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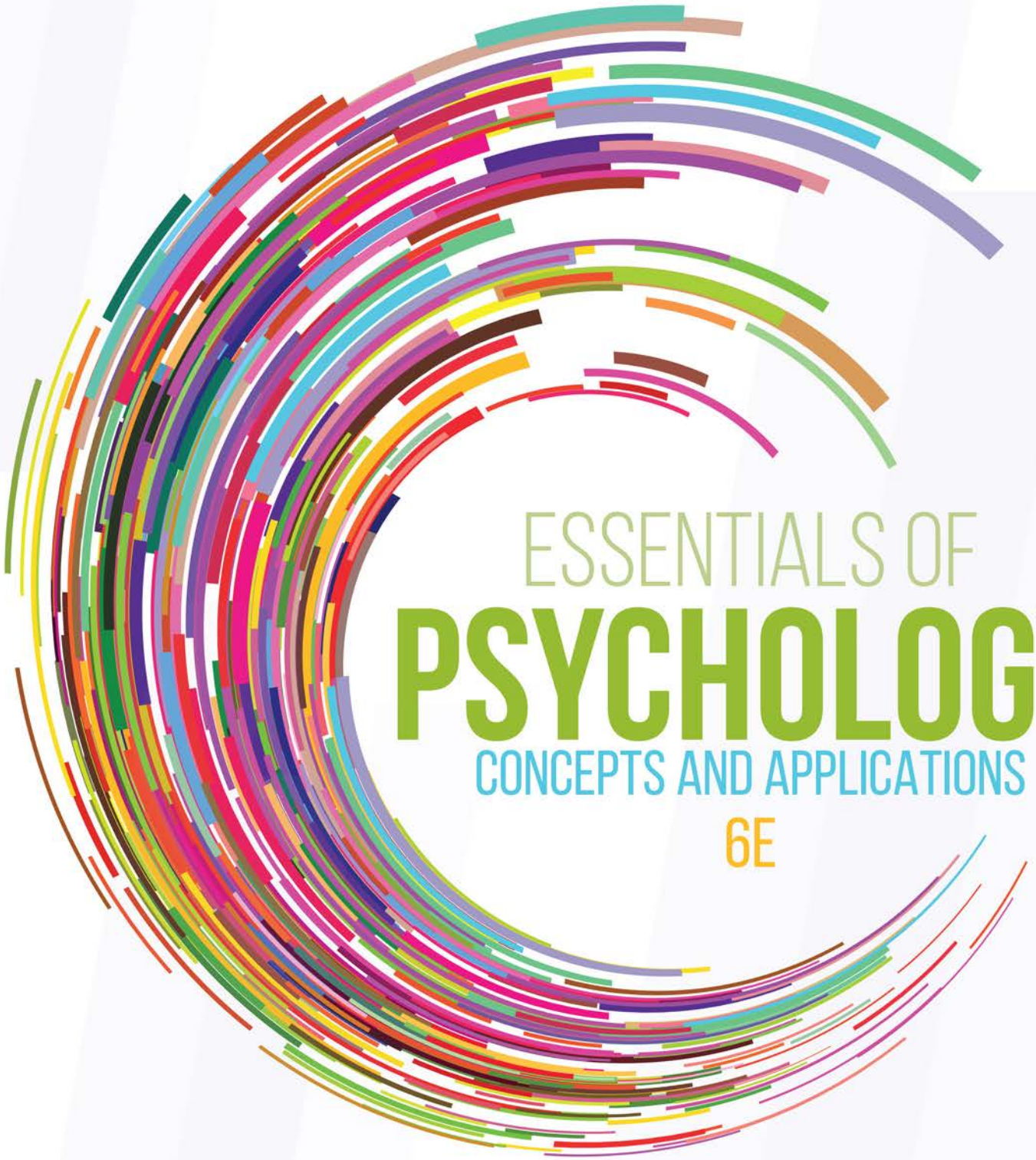
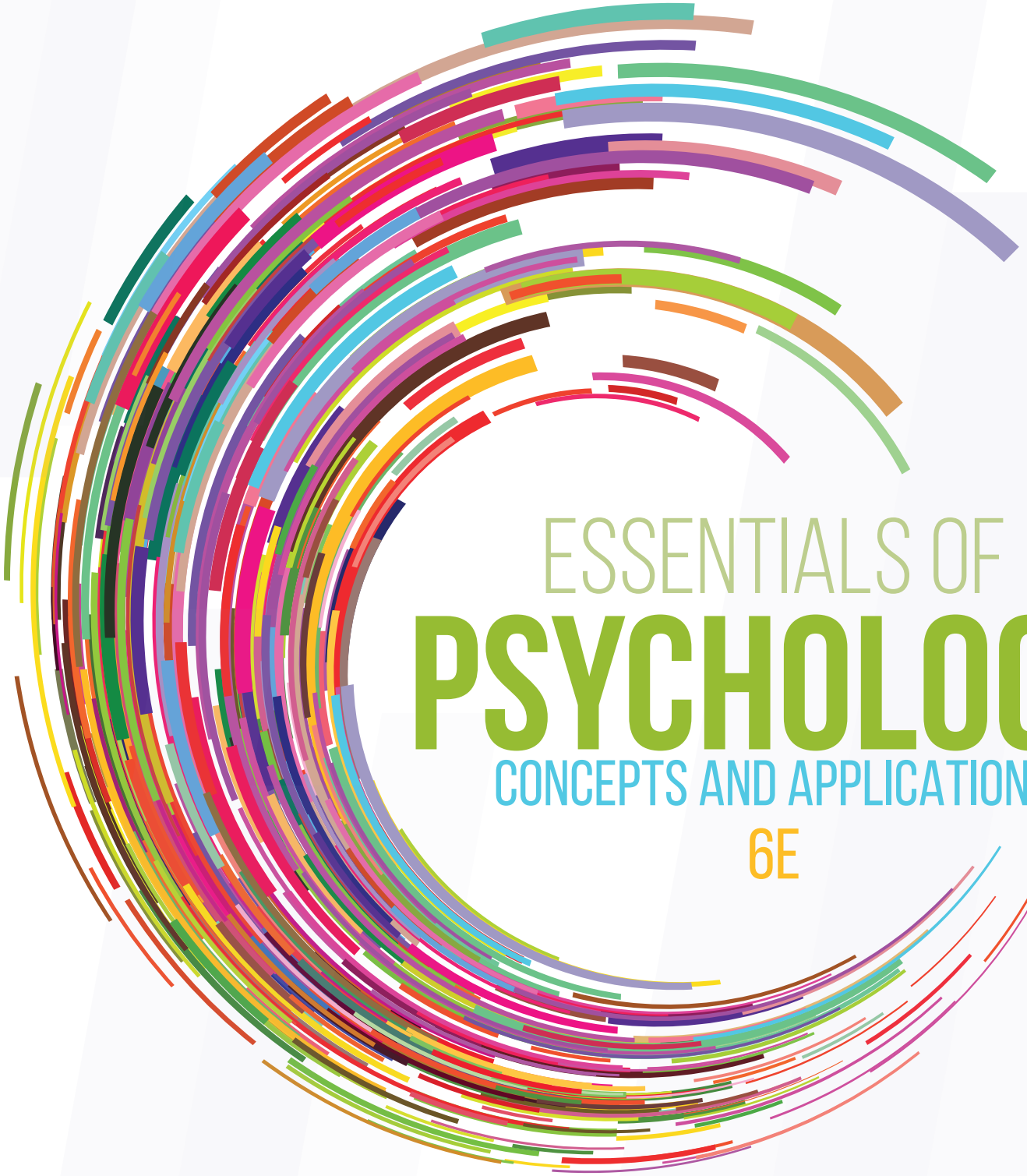


ESSENTIALS OF PSYCHOLOGY

CONCEPTS AND APPLICATIONS

6E

JEFFREY S. NEVID



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JEFFREY S. NEVID

ST. JOHN'S UNIVERSITY

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This text is dedicated to the thousands of psychology instructors who share their excitement and enthusiasm for the field of psychology with their students and seek to help them better understand the many contributions of psychology to our daily lives and to our understanding of ourselves and others. I consider myself fortunate to have the opportunity to be one of them.

About the Author

Jeff Nevid is Professor of Psychology at St. John's University in New York, where he teaches at the undergraduate and graduate levels. Dr. Nevid is a Fellow of Division 2 (Society for the Teaching of Psychology) of the American Psychological Association. He has accrued more than 200 research publications and presentations at professional conferences and has authored or coauthored more than a dozen textbooks in psychology and related fields. Dr. Nevid received his doctorate from the State University of New York at Albany and completed a postdoctoral fellowship in evaluation research at Northwestern University. In addition to this text in introductory psychology, his other texts include *Abnormal Psychology in a Changing World*, published by Pearson Education; *Human Sexuality in a Changing World*, also published by Pearson Education; and *Psychology and the Challenges of Life: Adjustment and Growth*, published by John Wiley & Sons.

Dr. Nevid's research encompasses many areas of psychology, including health psychology, clinical and community psychology, social psychology, personality assessment, gender and human sexuality, adolescent development, and teaching of psychology. His publications have appeared in such journals as *Teaching of Psychology, Health Psychology*, *Journal of Consulting and Clinical Psychology*, *Journal of Community Psychology*, *Journal of Youth and Adolescence*, *Clinical Psychology and Psychotherapy, Journal of Nervous and Mental Disease, Behavior Therapy*, *Psychology & Marketing*, *Professional Psychology, Psychology Learning & Teaching*, *International Journal for the Scholarship of Teaching and Learning, Sex Roles*, *Journal of Personality Assessment*, and *Journal of Social Psychology*, among others.

Dr. Nevid also served as an editorial consultant for the journals *Teaching of Psychology*, *Health Psychology*, and *Psychology & Marketing*, and as an associate editor of the *Journal of Consulting and Clinical Psychology*. He is actively involved in conducting research on pedagogical advances to help students succeed in the classroom and applies these tools in his introductory psychology course. His research on effective learning and instruction includes such topics as use of an integrated learning system (ILS) in teaching introductory psychology, mastery quizzing, journaling as a writing-to-learn assignment, the IDEA model of course assessment, accuracy of student confidence judgments on exam performance, and retrieval practice as a study tool.

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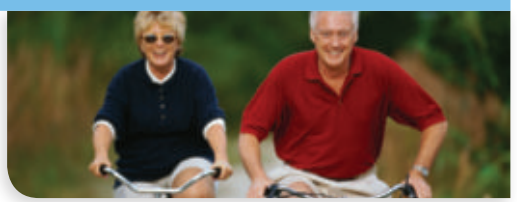

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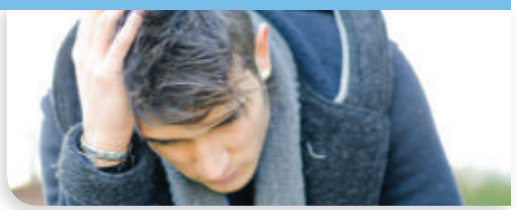

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Preface

Psychology is a vibrant, dynamic discipline that challenges any instructor or text author to keep abreast of the latest developments in a rapidly changing field. This new edition of *Essentials of Psychology: Concepts and Applications* captures these developments but retains its focus on helping students master core concepts in psychology. When I set out to write this text, I had three overriding goals in mind:

1. To make the study of psychology accessible and engaging to beginning students in psychology
2. To provide students with a solid grounding in the knowledge base in psychology
3. To help students succeed in the course

This text is an outgrowth of my work as a classroom instructor in introductory psychology and my work as a researcher exploring new pedagogical approaches to help students master key concepts.

What's New?

The sixth edition of *Essentials of Psychology* includes two new features and a thorough updating throughout the chapters.

New! Psychology of Daily Life

The ***Psychology of Daily Life*** feature in each chapter expands upon the application of psychological knowledge and techniques in our daily lives. I believe an important goal in teaching introductory psychology is to illustrate the relevance of psychology to the lives we live. Please see below a sample of these features in this new edition. The full listing is shown in the Features section on page XV.

- Nudging People to Clean Their Hands: Anatomy of a Research Study in the ICU (Ch. 1)
- Brain Scanning of Everyday Behaviors (Ch. 2)
- Holding Hands to Ease Pain (Ch. 3)
- Getting Your Z's (Ch. 4)
- Boosting Marital Satisfaction Through Classical Conditioning (Ch. 5)
- Powering Up Your Memory (Ch. 6)
- Do You Talk to Yourself? Of course you do (LOL). (Ch. 7)
- Becoming a Creative Problem Solver (Ch. 7)
- The Science of Roller Coasters (Ch. 8)
- Managing Anger (Ch. 8)
- How Much Screen Time Is Too Much? (Ch. 9)
- Living Longer, Healthier Lives (Ch. 9)
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- Want to Be Liked? Try Nodding and Asking Questions (Ch. 12)
- Compliance: Doing What Others Want You to Do (Ch. 12)
- Is Facebook Bringing You Down? (Ch. 13)
- Suicide Prevention (Ch. 13)
- Feeling Down or Stressed Out? We've Got an App for That (Maybe) (Ch. 14)
- Getting Help (Ch. 14)

New! Bridging Perspectives

The APA publication, *Strengthening the Common Core of the Introductory Psychology Course*, endorses an integrative approach to teaching introductory psychology that bridges different perspectives in the field and helps students see the relevance of core concepts across different areas of psychology.

This text includes two pedagogical features designed to emphasize integration of content across different areas of psychology. First, *Concept Links* are marginal inserts in each chapter that help students see how core concepts are applied across different topic areas in psychology.

Second, and new to this edition, the *Bridging Perspectives* feature shows students how different perspectives in the field can be integrated to provide a more comprehensive understanding of the topics discussed in the text. A partial listing of the ***Bridging Perspectives*** features in this new edition is shown below. The full, chapter-by-chapter listing is shown in the Features section on page XV.

- Tying It Together: An Overview of Contemporary Perspectives (Ch. 1)
- Genes and Behavior: A Case of Nature and Nurture (Ch. 2)
- Psychology and Pain Management (Ch. 3)
- Understanding and Treating Drug Abuse (Ch. 4)
- Biofeedback: Learning to Tune in to Your Body (Ch. 5)
- Intelligence and the Nature–Nurture Question (Ch. 7)

- Theories of Sexual Orientation (Ch. 8)
- Aging Well (Ch. 9)
- Emotions and Your Heart (Ch. 10)
- Genes and Traits: Moving Beyond the Nature–Nurture Debate (Ch. 11)
- Multiple Perspectives on Aggression: Examining the Roots of Behavior That Harms (Ch. 12)
- An Integrative Model of Panic Disorder (Ch. 13)
- Multicultural Issues in Psychotherapy (Ch. 14)

New! Thorough Updating

Each edition of this text is thoroughly updated from start to finish. New research developments are culled from various sources, including scientific journals in psychology and related fields, and professional books across many fields of study. As you thumb through the pages of this edition, you will find many hundreds of new findings from research appearing in the scientific literature in the past three years. Here is a sampling of new research findings and developments in the field from each chapter:

- Updated figures on employment settings of psychologists, ethnicities of psychologists, subfields in psychology, and women doctorate recipients in psychology (Ch. 1)
- New research on using a computer to "read" thoughts (Ch. 2)
- New evidence on sensitivity of the human olfactory system—in some ways, better than dogs (Ch. 3)
- New research on the opioid crisis in America (Ch. 4)
- New research on the role of cognition in classical conditioning (Ch. 5)
- New research on the serial position effect and remembering U.S. presidents (Ch. 6)
- New findings on how many words are in the average person's vocabulary (Ch. 7)
- Updated research on universality of facial expressions of emotions (Ch. 8)
- Updated section on the aging of America and changes in life expectancy (Ch. 9)
- Updated research on psychological and physical benefits of regular exercise (Ch. 10)
- New research on the Big Five (Ch. 11)
- New research on forming personality judgements based on facial features (Ch. 12)
- New research on links between social media use and depression (Ch. 13)
- New research comparing psychotherapy and pharmacotherapy (Ch. 14)

The IDEA Model of Course Assessment: Mapping Acquired Skills to APA Learning Goals

This text offers a unique pedagogical framework, which I call the IDEA model of course assessment, that is grounded in the widely used taxonomy of educational objectives developed by renowned educational researcher Benjamin Bloom. Each chapter begins with a listing of learning objectives expressed in the form of action verbs tied to measurable learning outcomes. The action verbs represent four key acquired skills paralleling those in Bloom's taxonomy. The action verbs *identify*, *define*, and *describe* represent basic cognitive skills in Bloom's taxonomy (knowledge and comprehension, or remembering and understanding in the revised taxonomy). The action verb *apply* represents an intermediate level of skills development needed to apply knowledge to real-life situations and examples, and the action verbs *explain* and *evaluate* represent the highest or most complex level of skills acquisition in Bloom's taxonomy—skills needed to analyze, synthesize, and evaluate information (or analyzing, evaluating, and creating, from the revised taxonomy).

