Bias in Attribution

Culture and Attributions

Interpersonal Attraction: Liking and Loving 404

Key Factors in Attraction

Perspectives on the Mystery of Love

Culture and Close Relationships

The Internet and Close Relationships

An Evolutionary Perspective on Attraction

Attitudes: Making Social Judgments 409

Components and Dimensions of Attitudes

Implicit Attitudes: Looking Beneath the Surface

Trying to Change Attitudes: Factors in Persuasion

Theories of Attitude Formation and Change

Conformity and Obedience: Yielding to Others 417

Conformity

Obedience

Cultural Variations in Conformity and Obedience

The Power of the Situation: The Stanford Prison Simulation

Behavior in Groups: Joining with Others 421

Behavior Alone and in Groups: The Case of the Bystander Effect

Group Productivity and Social Loafing

Decision Making in Groups

Reflecting on the Chapter's Themes 425

PERSONAL APPLICATION • Understanding Prejudice 426

Stereotyping

Making Biased Attributions

Forming and Preserving Prejudicial Attitudes

Competition Between Groups

Dividing the World into Ingroups and Outgroups

CRITICAL THINKING APPLICATION • Analyzing Credibility and Social Influence Tactics 430

Evaluating Credibility

Recognizing Social Influence Strategies

Review of Key Learning Goals 432

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13

Stress, Coping, and Health 434



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The Nature of Stress 435

Stress as an Everyday Event

Appraisal: Stress Lies in the Eye of the Beholder

Major Types of Stress

Responding to Stress 440

Emotional Responses

Physiological Responses

Behavioral Responses

Stress and Physical Health 448

Personality, Hostility, and Heart Disease

Emotional Reactions, Depression, and Heart Disease

Stress, Other Diseases, and Immune Functioning

Sizing Up the Link Between Stress and Illness

Factors Moderating the Impact of Stress

Positive Effects of Stress

Health-Impairing Behavior 452

Smoking

Alcohol and Drug Use

Lack of Exercise

Behavior and HIV/AIDS

Reactions to Illness 455

Deciding to Seek Treatment

Communicating with Health Providers

Adhering to Medical Advice

Reflecting on the Chapter's Themes 457

PERSONAL APPLICATION • Improving Coping and Stress Management 458

Reappraisal: Ellis's Rational Thinking

Humor as a Stress Reducer

Releasing Pent-up Emotions and Forgiving Others

Relaxing and Minimizing Physiological Vulnerability

CRITICAL THINKING APPLICATION • Thinking Rationally About Health Statistics and Decisions 462

Evaluating Statistics on Health Risks

Thinking Systematically About Health Decisions

Review of Key Learning Goals 464

14

Psychological Disorders 466



Abnormal Behavior: General Concepts 467

The Medical Model Applied to Abnormal Behavior

Criteria of Abnormal Behavior

Psychodiagnosis: The Classification of Disorders

Anxiety Disorders 471

Generalized Anxiety Disorder

Phobic Disorder

Panic Disorder and Agoraphobia

Obsessive-Compulsive Disorder

Posttraumatic Stress Disorder

Etiology of Anxiety Disorders

Dissociative Disorders 477

Dissociative Amnesia and Fugue

Dissociative Identity Disorder

Etiology of Dissociative Disorders

Mood Disorders 478

Major Depressive Disorder

Bipolar Disorder

Mood Disorders and Suicide

Etiology of Mood Disorders

Schizophrenic Disorders 484

General Symptoms

Subtypes and Course

Etiology of Schizophrenia

Autistic Disorder 490

Symptoms and Prevalence

Illustrated Overview: Three Categories of Psychological Disorders 492

Etiology of Autism

Reflecting on the Chapter's Themes 494

PERSONAL APPLICATION • Understanding Eating Disorders 495

Description

History and Prevalence

Etiology of Eating Disorders

CRITICAL THINKING APPLICATION • Working with Probabilities in Thinking About Mental Illness 498

Review of Key Learning Goals 500

15

Treatment of Psychological Disorders 502

Elements of the Treatment Process 504

Treatments: How Many Types Are There?

Clients: Who Seeks Therapy?

Therapists: Who Provides Professional Treatment?

Insight Therapies 507

Psychoanalysis

Client-Centered Therapy

Group Therapy

Couples and Family Therapy

How Effective Are Insight Therapies?

Behavior Therapies 513

Systematic Desensitization

Aversion Therapy

Social Skills Training

Cognitive-Behavioral Treatments

How Effective Are Behavior Therapies?

Biomedical Therapies 516

Treatment with Drugs

Electroconvulsive Therapy (ECT)

Illustrated Overview: Five Major Approaches to Treatment 522

Current Trends and Issues in Treatment 524

Blending Approaches to Treatment

Increasing Multicultural Sensitivity in Treatment

Institutional Treatment in Transition 526

Disenchantment with Mental Hospitals

Deinstitutionalization

Mental Illness, the Revolving Door, and Homelessness

Reflecting on the Chapter's Themes 528

PERSONAL APPLICATION • Looking for a Therapist 529

Where Do You Find Therapeutic Services?

Is the Therapist's Profession or Sex Important?

Is Treatment Always Expensive?

Is the Therapist's Theoretical Approach Important?

What Is Therapy Like?