These action verbs conveniently spell out the simple acronym IDEA:

Identify . . . key figures in the history of psychology, parts of nervous system, and so on.

Define or Describe . . . key concepts and features of major psychological theories.

Evaluate or Explain . . . underlying processes and mechanisms of behavior and mental processes.

Apply . . . psychological concepts to real-world examples.

The IDEA model is integrated with the *APA Guidelines for the Undergraduate Psychology Major, Version 2.0*, which specifies five major learning goals and corresponding student learning outcomes for undergraduate majors in psychology. Learning objectives in this text are mapped onto the APA learning goals (see table later in the Preface) to ensure that beginning students in psychology are exposed to core concepts in the field and foundational areas of competence in the psychology major.

The text adopts a learning-centric approach to help students encode and retain key concepts in psychology. The keystones of this approach include the following concept-based pedagogical tools:

- **Concept Signaling** Key concepts, not just key terms, are identified and highlighted in the margins to help students encode and retain core concepts. Concept signaling does for key concepts what highlighting does for key terms.
- **Concept Charts** These built-in study charts are "see-at-a-glance" capsulized summaries of key concepts to help reinforce new knowledge.
- **Concept Links** These marginal inserts show students how core concepts are linked across different areas of psychology.

Targeting Effective Learning (EL): The Four E's of Effective Learning

The learning system adopted in this text is based on the *Four E's of Learning:*

- **Engaging Interest**
- **Encoding Important Information**
- **Elaborating Meaning**
- **Evaluating Progress**

This pedagogical framework is grounded in basic research on learning and memory and is supplemented by pedagogical research, including research I have conducted with my students.[1] The pedagogical framework was then tested in classrooms throughout the country.

Engaging Interest

Learning begins with focused attention. A textbook can be an effective learning tool only if it engages and retains student interest. Students are not likely to encode or retain information without focused attention.

Essentials of Psychology: Concepts and Applications is designed to generate interest as well as involve students directly in the material they read. Personal vignettes are used to draw readers into the material and to illustrate how concepts discussed in the chapter relate to their personal experiences. In addition, "***Did You Know That . . .***" chapter-opening features are designed to grab student attention and encourage further reading. These chapter-opening questions whet the student's appetite for material presented in the chapter. Some questions debunk common myths and misconceptions, whereas others highlight interesting historical features or bring recent research developments into sharper focus. Accompanying page numbers are provided for easy cross-referencing to the chapter sections in which the information is discussed. A small sample follows:

Did You Know That . . .

- A major school of psychology was inspired by the view from a train? (Ch. 1)
- It is impossible to tickle yourself? (Ch. 2)
- You may be hooked on a drug you have with breakfast every morning? (Ch. 4)
- If you want to remember something you observed, first close your eyes? (Ch. 6)
- Albert Einstein used mental imagery in developing his theory of relativity? (Ch. 7)
- People in different cultures smile differently? (Ch. 8)
- Extraverted students tend to have more Facebook friends as well as more friends in the real world? (Ch. 11)
- We literally begin forming an impression of other people in a fraction of a second of catching a glimpse of them? (Ch. 12)
- People labeled as psychopaths are not psychotic? (Ch. 13)
- Antidepressant drugs are used to treat many types of psychological disorders, not just depression? (Ch. 14)

[1]Nevid, J. S., & Carmony, T. M. (2002). Traditional versus modular format in presenting textual material in introductory psychology. *Teaching of Psychology, 29,* 237–238.

Nevid, J. S., & Lampmann, J. L. (2003). Effects on content acquisition of signaling key concepts in text material. *Teaching of Psychology, 30,* 227–229.

Nevid, J. S., & Forlenza, N. (2005). Graphing psychology: An analysis of the most commonly used graphs in introductory psychology textbooks. *Teaching of Psychology, 32,* 253–256.

Nevid, J. S., & Mahon, K. (2009). Mastery quizzing as a signaling device to cue attention to lecture material. *Teaching of Psychology, 36,* 1–4.

Nevid, J. S., Pastva, A., & McClelland, N. (2012). Writing-to-learn assignments in introductory psychology: Is there a learning benefit? *Teaching of Psychology, 39,* 272–275.

Nevid, J. S., & McClelland, N. (2013). Using action verbs as learning outcomes: Applying Bloom's taxonomy in measuring instructional objectives in introductory psychology. *Journal of Education and Training Studies*, *1*(2), 19–24.

Nevid, J. S., Ambrose, M. A., & Pyun, Y. S. (2017). Effects of higher and lower level writing-to-learn assignments on higher and lower level examination questions. *Teaching of Psychology, 44*, 324–329.

Nevid, J. S., & Gordon, A. J. (2018). Integrated learning systems: Is there a learning benefit? *Teaching of Psychology, 45*, 340–345.

Nevid, J. S., Gordon, A. J., Terjesen, M., & Hicks, A. (2019). Classroom evaluation of online quizzing and concept building exercises embedded in an integrated learning system. *Psychology Learning & Teaching, 19*(2), 184–193.

The Brain Loves a Puzzle. The use of thought-provoking puzzles in the text stimulates student interest and encourages them to read further. Each chapter poses a puzzle relating to the content of the chapter and provides clues students can use to find the solution. Here are some examples from the text:

- How might being "able to hold your liquor" be a genetic risk factor for developing problems with alcohol? (Ch. 4)
- A young physicist was working on the problem of connecting the world's computers. After some false starts, he invented a model of a computer network based on how the brain performs memory tasks. What was this invention that changed the world, and how was it based on the workings of the human brain? (Ch. 6)
- Why do you suppose that traffic lights use colors rather than words like "stop" and "go"? (Ch. 7)
- On a trip to the aquarium with his father, 5-year-old Kamau sees a whale for the first time and says, "Wow, what a big fish!" His father points out that the whale is not a fish, but Kamau seems puzzled and continues to call it a fish. Why would Kamau persist in calling a whale a fish? (Ch. 9)
- If you were to collapse on the street and needed immediate help, why would you be less likely to receive help if the street was crowded than if there were but a few people nearby? (Ch. 12)
- Genetics plays an important role in schizophrenia, but why is it the case that scientists have been unable to find the gene that causes schizophrenia and probably never will? (Ch. 13)

"Try This Out" Hands-On Exercises. These active learning exercises encourage students to apply psychological concepts to their own experiences. Whether the topic involves trying to read a magazine sideways, breaking through the "Magic 7" barrier, reading emotions in facial expressions, or putting multitasking to the test, students work through problems, generate solutions, and test out previously held beliefs. Some *Try This Out* activities offer suggestions for *service learning* through participation in research and volunteer experiences, whereas others involve self-scoring questionnaires that allow students to evaluate their own behavior and attitudes about specific topics (for example, "Are You an Optimist or a Pessimist?").

Encoding Important Information

Learning and retaining key concepts in text material requires that information first be encoded in memory. The pedagogical technique of signaling or cueing can help people encode important information. Textbook authors have long used certain forms of signaling, such as headings and highlighted key terms. This text also includes two other types of signaling devices, the *running glossary* and *concept signaling*.

Running Glossary. Key terms are highlighted in the text and defined in the margins. Students do not need to interrupt their reading to thumb through a glossary at the end of the text whenever they encounter an unfamiliar term. (A full glossary is presented at the end of the text as well.)

Concept Signaling. Concept signaling is a unique pedagogical feature designed to help students encode and retain key concepts by extracting and highlighting them in the margins of the text. Cued concepts are signposts to help students gauge that they are getting the key points as they make their way through the chapter. Although some students can easily extract key concepts from text material, others struggle with the process of encoding key points. They may come away knowing a few isolated facts but may miss many of the major concepts that form the basic building blocks of knowledge in the field. Or they may feel "lost" in the middle of a chapter and become frustrated.

To evaluate the learning benefits of concept signaling, we conducted a controlled study in which students read two different text passages—one with key concepts highlighted in the margins and one without cued concepts. Our results showed that signaling key concepts by extracting them and highlighting them in the margins significantly improved quiz performance overall as well as on a subset of items that directly measured knowledge of key concepts (Nevid & Lampmann, 2003).

Not surprisingly, we found that signaling key concepts had no effects on learning surrounding material that was not signaled. This finding only reinforces what instructors have known for years—that students should not use pedagogical aids (whether they be summaries, interim quizzes, or cued concepts) as substitutes for reading the text in its entirety. Importantly, though, our results suggest that students may be better able to learn key concepts when they are signaled or highlighted in the text.

We also polled students in our study on which format they preferred—the one with signaled concepts or the one without. More than three of five students preferred concept signaling and found it easier to understand and more clearly presented than the standard (nonsignaled) format. (This was interesting in light of the fact that the content in the text passages was exactly the same in both formats.)

Elaborating Meaning

Though information must first be encoded to be learned, new learning needs to be strengthened to ensure long-term retention. Retention of newly acquired information can be strengthened through rote memorization, such as by rehearsal of particular words or phrases. But the types of deeper processing needed to build more enduring memories generally require *elaborative rehearsal* in which the person reflects on the meaning of the material and relates it to real-life applications and life experiences. This text provides several pedagogical features designed to facilitate elaborative rehearsal:

Learning Objectives. These important study aids are listed both at the beginning of the chapter and within the modules themselves. Sample answers to learning objectives are presented in the *Recite It* sections of the *Module Reviews*, using a fill-in-the-blanks format to foster active learning that encourages retrieval of key concepts. Research evidence consistently demonstrates the learning benefits of practicing retrieval skills, including research in our own laboratory. As noted earlier, learning objectives incorporate active learning verbs based on the IDEA model of course instruction.

Concept Charts. These study charts summarize key concepts in tabular form. Concept Charts reinforce knowledge of major concepts and help students make relational connections between concepts.

Concepts are repeated in several forms to reinforce new learning—in the narrative itself, in Concept Charts, in marginal inserts of cued concepts, and in schematic diagrams. The use of different contexts for presenting information strengthens new learning.

Try This Out. These exercises not only engage student interest, but also encourage students to apply concepts they learn in the text to their own experiences.

Evaluating Progress

The text contains a number of study aids to help students evaluate their progress:

Module Review Sections. At the end of each module is a *Module Review* consisting of three sections, a *Recite It* section, a *Recall It* section, and a *Think About It* section.

Reciting new knowledge is a key feature of the SQ3R study method and an important, perhaps the most important, study tool. *Recite It* sections provide an opportunity for students to recite their knowledge of the learning objectives and then to compare their responses to sample answers given in the text.

The *Recall It* sections allow students to test their knowledge by taking a short quiz on several key concepts. The answers are given in *Appendix B* at the end of the text.

The *Think About It* features encourage critical thinking by posing thought-provoking questions to stimulate students to think more deeply about concepts presented in the text.

Visual Overviews. In addition, *Visual Overview* sections offer students a visual learning tool to help them review and strengthen their knowledge of new concepts and see relationships among concepts in summary form.

The Modular Approach

The text is organized in a modular format that breaks down each chapter into smaller instructional units called modules. Each module is a cohesive study unit organized around a set of key concepts in a particular area of study. The modular approach helps busy students better organize their study efforts by allowing them to focus on one module at a time rather than trying to tackle a whole chapter at once.

In our research, we found the majority of students preferred a modular format over the traditional format (57.3 percent versus 38.5 percent, with 4.2 percent expressing no preference) (Nevid & Carmony, 2002). In addition, students who preferred a modular format performed significantly better when material was presented in this format than in the traditional format. It stands to reason that when students prefer a particular format, they will become more engaged in reading texts based on that format—an outcome that may translate into improved performance in classroom situations.

Targeting Critical Thinking Skills

The text encourages students to challenge their preconceived assumptions about human behavior and to think critically about information they hear or read about in the media in the light of scientific evidence. The *Thinking Critically About Psychology* sections at the end of each chapter provide students with opportunities to sharpen their critical thinking skills. Students can practice these skills by answering questions that require them to analyze problems and evaluate claims in relation to information presented in the chapters. Students may then compare their answers to sample responses presented in *Appendix A* of the text. The *Think About It* sections in each *Module Review* pose thought-provoking questions that further reinforce critical thinking skills.

Built-In Study Method: SQ3R+

The SQ3R (Survey, Question, Read, Recite, Review) study method is a widely used technique for enhancing learning and encouraging students to adopt a more active role in the learning process. The SQ3R method is directly built into the text. The text not only incorporates the traditional elements of SQ3R but also adds another element, the *Think About It* feature, which fosters critical thinking skills.

- **Survey and Question** Students can survey each chapter by reviewing the numbered listing of modules at the start of the chapter and by reading the introductory section in which material covered in the chapter is described. In addition, they can use the learning objectives as advance organizers to guide their reading and question themselves to ensure they have achieved these objectives.
- **Read** The writing style has been carefully developed for reading level, content, and style. Students are often addressed directly to engage them in the material and encourage them to examine how the information relates to their life experiences.

- **Recite and Review** Each module ends with a *Module Review* section that helps students review their knowledge of key concepts. Students should be encouraged to recite their knowledge of the learning objectives in the *Recite It* section of the *Module Review* before turning to the sample answers in the text for feedback. Students can then test their knowledge by completing a short quiz presented in the *Recall It* sections. These quizzes consist of fill-in, multiple-choice, matching, and short-answer questions. *Concept Charts* provide further opportunities for students to review the knowledge they have acquired.
- **Think About It** The text goes beyond review and recitation by posing thought-provoking questions in the *Module Reviews* that encourage reflection, critical thought, and self-exploration. These questions foster critical thinking (for example, "Do you believe that conventional intelligence tests are culturally biased? Why or why not?"), and encourage students to reflect on how the text material relates to their personal experiences (for example, "Are you a self-actualizer? Upon what evidence do you base your judgment? What steps could you take to become a self-actualizer?"). Instructors may wish to assign these questions as writing assignments.

Focus on Integrated Coverage of Key Learning Goals

Integrated Coverage of Psychology in Our Digital World

Our students are digital natives who have never known a time without cell phones or the Internet. When many of us started teaching, a *tablet* was something you took when you had a headache, a *cell phone* resembled a brick that only top corporate executives or military personnel carried, a *text* was something that instructors assigned in class, and a *web* was something that only spiders spun.

My, how the world has changed since the turn of the new millennium! When I was writing the first edition of this text, "the facebook" was a social experiment in a Harvard dorm. Now, Facebook has more than 2.4 billion active users worldwide. In teaching psychology in the twenty-first century, we need to examine the psychological effects of digital technology in our daily lives. Psychological scientists are actively exploring how personal technology is transforming our lives. This text brings this research to the attention of students who are experiencing these changes first-hand. Students will learn what psychologists are discovering about the psychological impact of cell phones, the Internet, and social media.

Integrated Coverage of Diversity in Psychology

One primary objective of this text is to raise students' awareness of the importance of issues relating to diversity. Discussion of cultural and gender issues is therefore integrated within the main body of the text rather than relegated to boxed features. A proliferation of boxes tends to break the flow of the text and to introduce unnecessary clutter that many students find distracting; it might even inadvertently convey the impression that material relating to diversity is less important than other material because it is boxed off.

Instructor Resources

Additional instructor resources for this product are available online. Instructor assets include an Instructor's Manual, Educator's Guide, PowerPoint® slides, and a test bank powered by Cognero®. Sign up or sign in at www.cengage.com to search for and access this product and its online resources.

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The IDEA Model of Course Assessment: Mapping Acquired Skills to *APA Learning Goals for the Undergraduate Psychology Major, Version 2.0*

GOAL 1 Knowledge Base in Psychology

APA Learning Goals	Related Content in Text and Ancillaries	IDEA Model of Course Assessment: *Skills Acquired— to Identify . . . Define or Describe . . . Evaluate or Explain . . . and Apply*
1.1 Describe key concepts, principles, and overarching themes in psychology	**Module 1.1**	**Define** psychology and **explain** why psychology is a science. **Identify** the major contemporary perspectives in psychology, and **describe** each perspective.
	The interaction of heredity and environment: Module 2.7	**Evaluate** the role of genetics in behavior. **Describe** methods psychologists use to study the roles of genes and environment in behavior.
	Free will versus determinism: Modules 11.3 and 11.4	**Describe** the social-cognitive theories of Rotter, Bandura, and Mischel. **Describe** the self-theory of humanistic theorist Carl Rogers.
	Interaction of mind and body: Modules 10.1 and 10.2	**Define** stress in psychological terms. **Identify** and **describe** the major sources of stress. **Define** the general adaptation syndrome and **identify** and **describe** its three stages. **Evaluate** the effects of stress on the body's immune system. **Identify** psychological factors that buffer the effects of stress. **Apply** stress management techniques to daily life. **Identify** psychological factors linked to coronary heart disease. **Identify** psychological factors linked to cancer. **Apply** knowledge of the transmission of sexually transmitted disease to steps we can take to protect ourselves from these diseases.
1.2 Develop a working knowledge of psychology's content domains **Learning, Memory, and Cognition**	**Module 5.1**	**Define** learning in psychological terms. **Explain** how conditioned responses are acquired and **describe** the contributions of Ivan Pavlov. **Explain** the process by which conditioned responses become weaker or disappear. **Explain** how conditioned responses can be strengthened. **Define** stimulus generalization and discrimination and **describe** their roles in classical conditioning. **Explain** classical conditioning from a cognitive perspective. **Apply** classical conditioning to examples discussed in the text.
	Module 5.2	**Define** operant conditioning, **identify** the major figures in its development, and **describe** their contributions. **Describe** different types of reinforcement and schedules of reinforcement. **Explain** the effects of different types of reinforcement on response rates. **Define** punishment and **explain** why psychologists raise concerns about the use of punishment in disciplining children. **Explain** the difference between escape learning and avoidance learning. **Apply** operant conditioning to examples discussed in the text.
	Module 5.3	**Define** cognitive learning and **describe** several types of cognitive learning.
	Module 6.1	**Identify** and **describe** the basic processes and stages of memory. **Identify** and **describe** the different types of long-term memory. **Explain** the roles of the semantic network model and levels-of-processing theory in memory. **Apply** constructionist theory to **explain** memory distortions. **Identify** factors influencing the reliability of eyewitness testimony. **Explain** why the concept of recovered memory is controversial.
	Module 6.2	**Describe** the major theories and factors in forgetting. **Explain** why recognition tests of memory generally produce better results than recall tests. **Describe** the causes of amnesia and the two major types of amnesia.
	Module 7.1	**Define** thinking. **Describe** several ways in which we represent information in our minds. **Explain** the difference between logical and natural concepts. **Identify** and **describe** mental strategies we can use to solve problems more effectively. **Identify** and **describe** mental roadblocks that impede problem solving and decision making. **Describe** the basic processes of creative thought and **explain** the difference between divergent and convergent thinking. **Apply** skills of problem solving to become a creative problem solver.

Continued on following page

APA Learning Goals	Related Content in Text and Ancillaries	IDEA Model of Course Assessment: *Skills Acquired— to Identify . . . Define or Describe . . . Evaluate or Explain . . . and Apply*
	Module 7.2	**Identify** and **describe** the basic components of language and the milestones in language development, and **describe** the roles of nature and nurture in language development. **Evaluate** the linguistic relativity hypothesis and whether language is unique to humans.
	Module 7.3	**Define** intelligence, **identify** different tests of intelligence, and **evaluate** the characteristics of a good test of intelligence. **Evaluate** gender differences in cognitive abilities. **Describe** the characteristics of the two extremes of intelligence and the misuses of intelligence tests. **Describe** the major theories of intelligence and **evaluate** the roles of heredity and environment in intelligence.
Individual Differences	**Module 11.1**	**Define** the concept of personality (from chapter introduction). **Identify** and **describe** the three levels of consciousness and three structures of personality in Freud's psychoanalytic theory. **Identify** and **describe** the stages in Freud's theory of psychosexual development. **Describe** the personality theories of Jung, Adler, and Horney.
	Module 11.2	**Describe** the trait theories of Allport, Cattell, Eysenck, and the Big Five model. **Evaluate** the genetic basis of personality traits.
	Module 11.3	**Describe** the social-cognitive theories of Rotter, Bandura, and Mischel.
	Module 11.4	**Describe** the self-theory of humanistic theorist Carl Rogers. **Explain** the difference between the concepts of self in collectivistic and individualistic cultures. **Apply** suggestions for enhancing self-esteem.
	Module 11.5	**Identify** the two major types of personality tests, and **evaluate** self-report and projective personality tests.
Social Bases of Behavior	**Module 12.1**	**Identify** the major influences on first impressions and **explain** why first impressions often become lasting impressions. **Identify** and **describe** cognitive biases that influence causal attributions. **Identify** three components of attitudes and **describe** the sources of attitudes and the pathways involved in changing attitudes through persuasive appeals. **Describe** cognitive dissonance theory and **explain** how cognitive dissonance can be reduced.
	Module 12.2	**Identify** factors that influence attraction. **Identify** the components of love identified in the triangular model of love. **Describe** the decision-making model of helping and **identify** factors that influence helping behavior. **Define** prejudice, **explain** how it develops, and **apply** your knowledge to ways of reducing it. **Identify** factors that contribute to human aggression.
	Module 12.3	**Define** social identity and **evaluate** cultural factors involved in social identity. **Describe** the basic finding of Asch's classic study on conformity and **identify** factors that influence conformity. **Identify** types of manipulative sales tactics and **explain** why they are effective. **Describe** the findings of Milgram's classic study and **evaluate** why his methods were controversial. **Evaluate** the effects of the presence of others on performance. **Define** groupthink and **explain** how it can lead to wrong decisions.
Biological Bases of Behavior	**Module 2.1**	**Define** what a neuron is, **identify** the parts of the neuron, and **explain** how neurons communicate with each other. **Explain** how an action potential is generated. **Identify** key neurotransmitters and **describe** their functions. **Explain** the difference between antagonists and agonists.

Continued on following page

APA Learning Goals	Related Content in Text and Ancillaries	IDEA Model of Course Assessment: *Skills Acquired— to Identify . . . Define or Describe . . . Evaluate or Explain . . . and Apply*
	Module 2.2	**Describe** how the nervous system is organized. **Describe** the functions of the central nervous system and the divisions of the peripheral nervous system. **Explain** the differences in functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.
	Module 2.3	**Describe** how the brain is organized and the roles that particular brain structures play in behavior.
	Module 2.4	**Describe** methods scientists use to study the workings of the brain.
	Module 2.5	**Explain** how the two halves of the brain differ in their functions.
	Module 2.6	**Describe** how the endocrine system is organized and the roles that hormones play in behavior.
	Module 2.7	**Evaluate** the role of genetics in behavior. **Describe** methods psychologists use to study the roles of genes and environment in behavior.
	Module 6.3	**Identify** the key brain structures involved in memory and **explain** the roles of neuronal networks and long-term potentiation. **Explain** the role that genetics plays in memory.
Developmental Processes	**Module 9.1**	**Identify** and **describe** the stages of prenatal development and major threats to prenatal development.
	Module 9.2	**Identify** reflexes present at birth. **Describe** the infant's sensory, perceptual, and learning abilities. **Describe** the development of the infant's motor skills in the first year of life.
	Module 9.3	**Identify** and **describe** three types of infant temperament and three types of infant attachment styles. **Identify** and **describe** the major parenting styles. **Identify** and describe Erikson's stages of psychosocial development in childhood. **Describe** Piaget's stages of cognitive development. **Describe** Vygotsky's psychosocial theory of cognitive development.
	Module 9.4	**Describe** the physiological, cognitive, and psychosocial changes that occur during adolescence, and Erikson's beliefs about psychosocial development in adolescence. **Describe** Kohlberg's stages of moral reasoning and **evaluate** his theory in light of Gilligan's criticism.
	Module 9.5	**Describe** the physical and cognitive changes that occur during adulthood and Erikson's stages of psychosocial development in early and middle adulthood.
	Module 9.6	**Describe** the physical and cognitive changes we can expect later in life, and Erikson's views on psychosocial development in late adulthood. **Identify** the qualities associated with successful aging. **Identify** the stages of dying proposed by Kübler-Ross. **Apply** suggestions for living a longer and healthier life.
Historical and Contemporary Perspectives	**Module 1.1**	**Define** psychology and **explain** why psychology is a science. **Identify** early schools of psychology and the important contributors to these schools, and **describe** the major concepts associated with each school. **Identify** the major contemporary perspectives in psychology and **describe** each perspective.

Continued on following page

APA Learning Goals	Related Content in Text and Ancillaries	IDEA Model of Course Assessment: *Skills Acquired— to Identify . . . Define or Describe . . . Evaluate or Explain . . . and Apply*
Sociocultural Bases of Behavior	**Module 11.4**	**Explain** the difference between the concepts of self in collectivistic and individualistic cultures.
	Module 12.2	**Define** prejudice, **explain** how it develops, and **apply** your knowledge to ways of reducing it. **Identify** factors that contribute to human aggression.
	Module 12.3	**Define** social identity and **evaluate** cultural factors involved in social identity.
		Sociocultural factors are integrated throughout the text, including research on ethnic differences in alcohol and drug use (Ch. 4), cultural display rules for emotional expression and cultural differences in smiling (Ch. 8), sociocultural differences in parenting styles (Ch. 9), Vygotsky's sociocultural theory (Ch. 9), acculturative stress of immigrant groups (Ch. 10), ethnic differences in cardiovascular disease (Ch. 10), ethnic identity and self-esteem (Ch. 11), cultural factors and self-identity in collectivistic versus individualistic cultures (Chs. 11 and 12), ethnic factors in self-disclosure (Ch. 12), sociocultural factors in conformity and aggressive behavior (Ch. 12), effects of stereotyping on stereotyped groups (Ch. 12), ethnic factors in access to mental health services (Ch. 13) and suicidal behaviors (Ch. 13), and multicultural factors in psychotherapy (Ch. 14), among others.
1.3 Describe applications of psychology	**Psychology of Daily Life features**	Nudging People to Clean Their Hands: Anatomy of a Research Study in the ICU (Ch. 1) Becoming a Critical Thinker (Ch.1) Brain Scanning of Everyday Behaviors (Ch. 2) Holding Hands to Ease Pain (Ch. 3) Getting Your Z's (Ch. 4) Boosting Marital Satisfaction Through Classical Conditioning (Ch. 5) Putting Reinforcement into Practice (Ch. 5) Can You Draw the Apple Logo? (Ch. 6) Powering Up Your Memory (Ch. 6) Do You Talk to Yourself? Of course you do (LOL). (Ch. 7) Becoming a Creative Problem Solver (Ch. 7) The Science of Roller Coasters (Ch. 8) Managing Anger (Ch. 8) How Much Screen Time Is Too Much? (Ch. 9) Living Longer, Healthier Lives (Ch. 9) Working Out to Work Out Daily Stress (Ch. 10) Taking the Distress Out of Stress (Ch. 10) Does Your College Major Suit Your Personality? (Ch. 11) Building Self-Esteem (Ch. 11) Want to Be Liked? Try Nodding and Asking Questions (Ch. 12) Compliance: Doing What Others Want You to Do (Ch. 12) Is Facebook Bringing You Down? (Ch. 13) Suicide Prevention (Ch. 13) Feeling Down or Stressed Out? We've Got an App for That (Maybe) (Ch. 14) Getting Help (Ch. 14)

GOAL 2 Scientific Thinking and Critical Thinking

2.1 Use scientific reasoning to interpret psychological phenomena **2.2** Demonstrate psychology information literacy **2.3** Engage in innovative and integrative thinking and problem solving **2.4** Interpret, design, and conduct basic psychological research	Module 1.3: **Anatomy of a Research Study in the ICU.** Breaks down the parts of a research study in psychology using an example of a contemporary research publication from a primary source Citing references in APA style	**Identify** the steps in the scientific method. **Identify** research methods that psychologists use. **Describe** the ethical standards that govern research in psychology.