CRITICAL THINKING APPLICATION • From Crisis to Wellness—But Was It the Therapy? 532

Review of Key Learning Goals 534

APPENDIX A	
Practice Tests and Answers to the Concept Checks	A-1
APPENDIX B	
Statistical Methods	A-21
APPENDIX C	
The Psychology of Environmental Sustainability	A-29

Glossary	G-1
References	R-1
Credits	C-1
Name Index	I-1
Subject Index	I-14

To the Student



Welcome to your introductory psychology textbook. In most college courses, students spend more time with their textbooks than with their professors, so it helps if students *like* their textbooks. Making textbooks likable, however, is a tricky proposition. By its very nature, a textbook must introduce students to many complicated concepts, ideas, and theories. If it doesn't, it isn't much of a textbook, and instructors won't choose to use it. Nevertheless, in writing this book I've tried to make it as likable as possible without compromising the academic content that your instructor demands. I've especially tried to keep in mind your need for a clear, well-organized presentation that makes the important material stand out and yet is interesting to read. Above all else, I hope you find this book challenging to think about and easy to learn from. Before you plunge into your first chapter, let me introduce you to the book's key features. Becoming familiar with how the book works will help you to get more out of it.

Key Features

You're about to embark on a journey into a new domain of ideas. Your text includes some important features that are intended to highlight certain aspects of psychology's landscape.

UNIFYING THEMES

To help you make sense of a complex and diverse field of study, I introduce seven themes in Chapter 1 that reappear in a number of variations as we move from chapter to chapter. These unifying themes are meant to provoke thought about important issues and to highlight the connections among chapters. They are discussed at the end of each chapter in a section called "Reflecting on the Chapter's Themes." Icons for the specific themes covered in a chapter appear near the beginning of these sections to help make the book's thematic structure more prominent.

PERSONAL APPLICATIONS

Toward the end of each chapter you'll find a Personal Application section that shows how psychology is relevant to everyday life. Some of these sections provide concrete, practical advice that could be helpful to you in your educational endeavors, such as those on improving academic performance, improving everyday memory, and achieving self-control. So, you may want to jump ahead and read some of these Personal Applications early.

CRITICAL THINKING APPLICATIONS

Each Personal Application is always followed by a two-page Critical Thinking Application that teaches and models basic critical thinking skills. I think you will find that these sections are refreshing and interesting. Like the Personal Applications, they are part of the text's basic content and should be read unless you are told otherwise by your instructor. Although the "facts" of psychology will gradually change after you take this course (thanks to scientific progress), the critical thinking skills modeled in these sections should prove valuable for many years to come.

REALITY CHECKS

Students typically come into the introductory psychology course with a variety of misconceptions. To foster a more accurate picture of psychology, each chapter includes three or four Reality Checks, which address common misconceptions related to psychology and provide direct refutations of the misinformation. These Reality Checks are sprinkled throughout the chapters, appearing adjacent to the relevant material. Exam-

ples of popular misconceptions that are dispelled include the myth that B. F. Skinner raised his daughter in a Skinner box, which led to her becoming severely disturbed (Chapter 1); the notion that people use only 10% of their brains (Chapter 3); the assumption that people who are color blind see the world in black and white (Chapter 4); and the idea that it is dangerous to awaken someone who is sleepwalking (Chapter 5). This text feature is based on recent research suggesting that explicit repudiations of erroneous ideas reduce students' misconceptions more effectively than the simple provision of correct information (Kowalski & Taylor, 2009). For the most part, the Reality Checks can be found in the margins of the pages, but they are a critical component of the text's educational material.

Learning Aids

This text contains a great deal of information. A number of learning aids have been incorporated into the book to help you digest it all.

An *outline* at the beginning of each chapter provides you with an overview of the topics covered in that chapter. Think of the outlines as road maps, and bear in mind that it's easier to reach a destination if you know where you're going.

Headings serve as road signs in your journey through each chapter. Four levels of headings are used to make it easy to see the organization of each chapter.

Key Learning Goals, found at the beginning of major sections, can help you focus on the important issues in the material you are about to read.

Reviews of Key Learning Goals, found at the end of the chapters, are detailed summaries of each chapter's key ideas, organized around the Key Learning Goals. The numbered paragraphs in these reviews address the learning objectives outlined in the Key Learning Goals. It's wise to read over these review materials to make sure you've digested the information in the chapter.

Italics (without boldface) are used liberally throughout the text to emphasize crucial points.

Key terms are identified with *italicized blue boldface* type to alert you that these are important vocabulary items that are part of psychology's technical language.

An *integrated running glossary* provides an on-the-spot definition of each key term as it's introduced in the text. These formal definitions are printed in *blue boldface* type. Becoming familiar with psychology's terminology is an essential part of learning about the field. The integrated running glossary should make this learning process easier.

Concept Checks are sprinkled throughout the chapters to let you test your mastery of important ideas. Generally, they ask you to integrate or organize a number of key ideas, or to apply ideas to real-world situations. Although they're meant to be engaging and fun, they do check conceptual *understanding*, and some are challenging. But if you get stuck, don't worry; the answers (and explanations, where they're needed) are in the back of the book in Appendix A.

Illustrations in the text are important elements in your complete learning package. Some illustrations provide enlightening diagrams of complicated concepts; others furnish examples that help flesh out ideas or provide concise overviews of research results. Careful attention to the tables and figures in the book will help you understand the material discussed in the text.

A 12-item *Practice Test* is provided for each chapter that should give you a realistic assessment of your mastery of that chapter and valuable practice in taking multiple-choice tests. These Practice Tests are found in Appendix A.

An *alphabetical glossary* is provided in the back of the book. Most key terms are formally defined in the integrated running glossary only when they are first introduced. So if you run into a technical term a second time and can't remember its meaning, it may be easier to look it up in the alphabetical glossary.