Continued on following page

APA Learning Goals	Related Content in Text and Ancillaries	IDEA Model of Course Assessment: *Skills Acquired— to Identify . . . Define or Describe . . . Evaluate or Explain . . . and Apply*
	Becoming a Critical Thinker	**Apply** critical thinking skills to **evaluate** claims made by others as well as online sources.
		Identify and **describe** mental strategies we can use to solve problems more effectively.
	Modules 7.1 and 7.3	**Identify** and **describe** mental roadblocks that impede problem solving and decision making.
	The Brain Loves a Puzzle features throughout the text (one per chapter) encourage students to use critical thinking	**Describe** the basic processes of creative thought and **explain** the difference between divergent and convergent thinking (Module 7.1).
		Apply skills of problem solving to become a creative problem solver (Module 7.1).
	Thinking Critically about Psychology features in each chapter challenge students to apply critical thinking skills to evaluate claims	
	Think About It features in each *Module Review* further reinforce critical thinking skills	
	Statistics Appendix applies methods of scientific inquiry to test hypotheses based on theory	
2.5 Incorporate sociocultural factors in scientific inquiry	See examples of research on sociocultural factors listed above under APA Learning Goal 1.2	

GOAL 3 Ethical and Social Responsiblity in a Diverse World

3.1 Apply ethical standards to evaluate psychological science and practice	Module 1.3	**Describe** the ethical standards that govern research in psychology.
3.2 Build and enhance interpersonal relationships	Module 8.4	**Define** emotional intelligence and **evaluate** its importance.
3.3 Adopt values that build community at local, national, and global levels	Module 2.5: Learning Through Volunteering	**Explain** the difference between the concepts of self in collectivistic and individualistic cultures.
	Module 11.3	**Describe** the decision-making model of helping and **identify** factors that influence helping behavior.
	Module 12.2	**Define** prejudice, **explain** how it develops, and **apply** your knowledge to ways of reducing it.
	Module 12.3: Our Social Selves: Who Are We?	
	See examples of research on sociocultural factors listed above under APA Learning Goal 1.2	

Continued on following page

GOAL 4 Communication

APA Learning Goal	Related Content in Text and Ancillaries
4.1 Demonstrate effective writing for different purposes	**Anatomy of a Research Study in the ICU (Module 1.3):** Breaks down the parts of a research article in psychology using an example of a contemporary research publication from a primary source **Think About It:** This *Module Review* feature provides critical thinking questions that can be assigned as writing assignments. **Statistics Appendix** provides examples of tables and graphs used for presenting data
4.2 Exhibit effective presentation skills for different purposes	**Use of various types of diagrams as learning tools throughout the text**—matrices (tabular presentation of concepts), network diagrams (flow charts and schematic diagrams), and hierarchical diagrams (ordered relationships among concepts)
4.3 Interact effectively with others	Module 5.2: Putting Reinforcement into Practice Module 8.4: Managing Anger Module 8.4: Factors involved in emotional intelligence Module 8.4: Cultural display rules for expressing emotions Module 12.2: Cultural differences in self-disclosure Module 12.3: The nature of prejudice and ways of reducing it Module 12.3: Resisting Persuasive Sales Pitches Instructor's Manual: Suggestions for group discussion

GOAL 5 Professional Development

5.1 Apply psychological content and skills to career goals	Module 1.1: Subfields in psychology Module 8.1: Achievement motivation vs. avoidance motivation Module 11.2: Sizing Up Your Personality (relationship to occupational choice)
5.2 Exhibit self-efficacy and self-regulation	Module 7.1: Becoming a Creative Problem Solver Module 8.4: Emotional Intelligence Module 8.4: Managing Anger Module 11.4: Building Self-Esteem
5.3 Refine project-management skills	Statistics Appendix for building computational literacy
5.4 Enhance teamwork capacity	Module 12.3: Psychological impediments to group task performance (social loafing and groupthink) Module 12.3: Building intergroup cooperation in social groups
5.5 Develop meaningful professional direction for life after graduation	Weblinks to APA websites provide resources for pursuing career interests in psychology and related fields. **Building Effective Study Skills:** Study Tips for Getting the Most from This Course (and Your Other Courses) (Message to Students, in Preface) **Psychological perspectives on development of role identity:** See Module 9.4 for discussion of Erikson's concept of the identity crisis and Marcia's taxonomy of identity statuses in the accompanying *Thinking Critically About Psychology* feature Module 11.5: What Should I Become? (*Try This Out*)

A Message to Students

Study Tips for Getting the Most from This Course (and Your Other Courses)

I often hear students say that they spend many hours reading their texts and attending classes, but their grades don't reflect the work that they do. I agree. Success is not a function of the time you put into your courses, but how well you use that time. Developing more effective study skills can help you become a more effective learner and get the most from this course as well as your other courses. Let's begin by discussing four key steps toward becoming an effective learner, which I call the four E's: (1) **engaging** interest, (2) **encoding** important information, (3) **elaborating** meaning, and (4) **evaluating** progress.

The Four E's of Effective Learning

1. **Engaging Interest** Paying close attention is the first step toward becoming an effective learner. The brain does not passively soak up information like a sponge. When your attention is divided, it is difficult to process new information at a level needed to understand the complex material required in college-level courses and to retain this newly acquired knowledge. If you find your mind wandering during class or while studying, bring your attention back to the lecture or study material. Becoming an active note taker during class and when reading your text can help you remain alert and focused and avoid spacing out. Keep a notepad handy while reading the text and jot down key points as you read through the material.
2. **Encoding Important Information** Encoding is the process of bringing information into memory. To encode important information from your classes or assigned readings, make it a practice to stop and ask yourself, "What's the main point or idea? What am I hearing or reading? What am I expected to know?" Jot down the major concepts or ideas and review them later. Use the built-in study tools in your textbook, such as highlighted key terms or concepts, along with the *Module Review* sections, to identify main points and themes you need to learn.
3. **Elaborating Meaning** New learning is a fragile thing. Rehearsing or repeating the information to yourself in the form of rote memorization may help reinforce newly acquired knowledge, but a more effective way of reinforcing new learning and building more enduring memories is to work with these new concepts and ideas by elaborating their meaning, such as by linking them to real-life examples and using them to solve problems. Your teachers and parents may have encouraged you to demonstrate your understanding of new vocabulary words by using them in a sentence. When you learned formulas and other math skills in class, your teachers may have asked you to demonstrate this knowledge by using it to solve math problems in your textbooks or workbooks. Apply this principle to learning psychology. For every concept you read about in this text or learn in class, connect it to a real-life example or life experience. Your textbook authors and instructors provide many examples of concepts they use, but you can take this a step further by connecting these concepts to your own life experiences.
4. **Evaluating Progress** Keep track of your progress in the course. Most texts, including this one, have quizzes you can use to test yourself on the material you have just read. Taking quizzes helps you gauge how you are doing and which areas you need to review further to improve your performance. Other built-in study tools that help you evaluate your progress include review sections and summaries. In this text, you'll find the *Recite It* section in the *Module Review* at the end of each module that provides brief questions related to the learning objectives for the module. Recite your knowledge of the learning objectives before glancing at the sample answers in the text. Recitation is an important study skill that demonstrates you have acquired new knowledge. Recite your answers in your own words by jotting them down in a notebook or computer file as you read through the module or when you come to the *Module Review*. Use the answers provided in the text as feedback to determine if you have achieved the learning objectives or need further review of the related material in the text. Then test your knowledge by taking the brief quiz in the *Recall It* section of the *Module Review*.

Tips for Succeeding in Class

Read the Syllabus. Think of the syllabus as a road map or a pathway to follow to succeed in the course. Take note of the course assignments, grading system, and other course requirements or expectations. Use your course syllabus as a guide to planning your semester, making entries in your calendar for examination dates and required papers and other course assignments.

Prepare for Class by Completing the Assigned Reading. Instructors have good reasons for wanting you to read the assigned chapter or readings before coming to class. They know that students are better prepared for lectures when they have some familiarity with the topics discussed in class. When students have a working knowledge of the material before they come to class, instructors have more freedom to use class time to explore topics in greater depth and breadth, rather than simply to review basic concepts. However, lectures may not make much sense to students who lack basic knowledge about the material because they haven't kept up with their readings.

Attend Class. One of the most important steps to succeeding in college is attending classes regularly. Missing classes can quickly lead to falling behind. If you need to miss a class, notify your instructor beforehand and ask for any assignments you may miss. Then ask a classmate for the notes for the missed class, but only approach someone you believe is a good note taker.

Be Punctual. There may be nothing more distracting to your instructor and classmates than students who come late to class. Though your instructor may not say anything directly, coming late to class conveys a poor impression of yourself. It also makes it difficult to keep up with lecture material because it puts you in the position of playing catch-up. You wouldn't think of arriving at a movie theater in the middle of a movie, so why should you expect to be able to follow the lecture when you arrive after it starts? If you occasionally arrive late due to traffic or an unexpected demand, drop your instructor a note of apology explaining the circumstances. All of us, including your instructors, occasionally face similar situations. However, if you have trouble regularly arriving on time, talk to your instructor or adviser about arranging a schedule that works better for you, or consider taking online courses that don't require regular class attendance.

Ask Questions. Don't hesitate to ask questions in class. Failing to ask your instructor to clarify a particular point you don't understand can lead you to feel lost or confused during class. Also, make sure to ask your instructor about the material that will be covered on an exam, as well as the format used for the exam, such as essay, short-answer, or multiple-choice questions.

Become an Active Note Taker. Don't try to write down everything the instructor says or every word that pops up on a PowerPoint slide. Very few people can write that fast. Besides, trying to copy everything verbatim can quickly lead you to fall behind. Focusing your attention on writing down everything also distracts you from thinking more deeply about material discussed in class. A better idea is to listen attentively and write down key points as clearly and concisely as you can, as well as the examples the instructor uses to illustrate these points. No one has perfect recall, so don't expect to remember every important point or concept discussed during a lecture. Write concepts down to review later.

Some instructors use PowerPoint slides as a guide to organizing the content of the lecture. Think of PowerPoint slides as a table of contents for the lecture. The bullet points in the slides are merely starting points for the lecture. Your instructor will likely expound upon each point. If you spend class time just copying bullet points, you may miss important information about each point that is discussed in class. Become an active note taker, not a copy machine. Listen attentively and write down the main concepts and ideas and any examples the instructor may give.

Rephrase and Review Your Notes. An effective way of reinforcing new learning is typing your class notes into a computer file. But rather than typing them word for word, try rephrasing them in your own words. Reworking your notes in this way encourages deeper processing of the material, which is a key factor in strengthening memory of newly learned information. The more you think about the material, the more likely you'll be to remember it when exam time comes around.

Building Effective Study Skills

Where to Study. Select a quiet study space that is as neat, clean, and free of distractions as possible.

When to Study.

- *Prevent procrastination.* Schedule regular study times and keep to your schedule.
- *Plan to study at times of the day you are most likely to be alert and best able to concentrate.* Don't leave it until the very end of the day when you are feeling tired or sleepy. Avoid studying directly after a big meal. Give your body time to digest your food. Likewise, avoid studying at a time of day when you're likely to be distracted by hunger pangs.
- *Avoid cramming for exams.* Cramming causes mental fatigue that can interfere with learning and retention. Establish a weekly study schedule to ensure you are well prepared for exams. Plan to review or brush up on the required material the day or two before the exam.

How to Study.

- *Plan study periods of about 45 or 50 minutes.* Very few people can maintain concentration for longer than 45 minutes or so. Take a 5- or 10-minute break between study periods. Give your mind and body a break by getting up, stretching your legs, and moving around.
- *Establish clear study goals for each study period.* Goals can include topics you want to cover, pages in the textbook you want to read or review, questions you need to answer, problems you need to solve, and so on.
- *Sit properly to maintain concentration.* Sit upright and avoid reclining or lying down to prevent nodding off or

losing focus. If your mind begins to wander, bring your thoughts back to your work. Or break the tendency to daydream by getting yourself out of your chair, gently stretch your muscles, take a quick walk around the room, and then return to studying.

How Much to Study. A convenient rule of thumb to use is to study two hours a week for each hour of class time. Like most rules of thumb, you may need to adjust it according to the amount of work you need to complete.

Read for Understanding. Slow down the pace of your reading so that you can pay close attention to the material you are trying to learn.

- Stop for a moment after every paragraph and pose questions to yourself about what you have just read. Jot down your answers to the questions you pose to yourself to reinforce this new learning.
- After reading a section of text, take a brief break and then review any concepts you don't fully understand to make sure you get the main points before moving to the next section or chapter. Yes, active reading takes more time and effort than just skimming, but it will make the time you spend reading more productive and meaningful.

Reach Out for Help. When you struggle to understand something, don't give up out of frustration. Ask your instructor for help.

Form Study Groups. Reach out to other students to form study groups. Studying as part of a group may induce you to hit the books more seriously.

Using This Text as a Study Tool

You are about to embark on a journey through the field of psychology. As with any journey, it is helpful to have markers or road signs to navigate your course. This text provides convenient markers to help you know where you've been and where you're headed. Take a moment to familiarize yourself with the terrain you'll encounter in your journey. It centers on the unique organizational framework of the text—the *concept-based modular format*.

Use Modules to Organize Your Study Time. This text is organized in instructional units called *modules* to help you structure your study time more efficiently. The modules in each chapter break down the chapter into these smaller instructional units. Rather than try to digest an entire chapter at once, you can chew on one module at a time. Each module is organized around a set of key concepts. As you make your way through a module, you will be learning a set of basic concepts and how they relate to the theoretical and research foundations of the field of psychology.

Use Concept Signaling as at Tool to Learning Key Concepts. Key concepts in each module are highlighted or signaled in the margins of the text to help ensure you learn the main points and ideas as you make your way through the text. Importantly, make sure to read all the surrounding material in the text, not just the material highlighted in the concept boxes in the margins. Your exams will likely test your knowledge of all the assigned material in the text.

Keep Notes as You Read. Taking notes in your own words strengthens deeper, more durable learning. Avoid underlining or highlighting whole sections of text. Let your brain—not your fingers—do the work. Highlight only the important sections of text you want to review further.

Use the Running Glossary to Learn Key Terms. Key terms are highlighted (boldfaced) in the text and defined in the margins for easy reference. To ensure you understand the meaning of these terms in context, see how they are used in the adjacent paragraphs of the text.

Review Your Progress. Each module begins with a set of learning objectives. Jot down these objectives in a notebook or computer file and try to answer them as you read along or when you come to the end of module. As noted above, you can check your answers against the sample answers in the *Recite It* sections of the *Module Reviews*. Then test yourself by taking the brief quizzes you'll find in the *Recall It* sections of the *Module Reviews*. If you find you are struggling with the quiz questions, review the corresponding sections of the text to strengthen your knowledge and then test yourself again.

Get the Study Edge with the SQ3R+ Study Method

This text includes a built-in study system called the SQ3R+ study method, a system designed to help students develop more effective study habits that expands upon the SQ3R method developed by psychologist Francis P. Robinson. SQ3R is an acronym that stands for five key study features: *survey*, *question*, *read*, *recite*, and *review*. This text adds an additional feature, the *Think About It* sections of the *Module Reviews*, which are the "+" in the SQ3R+ study method. Here's how the SQ3R+ study method works:

1. **Survey** Preview each chapter before reading it.
2. **Question** Pose questions to yourself as you read the text to ensure you are mastering the learning objectives. The learning objectives for each module test your ability to identify, define or describe, apply, and evaluate or explain your knowledge of psychology. To become a more active learner, use the learning objectives as a set of learning

goals you want to achieve as you make your way through the chapter. Generate additional questions about the material you can pose to yourself to further assess your knowledge of the material.

3. **Read** Read the module to master the learning objectives as well as to grasp key concepts and related information. To strengthen your understanding of text material, you may find it helpful to read each module a second or third time before an exam.
4. **Recite** When you reach the end of the module, gauge how well you understand the material by using the *Module Review* section to evaluate your progress. Remember to recite your knowledge of the learning objectives before looking at the sample answers in the text. Hearing yourself speak the answers enhances retention of newly learned information.
5. **Review** Establish a study schedule for reviewing text material on a regular basis. Test yourself each time you review or reread the material to boost long-term retention. Use the brief quiz in the *Recall It* part of the *Module Reviews* to test your knowledge.
6. **Think About It** This feature in the *Module Reviews* poses thought-provoking questions that encourage you to apply critical thinking skills and to reflect on how the material relates to your own experiences. Thinking more deeply about these concepts and relating them to your life experiences helps strengthen new learning.

I hope this guide to college success will help you succeed not only in this course but in your other courses as well. I also hope you enjoy your journey through psychology. I began my own journey through psychology in my freshman year in college and have continued along this path with a sense of wonder and joy ever since.

Please email your comments, questions, or suggestions to me at jeffnevid@gmail.com.

Jeff Nevid
New York, NY

LEARNING OBJECTIVES

After studying this chapter, you will be able to . . .

1. **Define** psychology and **explain** why psychology is a science.
2. **Identify** early schools of psychology and the important contributors to these schools, and **describe** the major concepts associated with each school.
3. **Identify** the major contemporary perspectives in psychology and **describe** each perspective.
4. **Identify** specialty areas or subfields of psychology and emerging specialty areas.
5. **Describe** ethnic and gender characteristics of psychologists today and the changes that have occurred over time.
6. **Identify** the steps in the scientific method.
7. **Identify** research methods that psychologists use.
8. **Describe** the ethical standards that govern research in psychology.
9. **Apply** critical thinking skills to **evaluate** claims made by others as well as online sources.

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PREVIEW

Module 1.1 Foundations of Modern Psychology

Module 1.2 Psychologists: Who They Are and What They Do

Module 1.3 Research Methods in Psychology

The Science of Psychology

1

You. Me. Us.