A Few Footnotes

Psychology textbooks customarily identify the studies, theoretical treatises, books, and articles that information comes from. These *citations* occur (1) when names are followed by a date in parentheses, as in “Smith (2011) found that . . .” or (2) when names and dates are provided together within parentheses, as in “In one study (Burke, Martinez, & Jones, 1999), the researchers attempted to . . .” All of the cited publications are listed by author in the alphabetized *References* section in the back of the book. The citations and references are a necessary part of a book’s scholarly and scientific foundation. Practically speaking, however, you’ll probably want to glide right over them as you read. You definitely don’t need to memorize the names and dates.

PsykTrek: A Multimedia Introduction to Psychology

Developed to accompany this textbook, *PsykTrek* is an enormously powerful multimedia learning tool—available online or on CD-ROM—that can enhance your understanding of many complex processes and theories, provide you with an alternative way to assimilate many crucial concepts, and add a little more fun to your journey through introductory psychology. *PsykTrek* has been designed to supplement and complement your textbook. I strongly encourage you to use it. The *PsykTrek* icons that you will see in many of the headings in the upcoming chapters refer to the content of *PsykTrek*. An icon indicates that the textbook topic referred to in the heading is covered in the Interactive Learning Modules or Simulations found on *PsykTrek*. The relevant simulations (Sim1, Sim2, and so forth) and the relevant Interactive Learning Modules (1a, 1b, 1c, and so forth) are listed on the right of the icons.

A Final Word

I’m pleased to be a part of your first journey into the world of psychology, and I sincerely hope that you’ll find the book as thought provoking and as easy to learn from as I’ve tried to make it. If you have any comments or advice on the book, please write to me in care of the publisher (Wadsworth/Cengage Learning, 20 Davis Drive, Belmont, CA 94002). You can be sure I’ll pay careful attention to your feedback. Finally, let me wish you good luck. I hope you enjoy your course and learn a great deal.

Wayne Weiten

1

The Evolution of Psychology

Psychology's Early History

Psychology's Modern History

Psychology Today: Vigorous and Diversified

Seven Unifying Themes

PERSONAL APPLICATION • Improving Academic Performance

CRITICAL THINKING APPLICATION • Developing Critical Thinking Skills: An Introduction

Review of Key Learning Goals

PARADOX

Psychology has a long past, but a short history.



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What is psychology? Why is it worth your time to study? Let me approach these questions by sharing a couple of stories with you.

In 2005, Greg Hogan, a college sophomore, briefly achieved national notoriety when he was arrested for a crime. Greg wasn't anybody's idea of a likely criminal. He was the son of a Baptist minister and the president of his class. He played cello in the university orchestra. He even worked part-time in the chaplain's office. So it shocked everybody who knew Greg when police arrested him at his fraternity house for bank robbery.

It seems that Greg had faked having a gun and made away with over \$2800 from a local bank. His reason? Over a period of months he had lost \$5000 playing poker on the Internet. His lawyer said Greg's gambling habit had become "an addiction" (Dissell, 2005; McLoughlin & Paquet, 2005).

Greg eventually entered a clinic for treatment of his gambling problem. In a way, he was lucky—at least he got help. Moshe Pergament, a 19-year-old community college student in Long Island, New York, wasn't so fortunate. Moshe was shot to death after brandishing a gun at a police officer. The gun turned out to be plastic. On the front seat of his car was a note that began, "Officer, it was a plan. I'm sorry to get you involved. I just needed to die." Moshe had just lost \$6000 betting on the World Series. His death was what people in law enforcement call "suicide by cop" (Lindsay & Lester, 2004).

These stories are at the extreme edge of a trend that concerns many public officials and mental health professionals: The popularity of gambling—from lotteries to sports betting to

online poker—is booming, especially among the young (D. F. Jacobs, 2004). College students seem to be leading the way. To some observers, gambling on college campuses has become an "epidemic."

Student bookies on some campuses make tens of thousands of dollars a year taking sports bets from other students. Television shows such as

The World Series of Poker are marketed squarely at college-student audiences. Poker sites on the web invite students to win their tuition by gambling online.

For most people, gambling is a relatively harmless—if sometimes expensive—pastime. However, estimates suggest that 5%–6% of teens and young adults develop serious problems with gambling—two to four times the rate for older adults (Jacobs, 2004; Petry, 2005; Winters et al., 2004). The enormous growth of pathological gambling among young people raises a number of questions. Is gambling dangerous? Can it really be addictive? What is an addiction, anyway? If pathological gamblers abuse drugs or commit crimes, is gambling the cause of their troubles, or is it a symptom of a deeper problem? Perhaps most critically of all, why do some people become pathological gamblers while the great majority do not? Every day millions of people in the United States play the lottery, bet on sports, or visit casinos without apparent harm. Yet others can't seem to stop gambling until they have lost everything—their savings, their jobs, their homes, and their self-respect. Why? What causes such perplexing, self-destructive behavior?

Psychology is about questions like these. More generally, psychology is about understanding *all* the things we do. All of us wonder sometimes about the reasons underlying people's behavior—why it's hard to diet, why we procrastinate about studying, why we fall in love with one person rather than another. We wonder why some people are outgoing while others are shy. We wonder why we sometimes do things that we know will bring us pain and anguish, whether it's clinging to a destructive relationship or losing our tuition money in a game of Texas Hold 'Em. The study of psychology is about all these things, and infinitely more.

Many of psychology's questions have implications for people's everyday lives. For me, this is one of the field's major attractions—*psychology is practical*. Consider the case of gambling. Pathological gamblers suffer all kinds of misery, yet they can't seem to stop. Listen to the anguish of a gambler named Steve: "Over the past two years I have lost literally thousands . . . I have attempted to give up time after time after time, but failed every time. . . . I have debts around my neck which are destroying mine and my family's life. . . . I just want a massive light to be turned on with a message saying, 'This way to your old life, Steve'" (SJB, 2006).