This may be your first course in psychology, but it is probably not your first encounter with many of the topics psychologists study. Your earliest exposure to the subject matter of psychology probably began many years ago. Perhaps your first encounter with psychology came as you first wondered about why people do what they do or how their personalities differ. Perhaps you wondered why your third-grade classmate just couldn't seem to sit still and often disrupted the class. Or perhaps you were curious about how people relate to each other and how they influence each other's behavior. Or maybe you wondered mostly about yourself, about who you are and why you do the things you do. Perhaps one of the reasons you are taking this course is to learn more about yourself.

Psychologists study behavior in all its forms. One way of thinking about psychology is to understand that it involves the study of *you* (the behavior of other people), *me* (one's own behavior), and *us* (how our behavior is affected by groups and social influences). Psychologists are interested in studying behavior in nonhuman species as well. Studies of behavior of other animals can shed light on basic principles of behavior and may help inform our understanding of our own behavior as well.

You may find answers to many of the questions you have about yourself and others in this introductory course in psychology. But you will probably not find all the answers you are seeking. There is still so much we do not understand, so much that remains to be explored. This text, like the field of psychology itself, is really about the process of exploration—the quest for knowledge about behavior and mental processes.

As with any scientific discipline, psychology requires that opinions, assumptions, beliefs, and theories about the subject matter it studies be tested and scrutinized in the light of the available evidence. Psychologists seek answers to the questions they and others pose about human nature by using scientific methods of inquiry. Like other scientists, psychologists are professional skeptics. They have confidence only in theories that can be tied to observable evidence. As in all branches of science, investigators in the field of psychology gather evidence to test their theories, beliefs, and assumptions.

Before we go further with our exploration of psychology, let us define what we mean by the term *psychology*. Though many definitions of psychology have been proposed, the one most widely used today defines psychology as the science of behavior and mental processes. But what do these terms mean—*behavior* and *mental processes*?

Broadly speaking, anything an organism does is a form of behavior. Sitting in a chair is a form of behavior. Reading, studying, and watching TV are forms of behavior. Making yourself a sandwich and talking on

Did you know that...

- One of the founders of modern psychology was such a poor student he was actually left back a grade in school? (p. 5)
- A movement that once dominated psychology believed that psychologists should turn away from the study of the mind? (p. 6)
- A major school of psychology was inspired by the view from a train? (p. 7)
- The school of psychology originated by Sigmund Freud holds that we are generally unaware of our true motives? (p. 8)
- People tend to post gloomier Facebook postings when it's raining outside than on sunny days? (p. 18)
- The popularity of women's names influences how other people judge their physical attractiveness? (p. 27)
- Pain patients reported a reduction in pain after they received a placebo ("sugar pill"), even though they were told it was a placebo? (p. 28)

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Researchers find that students who are physically separated from their cell phones showed more anxiety in a laboratory study than those whose cell phones were in their possession. Psychologists today are studying various ways in which technology is affecting our lives.

the phone are forms of behavior. Smiling, dancing, and raising your arm are also behaviors. Even thinking and dreaming are forms of behavior. Increasingly, people are interacting online, especially on social networking sites like Facebook. Online interactions are a form of social behavior and an area of increasing interest among psychologists and other social scientists.

Young people today are "digital natives" who have never known a time before the personal computer, the Web, or cell phones. They are an Internet surfing, iPoding, texting, Googling, Facebooking, and IMing generation (Nevid, 2011). Psychological attachment to cell phones is so strong that students in a recent laboratory study reported higher levels of anxiety when they were physically separated from their cell phones than when their phones were in their possession (Clayton, Leshner, & Almond, 2015). Through the course of our study of psychology, we will examine what psychologists have learned about the psychological effects of electronic technology and social networking.

Mental processes are private experiences that constitute our inner lives. These private experiences include thoughts, feelings, dreams and daydreams, sensations, perceptions, and beliefs that others cannot directly observe or experience. Among the challenges psychologists face is finding ways of making such inner experiences available to scientific study.

Before we begin exploring how psychologists study behavior and mental processes, let us take the story of psychology back to its origins to see how it developed as a scientific discipline and where it stands today.

MODULE

1.1 Foundations of Modern Psychology

1 **Define** psychology and **explain** why psychology is a science.

2 **Identify** early schools of psychology and the important contributors to these schools, and **describe** the major concepts associated with each school.

3 **Identify** the major contemporary perspectives in psychology and **describe** each perspective.

CONCEPT 1.1
Psychology is the scientific discipline that studies behavior and mental processes.

CONCEPT 1.2
Although psychology is a relatively young science, interest in understanding the nature of mind and behavior can be traced back to ancient times.

This first module in the text sets the stage for our study of psychology. It describes the development of psychology as a scientific discipline. How did psychology develop? What were the important influences that shaped its development as a scientific discipline? Here we address those questions by recounting a brief history of psychology. Let us begin by noting that although psychology is still a young science, its origins can be traced back to ancient times.

Origins of Psychology

The story of psychology has no clear beginning. We cannot mark its birth on any calendar. We can speculate that the story very likely began when early humans developed the capacity to reflect on human nature. Perhaps they were curious, as many of us are today, about what makes people tick. But what they may have thought or said about the nature of human beings remains unknown, as no record exists of their musings.

The word **psychology** is derived from two Greek roots: *psyche*, meaning "mind," and *logos*, meaning "study" or "knowledge." So it is not surprising that serious inquiries into psychology can be traced back to ancient Greece, when philosophers began to record their thoughts about the nature of mind and behavior. Psychology remained largely an interest of philosophers, theologians, and writers for several thousand years. It did not begin to emerge as a scientific discipline until the late nineteenth century.

The founding of psychology as an experimental science is generally credited to a German scientist, Wilhelm Wundt (1832–1920) (Lamiell, 2013). Wundt (pronounced *Voont*) is deserving of the credit because in 1879 in the city of Leipzig, Germany, he established the world's first scientific laboratory dedicated to the study of psychology. With the founding of Wundt's laboratory, psychology made the transition from philosophy to science (Benjamin, 2000).

Wundt was in some respects an unlikely candidate to found a new science. As a boy, he was a poor student and was even required to repeat a grade. The problem for young Wundt was that he tended to daydream in class. He would often be found sitting with an open book in his hands, staring off into space rather than reading his assigned text (a practice this author hopes you don't emulate too closely when you open your psychology text). But he persevered, eventually graduating from medical school and, from there, launched a successful research career as a physiologist. Later, he would apply his scientific training to his true passion, the understanding of conscious experience. In establishing the first psychology laboratory, the man who had once been left back in school because he was so absorbed in his own thoughts became the first scientist of the mind.

Like any scientific discipline, the field of psychology is an unfolding story of exploration and discovery. In this text, you will encounter many of the explorers and discoverers who have shaped the continuing story of psychology. The bridge from ancient thought to the present starts with Wundt; there, we encounter his disciple Edward Titchener and structuralism, the school of thought with which both men were associated. (See ■ Figure 1.1 for a timeline of the early days of psychology.)

David Young-Wolff/PhotoEdit

Psychologists study what we do and what we think, feel, dream, sense, and perceive. They use scientific methods to guide their investigations of behavior and mental processes.

Wilhelm Wundt, Edward Titchener, and Structuralism

Wilhelm Wundt was interested in studying mental experiences. He used a method called **introspection**, which attempts to directly study consciousness by having people report on what they are consciously experiencing (Leahey, 2014). For example, he would present subjects with an object, such as a piece of fruit, and then ask them to describe their impressions or perceptions of the object in terms of its shape, color, or texture and how it feels when touched. Or subjects might be asked to sniff a scent and describe the sensations or feelings the scent evoked in them. In this way, Wundt sought to break down mental experiences into their component parts, such as sensations, perceptions, and feelings, and then discover the rules that determine how these elements come together to produce the full range of conscious experiences.

Edward Titchener (1867–1927), an Englishman who was a disciple of Wundt, brought Wundt's teachings and methods of introspection to the United States and other English-speaking countries. The school of psychology identified with Wundt and Titchener became known as **structuralism**, an approach that attempted to define the structure of the mind by breaking down mental experiences into their component parts.

The first American to work in Wundt's experimental laboratory was the psychologist G. Stanley Hall (1844–1924) (Johnson, 2000). In 1892, Hall founded the American Psychological Association (APA), now the largest organization of psychologists in the United States, and he served as its first president. Nine years earlier, in 1883, he had established the first psychology laboratory in the United States, which was housed at Johns Hopkins University (Benjamin, 2000). Although Hall played a

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Wilhelm Wundt

CONCEPT 1.3

Structuralism, the early school of psychology associated with Wundt and Titchener, used introspection as a method of revealing the fundamental structures of mental experience in the form of sensations, perceptions, and feelings.

psychology The science of behavior and mental processes.

introspection Inward focusing on mental experiences, such as sensations or feelings.

structuralism The school of psychology that attempts to understand the structure of the mind by breaking it down into its component parts.

1860	• Gustav Fechner publishes *Elements of Psychophysics*
1875	• William James gives first psychology lecture at Harvard
1878	• G. Stanley Hall receives first Ph.D. in psychology in the U.S.
1879	• Wilhelm Wundt establishes first psychology laboratory
1883	• First American psychology laboratory established at Johns Hopkins University by G. Stanley Hall
1887	• G. Stanley Hall initiates the *American Journal of Psychology*
1889	• James Mark Baldwin establishes first Canadian psychology laboratory at University of Toronto
1890	• James writes first psychology text, *Principles of Psychology*
1892	• American Psychological Association (APA) formed; G. Stanley Hall first president
1894	• Margaret Floy Washburn is first woman to receive a Ph.D. in psychology
1895	• Sigmund Freud publishes first work on psychology
1896	• Lightner Witmer establishes the first psychology clinic in the U.S.
1900	• Freud publishes *The Interpretation of Dreams*
1905	• Two Frenchmen, Alfred Binet and Théodore Simon, announce development of the first intelligence test, which they describe as "a measuring scale of intelligence" • Mary Whiton Calkins becomes first woman president of APA
1908	• Ivan Pavlov's work on conditioning first appears in an American scientific journal
1910	• Max Wertheimer and colleagues begin research on Gestalt psychology
1913	• Watson publishes the behaviorist manifesto, *Psychology as the Behaviorist Views It*
1920	• Francis Sumner is first African American to receive a Ph.D. in psychology in the U.S. • Henry Alston is first African American to publish his research findings in a major psychology journal in the U.S.

FIGURE 1.1 Timeline of the Early Days of Psychology

CONCEPT 1.4
William James, the founder of functionalism, believed that psychology should focus on how our behavior and mental processes help us adapt to the demands we face in the world.

CONCEPT 1.5
Behaviorism was based on the belief that psychology would advance as a science only if it turned away from the study of mental processes and limited itself to the study of observable behaviors that could be recorded and measured.

functionalism The school of psychology that focuses on the adaptive functions of behavior.

pivotal role in the early days of psychology in the United States, Harvard psychologist William James is generally recognized as the father of American psychology.

William James and Functionalism

William James (1842–1910) was trained as a medical doctor but made important contributions to both psychology and philosophy. Although he too used introspection, he shifted the focus to the *functions* of behavior.

James founded **functionalism**, the school of psychology that focused on how behavior helps individuals adapt to demands placed upon them in the environment. Whereas structuralists were concerned with understanding the structure of the human mind, functionalists were concerned with the functions of mental processes (Willingham, 2007). Unlike the structuralists, James did not believe that conscious experience can be parceled into discrete elements. To James, consciousness is not like a jigsaw puzzle that can be pieced together from its component parts.

Functionalists examined the roles or functions of mental processes—*why* we do *what* we do. For example, James believed we develop habits, such as the characteristic ways in which we use a fork or a spoon, because they enable us to perform more effectively in meeting the many demands we face in daily life.

John Watson and Behaviorism

In the early 1900s, a new force in psychology called **behaviorism** gathered momentum. Its credo was that psychology should limit itself to the study of overt behavior that observers could record and measure. The founder of behaviorism was the American psychologist John Broadus Watson (1878–1958). Watson reasoned that because you can never observe another person's mental processes, psychology would never advance as a science unless it eliminated mentalistic concepts like mind, consciousness, thinking, and feeling. He rejected introspection as a method of scientific inquiry and proposed that psychology should become a science of behavior, not of mental processes. In this respect, he shared with the ancient Greek philosopher Aristotle the belief that science should rely on observable events. The problem with introspectionism is that there is no way to directly observe a person's mental experiences or know how one person's feelings or sensations compare to another's.

Watson believed that the environment molds the behavior of humans and other animals. He even boasted that if he were given control over the lives of infants, he could determine the kinds of adults they would become:

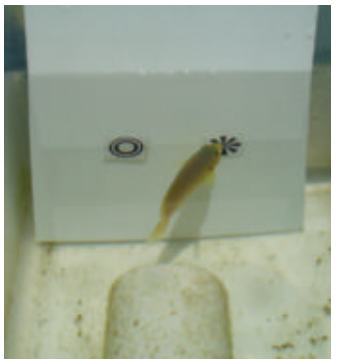
> Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might suggest—doctor, lawyer, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and the race of his ancestors. (Watson, 1924, p. 82)

No one, of course, took up Watson's challenge, so we never will know how "a dozen healthy infants" would have fared under his direction. Psychologists today, however, believe that human development is much more complex than

Watson thought. Few would believe that Watson could have succeeded in meeting the challenge he posed.

Nonetheless, by the 1920s, behaviorism had become the main school of psychology in the United States, and it remained the dominant force in American psychology for several generations. Its popularity owed a great deal to the work of the Harvard University psychologist B. F. Skinner (1904–1990). Skinner studied how behavior is shaped by rewards and punishments, the environmental consequences that follow specific responses. Skinner showed he could train animals to perform simple behaviors by rewarding specific responses. A rat could learn to press a bar and a pigeon to peck a button if they were rewarded for these responses by receiving pellets of food. Skinner also showed how more complex behaviors could be learned and maintained by manipulation of rewards, which he called *reinforcers*. In some of his more colorful demonstrations of the use of reinforcement, he trained a pigeon to play a tune on a toy piano, and a pair of pigeons to play a type of ping-pong in which the birds rolled a ball back and forth between them. These methods can even be used to teach a raccoon to shoot a basketball and to train fish to tap a particular target shape (Carroll, 2009).

Bettmann/Getty Images



By reinforcing specific responses, we can teach pigeons to play a type of ping-pong game and a fish to peck at a particular shape.

Source: Courtesy of Ulrike Siebeck, reproduced with permission of the *Journal of Experimental Biology*. U. E. Siebeck, L. Litherland and G. M. Wallis, JEB 212, 2113–2119 (2009). http://jeb.biologists.org/cgi/content/full/212/13/2113

Although Skinner studied mainly pigeons and rats, he believed that the same principles of learning he observed in laboratory animals could be applied to humans as well. He argued that human behavior is as much a product of environmental consequences as the behavior of other animals. Everything we do, from saying "excuse me" when we sneeze, to attending class, to reading a book, represents responses learned through reinforcement, even though we cannot expect to recall the many reinforcement occasions involved in acquiring and maintaining these behaviors.

Max Wertheimer and Gestalt Psychology

In 1910, at about the time John Watson was appealing to psychologists to abandon the study of the mind, a young German psychologist, Max Wertheimer (1880–1943), was traveling by train through central Germany on vacation (Hunt, 1993). What he saw looking through the window of the train would lead him to found a new movement in psychology, which he called **Gestalt psychology**, the school of psychology that studies ways in which the brain organizes and structures our perceptions of the world.