What is the best way to help someone like Steve? Should he join a group like Gamblers Anonymous? Would counseling work? Are there drugs that can help? By probing the whys and hows of human behavior, psychology can help us find answers to pressing questions like these, as well as better understand issues that affect each of us every day. You will see the practical side of psychology throughout this book, especially in the Personal Applications at the ends of chapters. These Applications focus on everyday problems, such as coping more effectively with stress, improving self-control, and dealing with sleep difficulties.

Beyond its practical value, psychology is worth studying because it provides a powerful *way of thinking*. All of us make judgments every day about why people do the things they do. For example, we might think that pathological gamblers are weak willed, or irrational, or just too dumb to understand that the odds are stacked against them. Or we might believe they are



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in the grip of an addiction that simply overpowers them. How do we decide which of these judgments—if any—are right?

Psychologists are committed to investigating questions about human behavior in a scientific way. This means that they seek to formulate precise questions about behavior and then test possible answers through systematic observation. This commitment to testing ideas means that psychology provides a means of building knowledge that is relatively accurate and dependable. It also provides a basis for assessing the assertions we hear every day about behavior, from friends and family, as well as in the popular media. Although most people probably don't think about it much, psychology is in the news all the time—in newspapers and magazines, on TV and radio, and on the Internet. Unfortunately, this coverage is often distorted or grossly oversimplified, so that misinformation is commonplace. Thus, many “truisms” about behavior come to be widely believed, when they really are misconceptions or myths. A small sampling of some popular myths related to psychology is shown in **Table 1.1**. This list of common misconceptions comes from an excellent book titled *50 Great Myths of Popular Psychology* (Lilienfeld et al., 2010). In the pages to come we'll touch upon a host of misconceptions about psychology and provide more accurate, science-based information on these matters. For example, in Chapter 3 you will learn that the idea that people only use 10% of their brains is utter nonsense. Recent research suggests that the best way to dispel students' misconceptions is to confront these beliefs head on and provide a direct refutation (Kowalski & Taylor, 2009). Hence, throughout this book you will find a feature called Reality Checks that will highlight common fallacies and counter them with more accurate, realistic information. The Reality Check features will be found adjacent to relevant material, supplementing the normal text by explicitly attacking naive, fallacious beliefs.

In the case of gambling, for example, researchers have designed careful studies to probe the relationship of gambling problems to any number of possible influences, from childhood experiences to membership in a college fraternity. They have compared the way slot machines are set to reward players with frequent small payoffs to the way rats and pigeons are taught to earn food rewards in the laboratory. They have used state-of-the-art brain-imaging techniques to study the brains of people performing tasks similar to placing bets. They have even looked at whether some people are predisposed by their genes to develop problems with gambling (Petry, 2005; Rockey et al., 2005; Szegedy-Maszak, 2005).

If there is one clear conclusion that emerges from these studies, it is that there is no simple answer to the mystery of pathological gambling. Instead, a full explanation of gambling problems will likely involve many influences that interact in complex ways

TABLE 1.1 Popular Myths Related to Psychology

Myth	Relevant Chapter
Most people use only 10% of their brain power.	Chapter 3
Playing Mozart's music to infants boosts their intelligence.	Chapter 3
Hypnosis is a unique “trance” state that differs in kind from wakefulness.	Chapter 5
Hypnosis is useful for retrieving memories of forgotten events.	Chapter 7
The polygraph (“lie detector”) test is an accurate means of detecting dishonesty.	Chapter 10
Opposites attract: We are most romantically attracted to people who differ from us.	Chapter 13
People with schizophrenia have multiple personalities.	Chapter 15
A large portion of criminals successfully use the insanity defense.	Chapter 15

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SOURCE: Based on Lilienfeld, S. O., Lynn, S. J., Ruscio, J., & Beyerstein, B. L. (2010). *50 great myths of popular psychology: Shattering widespread misconceptions about human behavior*. Malden, MA: Wiley-Blackwell.

(Derevensky & Gupta, 2004; Petry, 2005). As you'll see throughout this course, the same is true of most aspects of behavior. In my opinion, this is yet another reason to study psychology: It teaches us a healthy respect for the *complexity* of behavior. In a world that could use more understanding—and compassion—this can be an invaluable lesson.

As you go through this course, I hope you'll come to share my enthusiasm for psychology as a fascinating and immensely practical field of study. Let's begin our exploration by seeing how psychology has evolved from early speculations about behavior to a modern science. By looking at this evolution, you'll better understand psychology as it is today, a sprawling, multifaceted science and profession. We'll conclude our introduction with a look at seven unifying themes that will serve as connecting threads in the chapters to come. The chapter's Personal Application reviews research that provides insights into how to be an effective student. Finally, the Critical Thinking Application discusses how critical thinking skills can be enhanced.

Psychology's Early History

Psychology's story is one of people groping toward a better understanding of themselves. As the discipline has evolved, its focus, methods, and explanatory models have changed. Let's look at how psychology has developed from philosophical speculations about the mind into a modern research-based science.

The term *psychology* comes from two Greek words, *psyche*, meaning the soul, and *logos*, referring to the study of a subject. These two Greek roots were first put together to define a topic of study in the 16th century, when *psyche* was used to refer to the soul, spirit, or mind, as distinguished from the body (Boring, 1966). Not until the early 18th century did the term *psychology* gain more than rare usage among scholars. By that time it had acquired its literal meaning, "the study of the mind."

Of course, people have always wondered about the mysteries of the mind. In that sense, psychology is as old as the human race. But it was only about 140 years ago that psychology emerged as a scientific discipline.

A New Science Is Born

PSYKTREK 1a

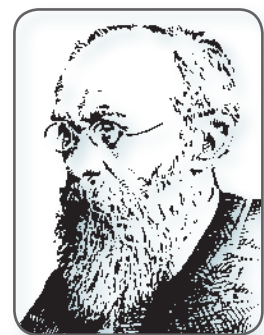
Psychology's intellectual parents were the disciplines of *philosophy* and *physiology*. By the 1870s a small number of scholars in both fields were actively exploring questions about the mind. How are bodily sensations turned into a mental awareness of the outside world? Are our perceptions of the world accurate reflections of reality? How do mind and body interact? The philosophers and physiologists who were interested in the mind viewed such questions as fascinating issues *within* their respective fields. It was a German professor, Wilhelm Wundt (1832–1920), who eventually changed this view. Wundt mounted a campaign to make psychology an independent discipline rather than a stepchild of philosophy or physiology.

In 1879 Wundt succeeded in establishing the first formal laboratory for research in psychology at the University of Leipzig. In recognition of this landmark event, historians have christened 1879 as psychology's "date of birth." Soon after, in 1881, Wundt established the first journal devoted to publishing research on psychology. All in all, Wundt's campaign was so successful that today he is widely characterized as the founder of psychology.

Wundt's conception of psychology dominated the field for two decades and was influential for several more. Borrowing from his training in physiology, Wundt (1874) declared that the new psychology should be a science modeled after fields such as physics and chemistry. What was the subject matter of the new science? According to Wundt, it was *consciousness*—the awareness of immediate experience. *Thus, psychology became*

KEY LEARNING GOALS

- 1.1 Summarize Wundt's contributions to psychology, and describe the chief tenets of structuralism and functionalism.
- 1.2 Articulate Freud's principal ideas and why they inspired controversy.
- 1.3 Trace the development of behaviorism, and assess Watson's impact on the evolution of psychology.
- 1.4 Summarize Skinner's key insights, and explain the emergence of humanism and its underlying philosophy.



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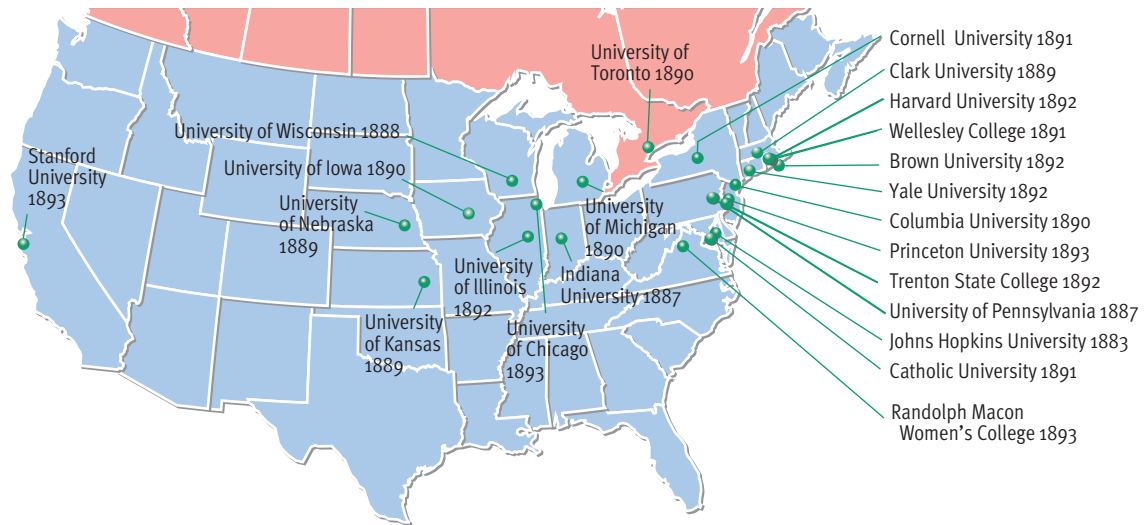
Wilhelm Wundt

"Physiology informs us about those life phenomena that we perceive by our external senses. In psychology, the person looks upon himself as from within and tries to explain the interrelations of those processes that this internal observation discloses."

FIGURE 1.1

Early research laboratories in North America.

This map highlights the location and year of founding for the first 23 psychological research labs established in North American colleges and universities. Many of these labs were founded by the students of Wilhelm Wundt. (Based on Benjamin, 2000)



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the scientific study of conscious experience. This orientation kept psychology focused squarely on the mind. But it demanded that the methods used to investigate the mind be as scientific as those of chemists or physicists.

Many outstanding scholars came to Leipzig to study under Wundt and then fanned out around the world, establishing laboratories that formed the basis for the new science of psychology. The growth of this new field was particularly rapid in North America, where some 23 new psychological research labs sprang up between 1883 and 1893 at the universities shown in **Figure 1.1** (Benjamin, 2000). Although psychology was born in Germany, it blossomed into adolescence in North America.

The Battle of the “Schools” Begins: Structuralism Versus Functionalism

PSYKTRK 1a

Competing schools of thought exist in most scientific disciplines. Sometimes the disagreements among these schools are sharp. Such diversity in thought is natural and often stimulates enlightening debate. In psychology, the first two major schools of thought, *structuralism* and *functionalism*, were entangled in the first great intellectual battle in the field.

Structuralism emerged through the leadership of Edward Titchener, an Englishman who emigrated to the United States in 1892. After training in Wundt’s lab, he taught for decades at Cornell University. **Structuralism was based on the notion that the task of psychology is to analyze consciousness into its basic elements and investigate how these elements are related.** Just as physicists were studying how matter is made up of basic particles, the structuralists wanted to identify the fundamental components of conscious experience, such as sensations, feelings, and images.