What had captured Wertheimer's attention was the illusion that objects in the distance—telegraph poles, houses, and hilltops—appeared to be moving along with the train, even though they were obviously standing still. Wertheimer was intrigued to find out why the phenomenon occurred. He believed the illusion was not a trick of the eye but reflected higher-level processes in the brain that created a false perception of movement. He promptly canceled his vacation and headed back to his laboratory to begin studying this phenomenon. The experiments he conducted with two assistants, Wolfgang Köhler (1887–1967) and Kurt Koffka (1886–1941), led to major discoveries about the nature of perception—the processes by which we organize sense impressions and form meaningful representations of the world around us.

The Gestalt psychologists rejected the structuralist belief that mental experience could be understood by breaking it down into its component parts. The German word **gestalt** can be roughly translated as "unitary form" or "pattern." Gestalt

behaviorism The school of psychology that holds that psychology should limit itself to the study of overt, observable behavior.

Gestalt psychology The school of psychology that holds that the brain structures our perceptions of the world in terms of meaningful patterns or wholes.

gestalt A German word meaning "unitary form" or "pattern."

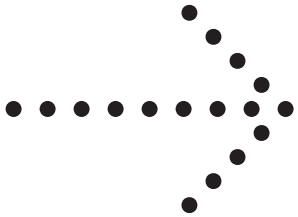


FIGURE 1.2 What Is This?

psychologists believe the brain organizes our perceptions of the world by grouping elements together into unified or organized wholes, rather than as individual bits and pieces of sense experience (Sayim, Westheimer, & Herzog, 2010). The well-known Gestalt maxim that the "whole is greater than the sum of the parts" expresses this core belief. You perceive the dots in ■ Figure 1.2 not as a formless array of individual dots but as a representation of an arrow. When you see a large number of black objects flying overhead, you instantly recognize them as a flock of birds flying in formation. In other words, your brain interprets what your eyes see as organized patterns or wholes.

CONCEPT 1.6
Gestalt psychology was based on the principle that the human brain organizes our perceptions of the world, so that we perceive organized patterns or wholes, not individual bits and pieces of sense experiences added together.

CONCEPT LINK
Although the influences of Gestalt psychology extend to many areas of psychology, it is best known for its contributions to the study of perception. See Module 3.5.

Sigmund Freud and Psychoanalysis

Around the time that behaviorism and Gestalt psychology were establishing a foothold in organized psychology, a very different model of psychology was emerging. It was based on the writings of an Austrian physician named Sigmund Freud (1856–1939). Freud's psychology focused not only on the mind, but also on a region of the mind that lay beyond the reach of ordinary consciousness—a region he called the **unconscious**. Freud conceived of the unconscious as the repository of primitive sexual and aggressive drives or instincts and of the wishes, impulses, and urges that arise from those drives or instincts (Kihlstrom, 2015). He believed that the motives underlying our behavior involve sexual and aggressive impulses that lie in the murky depths of the unconscious, hidden away from our ordinary awareness of ourselves. In other words, we may do or say things without understanding the true motives that prompted these behaviors.

Freud also believed that early childhood experiences play a determining role in shaping our personalities and behavior, including abnormal behaviors like excessive fears or phobias. He held that abnormal behavior patterns are rooted in unconscious conflicts originating in childhood. These conflicts involve a dynamic struggle within the unconscious mind between unacceptable sexual or aggressive impulses striving for expression and opposing mental forces seeking to keep this threatening material out of conscious awareness. Thus, Freud's view of psychology, and that of his followers, is often called the **psychodynamic perspective**.

Unlike Wundt, James, and Watson, Freud was a therapist, and his main aim was to help people overcome psychological problems. He developed a form of psychotherapy or "talk therapy" he called **psychoanalysis** (discussed in Chapter 14). Psychoanalysis is a type of mental detective work. It incorporates methods, such as analysis of dreams and of "slips of the tongue," that Freud believed could be used to gain insight into the nature of the underlying motives and conflicts of which his patients were unaware. Freud maintained that once these unconscious conflicts were brought into the light of conscious awareness, they could be successfully resolved, or "worked through," during therapy.

CONCEPT 1.7
According to Freud, much of our behavior is determined by unconscious forces and motives that lie beyond the reach of ordinary awareness.

CONCEPT LINK
Freud's model of therapy, called psychoanalysis, is based on the belief that therapeutic change comes from uncovering and working through unconscious conflicts within the personality. See Module 14.1.

CONCEPT 1.8
Although some early schools of psychology have essentially disappeared, contemporary perspectives in the field, including the behavioral, psychodynamic, humanistic, physiological, cognitive, and sociocultural perspectives, continue to evolve and to shape our understandings of behavior.

unconscious In Freudian theory, the part of the mind that lies outside the range of ordinary awareness and that contains primitive drives and instincts.

Contemporary Perspectives in Psychology

What do we find when we look over the landscape of psychology today? For one thing, we find a discipline that owes a great debt to its founders but is constantly reinventing itself to meet new challenges. Not all schools of thought have survived the test of time. Structuralism, for one, has essentially disappeared from the landscape; others maintain small groups of devoted followers who remain true to the original precepts. But by and large, the early schools of psychology—functionalism, behaviorism, Gestalt psychology, and psychoanalysis—have continued to evolve or have been consolidated within broader perspectives. Today, the landscape of psychology can be divided into six major perspectives: the behavioral, psychodynamic, humanistic, physiological, cognitive, and sociocultural.

The Behavioral Perspective

The linchpin of the **behavioral perspective** is behaviorism, the belief that environmental influences determine behavior and that psychology should restrict itself to the study of observable behavior. However, many psychologists believe that traditional behaviorism is too simplistic or limited to explain complex human behavior. Though traditional behaviorism continues to influence modern psychology, it is no longer the dominant force it was during its heyday in the early to mid-1900s.

Many psychologists today adopt a broader, learning-based perspective called **social-cognitive theory** (formerly called *social-learning theory*). This perspective originated in the 1960s with a group of learning theorists who broke away from traditional behaviorism (see Chapter 11). They believed that behavior is shaped not only by environmental factors, such as rewards and punishments, but also by *cognitive* factors, such as the value placed on different objects or goals (for example, getting good grades) and expectancies about the outcomes of behavior ("If I do X, then Y will follow."). Social-cognitive theorists challenged their fellow psychologists to find ways to study these mental processes rather than casting them aside as unscientific, as traditional behaviorists would. Traditional behaviorists may not deny that thinking occurs, but they do believe that mental processes lie outside the range of scientific study.

The behavioral perspective led to the development of a major school of therapy, **behavior therapy**. Behavior therapy involves the systematic application of learning principles that are grounded in the behaviorist tradition of Watson and Skinner. Whereas psychoanalysts are concerned with the workings of the unconscious mind, behavior therapists help people acquire more adaptive behaviors to overcome psychological problems such as fears and social inhibitions. Today, many behavior therapists subscribe to a broader therapeutic approach, called *cognitive-behavioral therapy*, which incorporates techniques for changing maladaptive thoughts as well as overt behaviors (see Chapter 14).

CONCEPT 1.9
Many psychologists today subscribe to a broad learning-based perspective, called social-cognitive theory, that emphasizes the environmental and cognitive influences on behavior.

CONCEPT LINK
Social-cognitive theorists believe that personality comprises not only learned behavior but also ways in which individuals think about themselves and the world around them. See Module 11.3.

CONCEPT 1.10
The psychodynamic perspective focuses on the role of unconscious motivation (inner wishes and impulses of which we are unaware) and the importance of childhood experiences in shaping personality.

The Psychodynamic Perspective

The psychodynamic perspective remains a vibrant force in psychology. Like other contemporary perspectives in psychology, it continues to evolve. As we'll see in Chapter 11, "neo-Freudians" (psychodynamic theorists who have followed the Freudian tradition) tend to place less emphasis on basic drives like sex and aggression than Freud did and more emphasis on processes of self-awareness, self-direction, and conscious choice.

The influence of psychodynamic theory extends well beyond the field of psychology. Its focus on our inner lives—our fantasies, wishes, dreams, and hidden motives—has had a profound impact on popular literature, art, and culture. Beliefs that psychological problems may be rooted in childhood and that people may not be consciously aware of their deeper motives and wishes continue to be widely endorsed, even by people not formally schooled in Freudian psychology.

The Humanistic Perspective: A "Third Force" in Psychology

In the 1950s, another force began to achieve prominence in psychology. Known as **humanistic psychology**, it was a response to the two dominant perspectives at the time, behaviorism and Freudian psychology. For that reason, humanistic psychology was called the "third force" in psychology. Humanistic psychologists, including the Americans Abraham Maslow (1908–1970) and Carl Rogers (1902–1987), rejected the deterministic views of behaviorism and psychodynamic psychology—beliefs that human behavior is determined by the environment (in the case of behaviorism) or by the interplay of unconscious forces and motives lying outside the person's awareness (in the case of Freudian psychology). Humanistic psychologists believe that free will and conscious choice are essential aspects of the human experience.

psychodynamic perspective The view that behavior is influenced by the struggle between unconscious sexual or aggressive impulses and opposing forces that try to keep this threatening material out of consciousness.

psychoanalysis Freud's method of psychotherapy; it focuses on uncovering and working through unconscious conflicts he believed were at the root of psychological problems.

behavioral perspective An approach to the study of psychology that focuses on the role of learning and importance of environmental influences in explaining behavior.

social-cognitive theory A contemporary learning-based model that emphasizes the roles of cognitive and environmental factors in determining behavior.

behavior therapy A form of therapy that involves the systematic application of the principles of learning.

humanistic psychology The school of psychology that believes that free will and conscious choice are essential aspects of the human experience.

CONCEPT 1.11
Humanistic psychology emphasizes personal freedom and responsibility for our actions and the value of self-awareness and acceptance of our true selves.

CONCEPT 1.12
The physiological perspective examines relationships between biological processes and behavior.

CONCEPT 1.13
Evolutionary psychology subscribes to the view that our behavior reflects inherited predispositions or tendencies that increased the likelihood of survival of our early ancestors.

Ivica Drusany/Shutterstock.com

Evolutionary psychologists believe that behavioral tendencies that had survival value to ancestral humans, such as aggressiveness, may have been passed down the genetic highway to modern humans. Even our penchant for aggressive sports might reflect these genetic underpinnings.

humanistic perspective An approach to the study of psychology that applies the principles of humanistic psychology.

physiological perspective An approach to the study of psychology that focuses on the relationships between biological processes and behavior.

evolutionary psychology A branch of psychology that focuses on the role of evolutionary processes in shaping behavior.

cognitive perspective An approach to the study of psychology that focuses on the processes by which we acquire knowledge.

Psychologists who adopt a **humanistic perspective** believe that psychology should focus on conscious experiences, even if those experiences are subjective and cannot be directly observed and scientifically measured. Humanistic psychologists view each of us as an individual who possesses distinctive clusters of traits and abilities and unique frames of reference or perspectives on life. They emphasize the value of self-awareness and of becoming an authentic person by being true to oneself (Grogan, 2013). They also stress the creative potentials of individuals and their ability to make choices that imbue their lives with meaning and purpose.

The Physiological Perspective

The **physiological perspective** examines relationships between biological processes and behavior. It is identified not with any one contributor but, rather, with many psychologists and neuroscientists who focus on the biological bases of behavior and mental processes.

Sitting atop your shoulders is a wondrous mass of tissue—your brain—that governs virtually everything you do. The brain is the center of the nervous system, an incredibly complex living computer that allows you to sense the world around you, to think and feel, to move through space, to regulate heartbeat and other bodily functions, and to coordinate what you see and hear with what you do. Your nervous system also allows you to visualize the world and imagine worlds that never were. As we'll find throughout this text, physiological psychology has illuminated our understanding of the biological bases of behavior and mental processes, including the roles of heredity, hormones, and the nervous system.

Evolutionary psychology is a movement within modern psychology that applies principles derived from Charles Darwin's theory of evolution to a wide range of behaviors (Bolhuis & Wynne, 2009; Buss, 2008; Confer et al., 2010; Gallup & Frederick, 2010). Darwin (1809–1882) believed that all life forms, including humans, evolved from earlier life forms by adapting over time to the demands of their natural environments.

Evolutionary psychologists believe that behavioral *tendencies* or *predispositions*, such as aggressive tendencies, might be rooted in our genes, having been passed along from generation to generation from ancestral times all the way down the genetic highway to us. Aggressive traits may have helped early humans survive as hunters of wild game, even if they are no longer adaptive in modern society. Evolutionary psychologists examine behaviors in different species that may have been influenced by evolutionary processes, including aggression, mating practices, and even altruism (that is, self-sacrifice of the individual for the group). But they also recognize that environmental factors, especially cultural learning and family influences, play important roles in determining whether behavioral tendencies or predispositions lead to actual behavior (for example, whether or not a person acts aggressively).

The Cognitive Perspective

Psychologists working from a **cognitive perspective** study mental processes, including thinking, learning, memory, use of language, and problem solving. These processes enable people to gain knowledge about themselves and the world around them. The word *cognitive* comes from the Latin word *cognitio*, meaning "knowledge."

Cognitive psychologists make no apology for studying mental experience; they believe the methods they use to study thinking or cognition are well grounded in the scientific tradition. After all, no one has ever observed subatomic particles such as protons and neutrons, but that hasn't prevented physicists from conducting scientific studies that attempt to investigate their properties. Chapter 7 examines the intriguing research findings reported by cognitive psychologists.

BRIDGING PERSPECTIVES

Tying It Together: An Overview of Contemporary Perspectives

Contemporary psychology is not divided as neatly into different schools of thought as it seemed to be in its early days. Diversity of perspectives is in fact one of the strengths of the science of psychology because it permits a broader view of the complex phenomena it attempts to explain. It's important to understand that no one perspective is necessarily right and the others wrong. Each perspective focuses on a different aspect of behavior or psychological functioning. Each has something unique to offer to a more complete understanding of human behavior, and none offers a full view. Given the complexity of human behavior and experience, it is not surprising that psychology has spawned multiple pathways for approaching its subject matter. It is also not surprising that many psychologists identify with an *eclectic or integrative* approach to understanding human behavior—one that seeks to synthesize or integrate an overarching view that draws upon different perspectives. Through the course of this text, we will touch upon the integration of different perspectives and what these diverse approaches teach us about behavior and mental processes. Look for the *Bridging Perspectives* icon as you read along.

In addition to the six major perspectives that dot the landscape of contemporary psychology, a growing movement within psychology, called **positive psychology**, is directed toward the study of positive aspects of human experience, such as love, happiness, altruism, and hope (Lopez, Pedrotti, & Snyder, 2019; McNulty & Fincham, 2012; Seligman & Csikszentmihaly, 2014). Psychologists have devoted a great deal of attention to understanding human weaknesses and deficits, including emotional problems, effects of traumatic stress, and problem behaviors such as violence and drug addiction. Founded by psychologist Martin Seligman, positive psychology balances the scale by focusing on our virtues and strengths, not our flaws. Throughout the text, we discuss aspects of positive psychology, including love, helping behavior, optimism, successful aging, happiness, self-esteem, self-actualization, and creativity.

In Concept Chart 1.1, the first of many such charts in the text, you'll find examples of the kinds of general questions that psychologists from each of the major contemporary perspectives might ask, as well as the kinds of questions they might pose to learn more about specific topics. These topics are introduced here to help you distinguish among the various perspectives in contemporary psychology. They will be discussed further in later chapters.

vadim kozlovsky/Shutterstock.com

positive psychology A contemporary movement within psychology that emphasizes the study of human virtues and assets, rather than weaknesses and deficits.

The Sociocultural Perspective

Psychologists who adopt a **sociocultural perspective** examine how behavior and attitudes are shaped by social and cultural influences to which people are exposed. They focus on the influence of such factors as age, ethnicity, gender, sexual orientation, lifestyle, income level, disability status, and exposure to discrimination and prejudice.