Although the structuralists explored many questions, most of their work concerned sensation and perception in vision, hearing, and touch. To examine the contents of consciousness, the structuralists depended on the method of **introspection, or the careful, systematic self-observation of one’s own conscious experience.** As practiced by the structuralists, introspection required training to make the *subject*—the person being studied—more objective and more aware. Once trained, participants were typically exposed to auditory tones, optical illusions, and visual

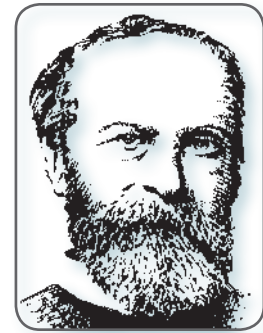


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stimuli such as pieces of fruit, and then they were asked to analyze what they experienced.

The functionalists, led by William James (1842–1910), a brilliant American scholar, took a different view of psychology’s task. **Functionalism was based on the belief that psychology should investigate the function or purpose of consciousness, rather than its structure.** James argued that the structuralists’ approach missed the real nature of conscious experience. Consciousness, he argued, consists of a continuous *flow* of thoughts. In analyzing consciousness into its “elements,” the structuralists were looking at static points in that flow. James wanted to understand the flow itself, which he called the *stream of consciousness*. Today, people take this metaphorical description of mental life for granted, but at the time it was a revolutionary insight.

Whereas structuralists naturally gravitated to the lab, functionalists were more interested in how people adapt their behavior to the demands of the real world around them. Instead of focusing on sensation and perception, the functionalists began to investigate mental testing, patterns of development in children, the effectiveness of educational practices, and behavioral differences between the sexes. These new topics may have played a role in attracting the first women into the field of psychology (see **Figure 1.2**).



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William James

“It is just this free water of consciousness that psychologists resolutely overlook.”

**Mary Whiton Calkins
(1863–1930)**



Mary Calkins, who studied under William James, founded one of the first dozen psychology laboratories in America at Wellesley College in 1891, invented a widely used technique for studying memory, and became the first woman to serve as president of the American Psychological Association in 1905. Ironically, however, she never received her Ph.D. in psychology. Because she was a woman, Harvard University only reluctantly allowed her to take graduate classes as a “guest student.” When she completed the requirements for her Ph.D., Harvard would only offer her a doctorate from its undergraduate sister school, Radcliffe. Calkins felt that this decision perpetuated unequal treatment of the sexes, so she refused the Radcliffe degree.

**Margaret Floy Washburn
(1871–1939)**



Margaret Washburn was the first woman to receive a Ph.D. in psychology. She wrote an influential book, *The Animal Mind* (1908), which served as an impetus to the subsequent emergence of behaviorism and was standard reading for several generations of psychologists. In 1921 she became the second woman to serve as president of the American Psychological Association. Washburn studied under James McKeen Cattell at Columbia University, but like Mary Calkins, she was only permitted to take graduate classes unofficially, as a “hearer.” Hence, she transferred to Cornell University, which was more hospitable toward women, and completed her doctorate in 1894. Like Calkins, Washburn spent most of her career at a college for women (Vassar).

**Leta Stetter Hollingworth
(1886–1939)**



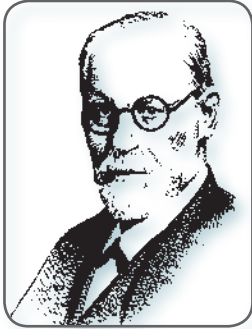
Leta Hollingworth did pioneering work on adolescent development, mental retardation, and gifted children. Indeed, she was the first person to use the term *gifted* to refer to youngsters who scored exceptionally high on intelligence tests. Hollingworth (1914, 1916) also played a major role in debunking popular theories of her era that purported to explain why women were “inferior” to men. For instance, she conducted a study refuting the myth that phases of the menstrual cycle are reliably associated with performance decrements in women. Her careful collection of objective data on gender differences forced other scientists to subject popular, untested beliefs about the sexes to skeptical, empirical inquiry.

FIGURE 1.2

Women pioneers in the history of psychology. Women have long made major contributions to the development of psychology (Milar, 2000; Russo & Denmark, 1987), and today nearly half of all psychologists are female. As in other fields, however, women have often been overlooked in histories of psychology (Furumoto & Scarborough, 1986). The three psychologists profiled here demonstrate that women have been making significant contributions to psychology almost from its beginning—despite formidable barriers to pursuing their academic careers.

Photos: Archives of the History of American Psychology, The Center for the History of Psychology, University of Akron

The impassioned advocates of structuralism and functionalism saw themselves as fighting for high stakes: the definition and future direction of the new science of psychology. Their war of ideas continued energetically for many years. Who won? Most historians give the edge to functionalism. Both schools of thought gradually faded away. But the practical orientation of functionalism fostered the development of two important descendants—behaviorism and applied psychology (Green, 2009). We will discuss both momentarily.



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Sigmund Freud

“The unconscious is the true physical reality; in its innermost nature it is as much unknown to us as the reality of the external world.”

Freud Brings the Unconscious into the Picture

PSYKTRAK 1a, 10a

Sigmund Freud (1856–1939) was an Austrian physician whose theories made him one of the most influential—and controversial—intellectual figures of modern times. Freud’s (1900, 1933) approach to psychology grew out of his efforts to treat mental disorders. In his medical practice, Freud treated people troubled by psychological problems such as irrational fears, obsessions, and anxieties with an innovative procedure he called *psychoanalysis* (described in detail in Chapter 15). Decades of experience probing into his patients’ lives provided much of the inspiration for Freud’s theory.