The study of sociocultural factors in shaping behavior is especially relevant today because of the increasing diversity of American society. Ethnic minority groups now represent about one-third of the U.S. population, but are expected to grow to nearly half the population by the year 2050. The two fastest growing population groups in the United States are Hispanics (Latinos) and people with a multiracial identity,

sociocultural perspective An approach to the study of psychology that emphasizes the role of social and cultural influences on behavior.

CONCEPT 1.14
The cognitive perspective focuses on understanding the mental processes by which people gain knowledge about themselves and the world around them.

CONCEPT 1.15
The sociocultural perspective places behavior within a broad social context by examining the influences of ethnicity, gender, lifestyle, socioeconomic status, and culture.

which include such high-profile individuals as President Barack Obama, singer Nicki Minaj, and baseball great Derek Jeter ("Hispanics to Total," 2014; Saulny, 2011).

The sociocultural perspective poses several questions to which we shall return later in the text: Does susceptibility to visual illusions vary across cultures? Are there gender differences in basic abilities in math or verbal skills? How does culture influence concepts of the self? Are there ethnic differences in drug use patterns, and if so, how might we account for them? Are there racial differences in intelligence, and if so, what do we make of them? What role does acculturation play in the psychological adjustment of immigrant groups?

Psychologists recognize that research samples need to be broadly representative of the populations to which they wish to generalize their findings. Much of the early research in psychology focused on White, middle-class samples, composed largely of male college students. We should not assume that findings based on narrowly defined groups of individuals necessarily generalize to other groups who have different life experiences.

Concept Chart 1.1 Contemporary Perspectives in Psychology: How They Differ

		Questions About Specific Topics		
Perspective	**General Questions**	**Aggression**	**Depression**	**Obesity**
Behavioral	How do early learning experiences shape our behavior as adults?	How is aggressive behavior learned? How is it rewarded or reinforced? Does exposure to violence in the media or among one's peers play a role?	How is depression related to changes in reinforcement patterns? What social skills are needed to establish and maintain social relationships that could serve as sources of reinforcement?	How might unhealthy eating habits lead to obesity? How might we change those habits?
Psychodynamic	How do unresolved conflicts from childhood affect adult behavior? How can people be helped to cope with these conflicts?	How is aggression related to unconscious impulses? Against whom are these impulses really directed?	How might depression be related to unresolved loss? Might it represent anger turned inward?	Might obesity relate to childhood conflicts revolving around unresolved needs for love and support? Might food have become a substitute for love?
Humanistic	How do people pursue goals that give their lives a sense of meaning and purpose?	Might violence be related to frustration arising when people are blocked from pursuing their goals? How might we turn this around to prevent violence?	Might depression be related to a lack of self-esteem or a threat to one's self-image? Might it stem from a sense of purposelessness or lack of meaning in life?	What sets the stage for obesity? Does food have a special meaning for obese people? How can we help them find other sources of satisfaction?
Physiological	How do biological structures and processes make behavior possible? What roles do nature (heredity) and nurture (environment) play in such areas as intelligence, language development, and aggression?	What brain mechanisms control aggressive behavior? Might brain abnormalities explain violent behavior in some people?	How are changes in brain chemistry related to depression? What genetic links might there be?	Is obesity inherited? What genes may be involved? How would knowledge of a genetic basis lead to new approaches to treatment or prevention?

(*Continued*)

Concept Chart 1.1 (*Continued*)

Perspective	General Questions	Questions About Specific Topics: Aggression	Depression	Obesity
Cognitive	How do people solve problems, make decisions, and develop language?	What thoughts trigger aggressive responses? What beliefs do aggressive people hold that might increase their potential for violence?	What types of thinking patterns are related to depression? How might they be changed to help people overcome depression or prevent it from occurring?	How does obesity affect a person's self-concept? What thoughts lead to eating binges? How might they be changed?
Sociocultural	How do concepts of the self differ across cultures? How do social and cultural influences shape behavior?	What social conditions give rise to drug use and aggressive behavior? Does our society condone or even reward certain forms of violence, such as sexual aggression against women or spousal abuse?	Is depression linked to social stresses, such as poverty or unemployment? Why is depression more common among certain groups of people, especially women? Does it have to do with their expected social roles?	Are some groups at greater risk of obesity than others? Do cultural differences in dietary patterns and customs play a role?

MODULE REVIEW

1.1 Foundations of Modern Psychology

Recite It

1. **Define** psychology and **explain** why psychology is a science.

   Psychology is the science of (a) _____ and mental processes. Psychology is a science because it applies the scientific model in testing claims and beliefs in the light of (b) _____ .

2. **Identify** early schools of psychology and the important contributors to these schools, and **describe** the major concepts associated with each school.

   (c) _____ is the earliest school of psychology. It was identified with Wilhelm (d) _____ and Edward Titchener, and it attempted to break down mental experiences into their component parts—sensations, perceptions, and feelings.

   Functionalism is the school of psychology founded by William (e) _____ . It attempts to explain our behavior in terms of the (f) _____ it serves in helping us adapt to the environment.

   Behaviorism is the school of psychology begun by John (g) _____ . It holds that psychology should limit itself to observable phenomena—namely, (h) _____ .

   (i) _____ psychology is the school of psychology founded by Max (j) _____ . It is grounded in the belief that the brain structures our perceptions of the world in terms of organized patterns or (k) _____ .

   Psychoanalysis, the school of thought originated by Sigmund (l) _____, emphasizes the role of (m) _____ motives and conflicts in determining human behavior.

3. **Identify** the major contemporary perspectives in psychology and **describe** each perspective.

   The (n) _____ perspective focuses on observable behavior, the role of learning, and the importance of environmental influences on behavior.

   The (o) _____ perspective represents the model of psychology developed by Freud and his followers. It holds that our behavior and personalities are shaped by unconscious motives and conflicts that lie outside the range of ordinary awareness.

   The (p) _____ perspective reflects the views of humanistic psychologists such as Carl (q) _____ and Abraham (r) _____ who emphasized the importance of subjective conscious experience and personal freedom and responsibility.

   The (s) _____ perspective examines the ways in which behavior and mental experience are influenced by biological processes such as heredity, hormones, and the workings of the brain and other parts of the nervous system.

   The (t) _____ perspective focuses on mental processes that allow us to gain knowledge about ourselves and the world.

   The (u) _____ perspective examines how our behavior and attitudes are shaped by social and cultural influences.

Recall It

1. William James is to functionalism as _____ _____ is to structuralism.

2. The early school of psychology called structuralism
   a. rejected the use of introspection as a research method.
   b. focused on overt behavior.
   c. investigated the structure of the mind.
   d. was concerned with the functions of behavior.

3. Which of the early schools of psychology believed that psychology should be limited to the study of observable behavior?

4. Gestalt psychology focuses on
   a. the organization of the mind.
   b. the ways in which the brain organizes and structures our perceptions of the world.
   c. the functions of behavior.
   d. the role of self-actualization in motivating behavior.

5. Humanistic psychologists rejected the notion that unconscious processes and environmental influences determine our behavior. Rather, they emphasized the importance of _____ in understanding behavior.
   a. conscious choice
   b. heredity and physiological processes
   c. classical and operant conditioning
   d. the underlying structures of the mind

6. Which psychological perspective originated with Sigmund Freud?

Think About It

- Suppose you wanted to explain behavior in terms of how people's habits help them adapt to the environmental demands they face. What early school of psychology would you be adopting in your approach?
- Suppose you wanted to understand behavior in terms of underlying forces within the personality that influence behavior even though the person may not be aware of them. What early school of psychology would this approach represent?
- Humanistic psychologists emphasize the importance of finding a purpose or meaning in life. What are your purposes in life? How can you make your own life more meaningful?

Recite It *answers are placed at the end of the chapter.* **Recall It** *answers are found in Appendix B.*

MODULE

1.2 Psychologists: Who They Are and What They Do

4 **Identify** specialty areas or subfields of psychology and emerging specialty areas.

5 **Describe** ethnic and gender characteristics of psychologists today and the changes that have occurred over time.

CONCEPT 1.16
The field of psychology consists of an ever-growing number of specialty areas.

When you think of a psychologist, do you form a mental image of someone working in a hospital or clinic who treats people with psychological problems? This image describes one type of psychologist—a clinical psychologist. But there are many types. Psychology is a diverse profession because of a large number of areas in the field and because of the many different roles psychologists perform. Some psychologists teach and conduct research. Others provide psychological services to individuals or to organizations, such as schools or businesses. Psychologists are usually identified with one particular specialty or subfield within psychology—for example, experimental, clinical, developmental, educational, or social psychology.

basic research Research focused on acquiring knowledge even if such knowledge has no direct practical application.

Some psychologists conduct **basic research**—research that seeks to expand our understanding of psychological phenomena even if such knowledge does not lead

directly to any practical benefits. These psychologists typically work for universities or government agencies. Some psychologists conduct **applied research**—research intended to find solutions to specific problems. For example, a psychologist might apply research on learning and memory to studying methods of enhancing the educational experiences of children with intellectual disability. Still other psychologists work in applied areas of psychology in which they provide services to people or organizations. These include clinical, counseling, school, and industrial/organizational psychologists. Many of these applied psychologists also conduct research in the areas in which they practice. In this module, we take a closer look at the various types of psychologists.

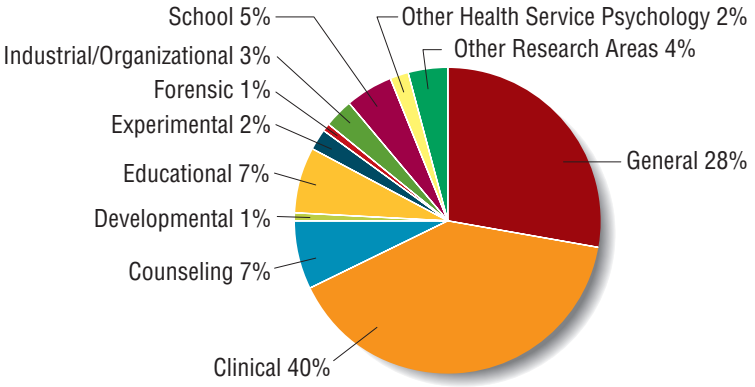


FIGURE 1.3 Subfields of Psychology
Here we see the distribution of doctoral degrees awarded in major subfields in psychology. Clinical psychology is the largest subfield, followed by general psychology, which includes research areas such as social, personality, health, cognitive, environmental, and physiological psychology.

Source: American Psychological Association (2018). *Degrees in psychology* [interactive data tool]. Retrieved from https://www.apa.org/workforce/data-tools/degrees-psychology.

Subfields of Psychology

All psychologists study behavior and mental processes, but they pursue this knowledge in different ways, in different settings, and from different perspectives. The following sections provide a rundown of some of the major subfields or specialty areas within the field of psychology and some emerging ones.

Most psychologists earn doctoral degrees in their area of specialization, such as experimental psychology, clinical psychology, or social psychology. The PhD (Doctor of Philosophy) is the most common doctoral degree and is awarded after completion of required graduate coursework and a dissertation, which involves an original research project. Some psychologists seeking practice careers may earn a Doctor of Psychology degree (PsyD), a doctoral degree that is focused more on practitioner skills than on research skills. Others may pursue graduate programs in schools of education and be awarded a doctorate in education (EdD). In some specialty areas, such as school psychology and industrial/organizational (I/O) psychology, the master's degree is recognized as the entry-level degree for professional work in the field.

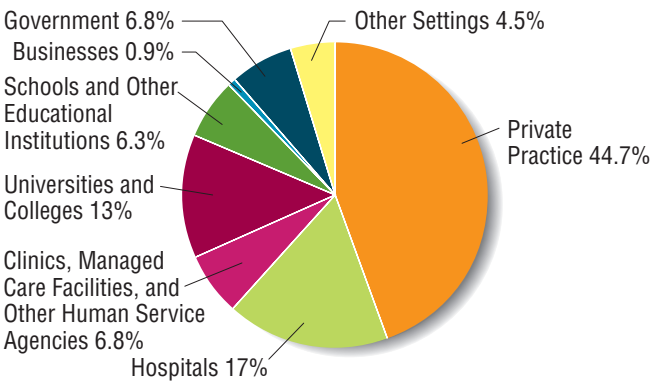


FIGURE 1.4 Where Psychologists Work
The largest group of psychologists works in settings that provide psychological services, such as private practice and hospital and clinic settings. Many work at colleges and universities as teachers, researchers, administrators, or supervisors of psychologists in training. Some also work in schools or government agencies.

Source: Stamm, Lin, & Christidis, 2017.

Subfields in Psychology

Concept Chart 1.2 provides an overview of the major subfields or specialties in psychology discussed in this section. ■ Figure 1.3 shows the percentages of psychologists in these subfields, and ■ Figure 1.4 summarizes where psychologists work.

Experimental psychologists apply experimental methods to the study of behavior and mental processes. They study such processes as learning, sensation and perception, and cognition. **Comparative psychologists** are experimental psychologists who focus on the similarities and differences in behavior across different species. **Physiological psychologists** (also known as *biological psychologists*) are experimental psychologists who focus on understanding the biological bases of behavior.

Clinical psychologists evaluate and treat people with psychological disorders, such as depression and anxiety disorders. They may use psychotherapy to help people overcome psychological problems or cope better with the stresses they face in their lives. They may administer psychological tests to better understand people's problems or to evaluate their intellectual abilities or personalities.

Many conduct research studies in the field or train future psychologists. Others work in hospitals or clinics, while still others work in private practice or university

applied research Research that attempts to find solutions to specific problems.

experimental psychologists Psychologists who apply experimental methods to the study of behavior and mental processes.

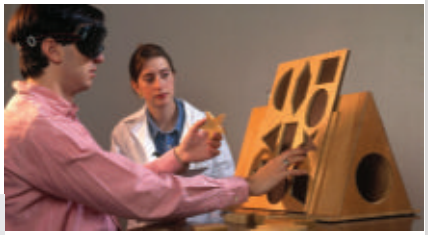
comparative psychologists Psychologists who study behavioral similarities and differences among animal species.

physiological psychologists Psychologists who focus on the biological underpinnings of behavior.

clinical psychologists Psychologists who use psychological techniques to evaluate and treat individuals with mental or psychological disorders.

Concept Chart 1.2 Specialty Areas of Psychology

Types of Psychologists	Nature of Specialty	Typical Questions Studied
Experimental psychologists	Conduct research on learning, cognition, sensation and perception, biological bases of behavior, and animal behavior	How do various states of arousal affect learning? Which brain centers are responsible for memory?
Clinical psychologists	Evaluate and treat people with psychological problems and disorders, such as depression and schizophrenia	How can we diagnose anxiety? Is depression treated more effectively with psychotherapy or drug therapy?
Counseling psychologists	Help people with adjustment problems	What kind of occupation would this student find fulfilling? Why does this person find it difficult to make friends?
School psychologists	Work in school systems to help children with academic problems or special needs	Would this child profit from special education, or would he or she be better off in a regular classroom?
Educational psychologists	Construct standardized psychological and educational tests (such as the SAT); improve course planning and instructional methods	Is this test a valid predictor of success in college? How can we teach algebra more efficiently?
Developmental psychologists	Study physical, cognitive, social, and personality development across the life span	At what age do children begin to walk or speak? What types of crises do people face in middle or later adulthood?
Personality psychologists	Study the psychological characteristics that make each of us unique	What is the structure of personality? How do we measure personality?
Social psychologists	Study the nature and causes of people's thoughts, feelings, and behavior in social situations	What are the origins of prejudice? Why do people do things as members of groups that they would not do as individuals?
Environmental psychologists	Study the ways in which people's behavior and mental processes influence, and are influenced by, their physical environments	What are the effects of city life on people? How does overcrowding affect people's health and behavior?
Industrial/organizational psychologists	Study the relationships between people and their work environments	How can we find out who would perform well in this position? How can we make hiring and promotion fairer? How can we enhance employees' motivation?
Health psychologists	Study the relationships between psychological factors and the prevention and treatment of physical illness	How can we help people avoid risky sexual behaviors? How can we help people quit smoking and start to exercise?
Consumer psychologists	Study the relationships between psychological factors and consumers' preferences and purchasing behavior	Why do people select particular brands? What types of people prefer a particular type of product?