His work with patients persuaded Freud of the existence of what he called the *unconscious*. According to Freud, **the unconscious contains thoughts, memories, and desires that are well below the surface of conscious awareness but that nonetheless exert great influence on behavior.** Freud based his concept of the unconscious on a variety of observations. For instance, he noticed that seemingly meaningless slips of the tongue (such as “I decided to take a summer school *curse*”) often appeared to reveal a person’s true feelings. He also noted that his patients’ dreams often seemed to express important feelings that they were unaware of. Knitting these and other observations together, Freud eventually concluded that psychological disturbances are largely caused by personal conflicts existing at an unconscious level. More generally, his *psychoanalytic theory attempts to*



Concept Check 1.1

Understanding the Implications of Major Theories: Wundt, James, and Freud

Check your understanding of the implications of some of the major theories reviewed in this chapter by indicating who is likely to have made each of the statements quoted below. Choose from the following theorists: (a) Wilhelm Wundt, (b) William James, and (c) Sigmund Freud. You’ll find the answers in Appendix A in the back of the book.

- _____ 1. “He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If the lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore. And thus the task of making conscious the most hidden recesses of the mind is one which it is quite possible to accomplish.”
- _____ 2. “The book which I present to the public is an attempt to mark out a new domain of science. . . . The new discipline rests upon anatomical and physiological foundations. . . . The experimental treatment of psychological problems must be pronounced from every point of view to be in its first beginnings.”
- _____ 3. “Consciousness, then, does not appear to itself chopped up in bits. Such words as ‘chain’ or ‘train’ do not describe it fitly. . . . It is nothing jointed; it flows. A ‘river’ or ‘stream’ are the metaphors by which it is most naturally described.”

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explain personality, motivation, and mental disorders by focusing on unconscious determinants of behavior.

Freud's concept of the unconscious was not entirely new, but he put it on the map for the general population and elaborated on it like never before (Lothane, 2006). It is important to emphasize that the concept of the unconscious was a major departure from the prevailing belief that people are fully aware of the forces affecting their behavior. In arguing that behavior is governed by unconscious forces, Freud made the disconcerting suggestion that people are not masters of their own minds. Other aspects of Freud's theory also stirred up debate. For instance, he proposed that behavior is greatly influenced by how people cope with their sexual urges. At a time when people were far less comfortable discussing sexual issues than they are today, even scientists were offended and scandalized by Freud's emphasis on sex. Small wonder, then, that Freud was soon engulfed in controversy.

In spite of its controversial nature, Freud's theory gradually won acceptance, attracting prominent followers such as Carl Jung and Alfred Adler. Important public recognition from psychology came in 1909, when G. Stanley Hall invited Freud to give a series of lectures at Clark University in Massachusetts. By the 1920s psychoanalytic theory was widely known around the world. Although psychoanalytic theory continued to generate heated debate, it survived to become an influential theoretical perspective. Today, many psychoanalytic concepts have filtered into the mainstream of psychology (Luborsky & Barrett, 2006; Pincus, 2006; Westen, Gabbard, & Ortigo, 2008).

Watson Alters Psychology's Course as Behaviorism Makes Its Debut

PSYKTRK 1a, 5b

In the early 1900s, another major school of thought appeared that dramatically altered the course of psychology. Founded by John B. Watson (1878–1958), **behaviorism is a theoretical orientation based on the premise that scientific psychology should study only observable behavior.** It is important to understand what a radical change this definition represents. Watson (1913, 1919) was proposing that psychologists *abandon the study of consciousness altogether* and focus exclusively on behaviors they could observe directly. In essence, he was redefining what scientific psychology should be about.

Why did Watson argue for such a fundamental shift in direction? Because to him, the power of the scientific method rested on the idea of *verifiability*. In principle, scientific claims can always be verified (or disproved) by anyone who is able and willing to make the required observations. However, this power depends on studying things that can be observed objectively. Otherwise, the advantage of using the scientific approach—replacing vague speculation and personal opinion with reliable, exact knowledge—is lost. In Watson's view, mental processes are not a proper subject for scientific study because they are ultimately private events. After all, no one can see or touch another's thoughts. Consequently, if psychology was to be a science, it would have to give up consciousness as its subject matter and become instead the *science of behavior*.

Behavior refers to any overt (observable) response or activity by an organism. Watson asserted that psychologists could study anything that people do or say—shopping, playing chess, eating, complimenting a friend. However, according to Watson they could *not* study scientifically the thoughts, wishes, and feelings that might accompany these behaviors.

Watson's radical reorientation of psychology did not end with his redefinition of its subject matter. He also took an extreme position on one of psychology's oldest and most fundamental questions: the issue of *nature versus nurture*. This age-old debate is concerned with whether behavior is determined mainly by genetic inheritance ("nature") or by environment and experience ("nurture"). To oversimplify, the question is this: Is a great concert pianist or a master criminal born, or made?



John B. Watson

"The time seems to have come when psychology must discard all references to consciousness."

Watson argued that each is made, not born. He discounted the importance of heredity. He maintained that behavior is governed entirely by the environment. Indeed, he boldly claimed:

Give me a dozen healthy infants, well-formed, and my own special world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief, and yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations and race of his ancestors. I am going beyond my facts and I admit it, but so have the advocates of the contrary and they have been doing it for many thousands of years. (1924, p. 82)

For obvious reasons, Watson's tongue-in-cheek challenge was never put to a test. Although this widely cited quote overstated and oversimplified Watson's views on the nature-nurture issue (Todd & Morris, 1992), his writings contributed to the environmental slant that became associated with behaviorism (Horowitz, 1992).