Richard T. Nowitz/Science Source

What are the different specialty areas in psychology? What types of questions do the different types of psychologists study?

LightField Studios/Shutterstock.com

Psychologists work in various settings, but the majority work in private practice, hospital or clinic settings, and human service agencies where they provide psychological services such as psychotherapy, psychological testing, and consultation.

settings. As Figure 1.3 shows, clinical psychology is the subfield comprising the largest number of doctoral degrees awarded.

The professional roles of clinical psychologists in evaluating and treating psychological disorders often overlap with those of **psychiatrists**, medical doctors who complete residency training in the medical specialty of psychiatry. Unlike psychiatrists, however, psychologists cannot prescribe drugs. But even these lines may be blurring now that a small number of psychologists have been trained in specialized programs to prescribe drugs to treat psychological disorders (Bradshaw 2017).

Counseling psychologists help people who have adjustment problems that are usually not as severe as the kinds of problems that clinical psychologists treat. If you did not know what course of study to follow in college, or if you were having a difficult time adjusting to college, you might talk to a counseling psychologist about it. Counseling psychologists also help people make vocational decisions or resolve marital problems. Many work in college counseling centers or community-based counseling or mental health centers.

psychiatrists Medical doctors who specialize in the diagnosis and treatment of mental or psychological disorders.

counseling psychologists Psychologists who help people clarify their goals and make life decisions or find ways of overcoming problems in various areas of their lives.

© Tetra Images/Getty Images

Environmental psychologists suggest that by dimming the lights you may avoid turning a disagreement with someone into a heated argument.

ESB Professional/Shutterstock.com

Do you feel cheerier on pleasant spring days than in the "dog days" of summer? Environmental psychologists find a link between moods and outdoor temperature.

Jamie Sabau/Getty Images Sport/Getty Images

The opposing team is about to call a time-out to "ice" the field goal kicker with the game on the line, giving him more time to think about the kick. Sport psychologists confirm a long-standing belief that athletes tend to choke in critical situations when they pay too much attention to their performance.

school psychologists Psychologists who evaluate and assist children with learning problems or other special needs.

educational psychologists Psychologists who study issues relating to the measurement of intelligence and the processes involved in educational or academic achievement.

developmental psychologists Psychologists who focus on processes involving physical, cognitive, social, and personality development.

personality psychologists Psychologists who study the psychological characteristics and behaviors that distinguish us as individuals and lead us to act consistently over time.

social psychologists Psychologists who study group or social influences on behavior and attitudes.

environmental psychologists Psychologists who study relationships between the physical environment and behavior.

industrial/organizational (I/O) psychologists Psychologists who study people's behavior at work.

health psychologists Psychologists who focus on the relationship between psychological factors and physical health.

School psychologists work in school systems, where they help children with academic, emotional, and behavioral problems and evaluate students for placement in special education programs. They are also team players who work collaboratively with teachers and other professionals in providing a broad range of services for children.

Educational psychologists develop tests that measure intellectual ability or academic potential, help gear training approaches to students' learning styles, and create ways of helping students reach their maximum academic potential. Many also conduct research; among the issues they study are the nature of intelligence, how teachers can enhance the learning process, and why some children are more highly motivated than others to do well in school.

Developmental psychologists study people's physical, cognitive, social, and personality development throughout the life span. *Child psychologists* are developmental psychologists who limit their focus to child development.

Personality psychologists seek to understand the nature of personality—the cluster of psychological characteristics and behaviors that distinguish each of us as unique individuals and that account for the consistency of our behavior over time. In particular, they study how personality is structured and how it develops and changes.

Social psychologists study how group or social influences affect behavior and attitudes. Whereas personality psychologists look within an individual's psychological makeup to explain behavior, social psychologists focus on how groups affect individuals and, in some cases, how individuals affect groups.

Environmental psychologists study relationships between the physical environment and behavior. They study how weather affects people's moods and whether higher outdoor temperature incites aggressive behaviors, as well as examining psychological effects of environmental factors such as air pollution, overcrowding, and noise (Steg, van den Berg, & de Groot, 2018).

Are your moods affected by the weather? Evidence from studies in environmental psychology shows that people tend to report more positive moods during pleasant spring weather and more negative moods during hotter summer months (Keller et al., 2005). People also tend to post gloomier comments on Facebook postings on rainy days than on days when the sun is shining (Coviello et al., 2014). Another study with more direct pocketbook implications showed that institutional investors who were charged with investing funds of large banks and financial firms were more likely to buy stocks on sunny days and sell them on cloudy ones, perhaps because sunnier days put them in a more cheerful, optimistic mood (Goetzmann et al., 2014).

Even indoor lighting can affect our behavior, as shown in a Canadian laboratory study in which college students showed stronger emotional responses when they were tested under brighter lighting (Xu & Labroo, 2013). The lead investigator, Alison Jing Xu, believes these results have implications for how products are sold: "If you are selling emotional expressive products such as flowers or engagement rings it would make sense to make the store as bright as possible" (quoted in "The Way a Room Is Lit," 2014). On the other hand, if you want to avoid getting into a heated argument with someone, it may be best to first turn down the lights.

Industrial/organizational (I/O) psychologists study people at work. They are concerned with such issues as job satisfaction, personnel selection and training, leadership qualities, effects of organizational structure on productivity and work performance, and challenges posed by changes in the workplace. They use psychological tests to determine the fit between applicants' abilities and interests and the jobs available within an organization or corporation. Some I/O psychologists perform human factors research in which they examine ways of making equipment (for example, airplane gauges and computer systems) more efficient and easier to use.

Health psychologists study how such psychological factors as stress, lifestyle, and attitude affect physical health. They apply this knowledge in developing disease prevention programs and interventions to improve the quality of life of patients with chronic diseases, such as heart disease, cancer, and HIV/AIDS.

Consumer psychologists are interested in understanding consumer behavior—why people purchase particular products and brands. They examine consumers' attitudes toward different products, ways of advertising or packaging products, even the choice of music stores play to put customers in a buying mood.

Emerging Specialty Areas

When G. Stanley Hall founded the American Psychological Association (APA) in 1892, it had 31 charter members (Benjamin, 1997); today, the membership exceeds 100,000. It's no wonder that psychology's interests and specialties cover so wide a range, including such emerging specialty areas as neuropsychology, geropsychology, forensic psychology, and sport psychology.

Neuropsychologists study relationships between the brain and behavior. Although some neuropsychologists limit their activities to research, *clinical neuropsychologists* use specialized tests to evaluate the cognitive effects of brain injuries and strokes. These tests can help them pinpoint the specific areas of the brain affected by injury or disease. Clinical neuropsychologists may also work with rehabilitation specialists in designing programs to help people who have suffered various forms of brain damage regain as much of their functioning as possible.

Geropsychologists focus on psychological processes associated with aging. They work with geriatric patients to help them cope with the stresses of later life, including retirement, loss of loved ones, and declining physical health.

Forensic psychologists work within the legal system (Neal, 2018). They perform psychological evaluations in child custody cases, testify about the competence of defendants to stand trial, develop psychological profiles of criminal types, give expert testimony in court on psychological issues, or assist attorneys in selecting potential jury members.

Sport psychologists apply psychological principles and techniques to sports and athletic competition (Weinberg & Gould, 2019). They help athletes develop relaxation skills and use positive self-talk and mental-focusing skills to overcome performance anxiety and enhance athletic performance. They also study why athletes sometimes "choke" in critical game situations (focusing too much attention on what they are doing can ruin their performance).

Some sport psychologists help athletes handle competitive pressures and balance travel, family, and life demands as well as team dynamics. Sport psychologists also counsel players who experience psychological difficulties adjusting to the rigors of competition.

Professional Psychology: Becoming More Diverse

The early psychologists shared more than just a yearning to understand behavior: Almost all of them were White men of European background. The ranks of women in the early days of psychology were slim, and the ranks of racial and ethnic minorities even slimmer. Back then, women and minority members faced many barriers in pursuing careers in psychology, as they did in numerous other professions.

Consider the puzzle posed about the woman who completed all doctoral degree requirements at Johns Hopkins University but was not awarded the doctoral degree. She was Christine Ladd-Franklin (1847–1930), the earliest woman pioneer in psychology. Christine completed all the requirements for a PhD at Johns Hopkins University in 1882, but the university refused to award her the degree because it did not issue doctoral degrees to women at that time. Nonetheless, she went on to pursue a distinguished research career in psychology, during which she developed a new theory of color vision. She finally received her PhD in 1926.

Another woman pioneer was Mary Whiton Calkins (1863–1930). A brilliant student of William James, Calkins completed all her PhD requirements at Harvard University, but the university denied her a doctorate; like Johns Hopkins, it did not

The Brain Loves a Puzzle

As you read ahead, use the information in the text to solve the following puzzle:

> A student successfully completed all doctoral (PhD) requirements at Johns Hopkins University but was refused a doctorate. Undeterred, the student went on to a distinguished research career in psychology, even formulating a new theory of color vision. Why did the university refuse to grant her the doctoral degree?

CONCEPT 1.17

Women and minority members faced difficult obstacles in pursuing careers in psychology in the early days of the profession.

consumer psychologists Psychologists who study why people purchase particular products and brands.

neuropsychologists Psychologists who study relationships between the brain and behavior.

geropsychologists Psychologists who focus on psychological processes involved in aging.

forensic psychologists Psychologists involved in the application of psychology to the legal system.

sport psychologists Psychologists who apply psychology to understanding and improving athletic performance.

grant doctoral degrees to women. She was offered the doctorate through Radcliffe College, a women's academy affiliated with Harvard, but she refused it. Not easily deterred, she went on to a distinguished career in psychology—teaching and conducting important research on learning and short-term memory. In 1905, she became the first female president of the APA.

Margaret Floy Washburn (1871–1939) encountered similar discrimination when she pursued studies in psychology at Columbia University. In 1894, having found a more receptive environment at Cornell University, she became the first woman in the United States to earn a PhD in psychology. She wrote an influential book, *The Animal Mind*, and in 1921, became the second female president of the APA.

In 1909, Gilbert Haven Jones (1883–1966), an African American, received a doctorate in psychology from a university in Germany. It wasn't until 1920, however, at Clark University in Worcester, Massachusetts, that Francis Sumner (1895–1954) became the first African American to receive a doctorate in psychology in the United States. Sumner went on to a distinguished career in teaching and research. He helped establish the psychology department at Howard University and served as its chairperson until his death in 1954.

CONCEPT 1.18
Though the field of psychology has become more diverse, people of color are still underrepresented in professional psychology.

CONCEPT 1.19
The profession of psychology has undergone a major gender shift in recent years.

In 1920, the same year Sumner earned his doctorate, J. Henry Alston became the first African American to publish his research findings (on the perception of warmth and cold) in a major U.S. psychology journal. It took another 50 years (until 1971) before the first African American psychologist, Kenneth Clark (1914–2005), was elected president of the APA. In 1999, Richard Suinn became the first Asian American psychologist to be elected president of the APA.

The professional ranks of psychology have become more diverse, but people of color remain underrepresented in the profession. Only about one in seven working psychologists are members of ethnic or racial minority groups, which is less than half the percentage in the general population (Lin, Stamm, & Christidis, 2018). However, we can expect minority representation to continue to tick upward, as about 34 percent of early career psychologists are racial or ethnic minorities. ■ Figure 1.5 shows the racial and ethnic makeup of psychologists today for the largest U.S. minority groups.

A different picture emerges when we examine gender shifts in professional psychology (Clay, 2017; Fowler et al., 2018; Winerman, 2017). Women today account for three-quarters of doctorate recipients in psychology. By contrast, only about 20 percent of psychology doctorates in 1970 were granted to women (see ■ Figure 1.6). This gender shift mirrors the increased representation of women in occupations traditionally dominated by men, including medicine and law. However, the gender shift is occurring at a faster rate in psychology than in other professions.

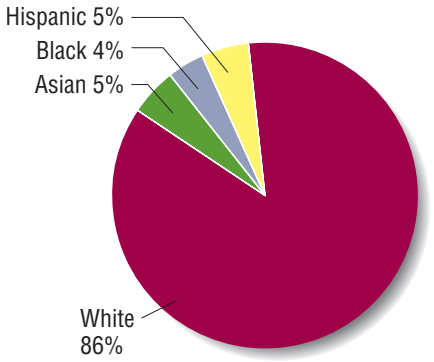
Mary Whiton Calkins

Science History Images/Alamy Stock Photo

Margaret Floy Washburn

AP Images

Kenneth Clark



Note: Percentages are approximate.

FIGURE 1.5 Ethnicities of Psychologists
Although the psychology workforce has become more diverse, racial or ethnic minorities comprise slightly less than 15 percent of psychologists today.

Source: Lin, Stamm, & Christidis, 2018.

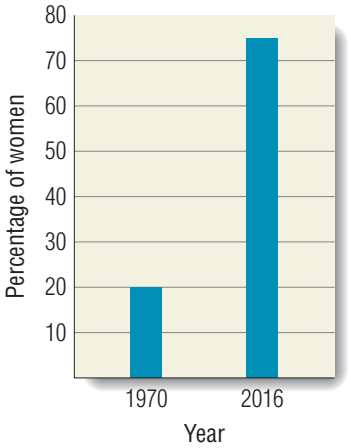


FIGURE 1.6 Women Recipients of Doctoral Degrees in Psychology
Women represent three-quarters of new doctorate recipients in psychology, as compared to about one-fifth in 1970.

Source: Fowler, G., Cope, C., Michalski, D., Christidis, P., Lin, L., & Conroy, J. (2018, December). Women outnumber men in psychology graduate programs. Monitor on Psychology, 49(11), p. 21.

MODULE REVIEW

1.2 Psychologists: Who They Are and What They Do

Recite It

4. Identify specialty areas or subfields of psychology and emerging specialty areas.

Subfields in psychology include clinical and counseling psychology, school psychology, industrial-organizational psychology, and experimental psychology, as well as emerging specialty areas such as geropsychology, (a) _____ psychology, and sport psychology.

5. Describe ethnic and gender characteristics of psychologists today and the changes that have occurred over time.

Though psychology is now a more diverse discipline, African Americans and other minority groups remain (b) _____ in the professional ranks of psychologists. Unlike the early days of the profession, when (c) _____ were actively excluded from pursuing professional careers, they now constitute more than three quarters of new doctoral degree recipients in psychology.

Recall It

1. _____ research focuses on expanding our understanding and knowledge, whereas _____ research focuses on finding answers or solutions to particular problems.

2. Match the following types of psychologists with the type of work they do: (a) counseling psychologists; (b) developmental psychologists; (c) environmental psychologists; (d) consumer psychologists.

i. study changes in behaviors and attitudes throughout the life cycle
ii. study effects of outdoor temperature on aggression
iii. study psychological characteristics of people who buy particular products
iv. help students adjust to college life

3. A psychologist who works within the legal system is most likely to be a

a. social psychologist.
b. neuropsychologist.
c. forensic psychologist.
d. counseling psychologist.

4. The first African American to receive a doctorate in psychology in the United States was

a. Mary Whiton Calkins.
b. Francis Sumner.
c. Gilbert Haven Jones.
d. Kenneth Clark.