Behaviorism's approach contributed to the rise of animal research in psychology. Having deleted consciousness from their scope of concern, behaviorists no longer needed to study human subjects who could report on their mental processes. Many psychologists thought that animals would make better research subjects anyway. One key reason was that experimental research is often more productive if experimenters can exert considerable *control* over their subjects. Obviously, a researcher can exert much more control over a laboratory rat or pigeon than over a human subject. Thus, the discipline that had begun its life a few decades earlier as the study of the mind now found itself heavily involved in the study of simple responses made by lab animals.

Although Watson's views shaped the evolution of psychology for many decades, he ended up watching the field's progress from the sidelines. Because of a heavily publicized divorce scandal in 1920, Watson was forced to resign from Johns Hopkins University (Buckley, 1994). Bitterly disappointed, he left academia at the age of 42, never to return. Psychology's loss proved to be the business world's gain, as Watson went on to become an innovative, successful advertising executive (Brewer, 1991; Coon, 1994). The advertising industry was just emerging as a national force in the 1920s, and Watson quickly became one of its most prominent practitioners. He pioneered fear appeals, testimonials, selling the "prestige" of products, and the promotion of style over substance, all of which remain basic principles in modern marketing (Buckley, 1982). Moreover, "through an enormous output of books, magazine articles, and radio broadcasts he was able to establish himself as the public spokesman for the profession of psychology and an expert on subjects ranging from childrearing to economics. In effect, Watson became the first 'pop' psychologist" (Buckley, 1982, p. 217). So, ironically, Watson became the public face of the discipline that had banished him from its mainstream.



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B. F. Skinner

"I submit that what we call the behavior of the human organism is no more free than its digestion."

Skinner Questions Free Will as Behaviorism Flourishes

PSYKTRK 1a, 10b

The advocates of behaviorism and psychoanalysis tangled frequently during the 1920s, 1930s, and 1940s. As psychoanalytic thought slowly gained a foothold within psychology, many psychologists softened their stance on the acceptability of studying internal mental events. However, this movement toward the consideration of internal states was dramatically reversed in the 1950s by a Harvard psychologist named B. F. Skinner (1904–1990).

Skinner did not deny the existence of internal mental events. However, he insisted that they could not be studied scientifically. Moreover, he maintained, there was no need to study them. According to Skinner, if the stimulus of food is followed by the response of eating, we can fully describe what is happening without making any guesses about



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whether the animal is experiencing hunger. Like Watson, Skinner also emphasized how environmental factors mold behavior.

The fundamental principle of behavior documented by Skinner is deceptively simple: *Organisms tend to repeat responses that lead to positive outcomes, and they tend not to repeat responses that lead to neutral or negative outcomes.* Despite its simplicity, this principle turns out to be quite powerful. Working with lab rats and pigeons in a small chamber called a Skinner box (see Chapter 6), Skinner showed that he could exert remarkable control over the behavior of animals by manipulating the outcomes of their responses. He was even able to train animals to perform unnatural behaviors. For example, he once trained some pigeons to play a respectable version of table tennis. They pecked a ball back and forth on a Ping Pong table (see the video found within *PsykTrek*). Skinner's followers eventually showed that the principles uncovered in their animal research could be applied to complex human behaviors as well. Behavioral principles are now widely used in factories, schools, prisons, mental hospitals, and a variety of other settings.

Skinner's ideas had repercussions that went far beyond the debate among psychologists about what they should study. Skinner spelled out the full implications of his findings in his book *Beyond Freedom and Dignity* (1971). There he asserted that all behavior is fully governed by external stimuli. In other words, your behavior is determined in predictable ways by lawful principles, just as the flight of an arrow is governed by the laws of physics. Thus, if you believe that your actions are the result of conscious decisions, you're wrong. According to Skinner, we are all controlled by our environment, not by ourselves. In short, Skinner arrived at the conclusion that *free will is an illusion*.

As you can readily imagine, such a disconcerting view of human nature was not universally acclaimed. Like Freud, Skinner was the target of harsh criticism. Much of this criticism stemmed from misinterpretations of his ideas reported in the popular press (Rutherford, 2000). For example, his analysis of free will was often misconstrued as an attack on the concept of a free society—which it was not. Somehow, a myth also emerged that Skinner raised his daughter in a version of a Skinner box and that this experience led her to be severely disturbed later in life. Despite the misinformation and controversy, however, behaviorism flourished as the dominant school of thought in psychology during the 1950s and 1960s (Gilgen, 1982).

The Humanists Revolt

PSYKTRK 1a, 10c

By the 1950s behaviorism and psychoanalytic theory had become the most influential schools of thought in psychology. However, many psychologists found these theoretical orientations unappealing. The principal charge hurled at both schools was that they were “dehumanizing.” Psychoanalytic theory was attacked for its belief that behavior is dominated by primitive, sexual urges. Behaviorism was condemned for its preoccupation with the study of simple animal behavior. Both theories were criticized because they suggested that people are not masters of their own destinies. Above all, many people argued, both schools of thought failed to recognize the unique qualities of *human* behavior.

Beginning in the 1950s, the diverse opposition to behaviorism and psychoanalytic theory blended into a loose alliance that eventually became a new school of thought called “humanism” (Bühler & Allen, 1972). In psychology, **humanism is a theoretical**

Reality Check

Misconception

B. F. Skinner raised his daughter, Deborah, in a Skinner box, contributing to her becoming severely disturbed later in life, which led to her suicide.

Reality

Skinner did design an innovative crib called a “baby tender” for Deborah, which was featured in *Ladies' Home Journal* (Skinner, 1945; see the photo below). But it was not analogous to a Skinner box, was not used for experiments, and apparently was quite comfortable. Deborah grew up normally, was very close to her father, has not suffered from psychological problems as an adult, and is alive and well, working as an artist (Buzan, 2004).



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