REAL WORLD PSYCHOLOGY

Second Edition
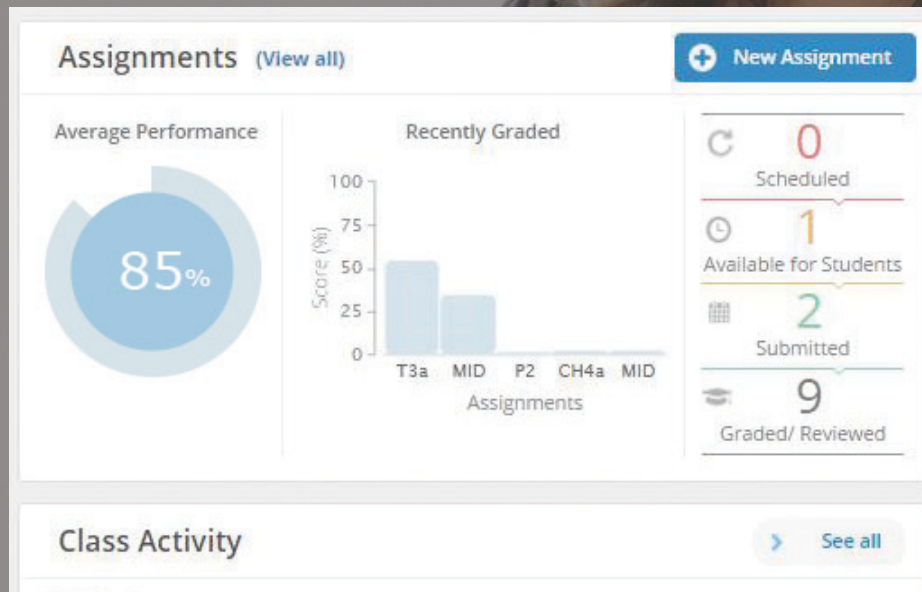
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About the Authors

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KAREN HUFFMAN is an emeritus professor of psychology at Palomar College, San Marcos, California, where she taught full-time until 2011 and served as the Psychology Student Advisor and Co-Coordinator for psychology faculty. Professor Huffman received the *National Teaching Award for Excellence in Community/Junior College Teaching* given by Division Two of the American Psychological Association (APA), along with many other awards and accolades. She's also the author and co-author of several textbooks, including *Psychology in Action*, *Psychology*, and *Real World Psychology*. Professor Huffman's special research and presentation focus is on active learning and critical thinking. She has been the invited speaker and conducted numerous presentations, online web seminars, and teaching workshops throughout the United States, Spain, Canada, and Puerto Rico.

Real World Psychology

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Brief Contents

Contents

Preface

People who believe they have the power to exercise some measure of control over their lives are healthier, more effective and more successful than those who lack faith in their ability to effect changes in their lives.

—Albert Bandura

Why did we, the authors of this text, choose to start our Preface with this particular quote from psychologist Albert Bandura? It's because we strongly agree that having faith in our ability to effect change is all important. We also firmly believe that the field of psychology is the single-best route for gaining some measure of control over our lives, and why we're so happy to "give psychology away" in this Second Edition of *Real World Psychology (RWP)*!

In keeping with this focus on change, did you notice the colorful chameleon on the cover of this book? Have you ever wondered why authors or publishers choose certain images for their books? In our case, we chose the chameleon as RWP's brand image because of its famous ability to change. Our second reason for choosing the chameleon is due to its 360-degree range of vision—making it remarkably adaptive to the environment!

We believe that recognizing and adapting to the world around us is essential to survival and success, as reflected by our text's focus on real world examples and in the title, *Real World Psychology (2e)*.

In addition to discussing our foundational belief in the power of change and adapting to the real-world environment, we want to explain our text's central theme and essence—*Student Engagement*. How can a textbook engage and inspire today's students? Most would agree that good teaching largely depends on the commitment and excitement of the teacher, and we believe the same can be said about a textbook and its authors. As you'll see in the next section, we've done everything we can in this Second Edition to engage and inspire the reader. Psychology has always been a deep passion and love for both of us. After a combined total of more than 50 years of teaching introductory psychology, we truly believe that understanding ourselves and others can enrich and improve virtually every aspect of our lives—work, play, home, college, national and international affairs.

Unfortunately, studies find that this first class in general psychology is the only formal course in psychology that most students will ever encounter, and the field is so large and complex that it's a constant juggling act to try to cover all the major concepts and theories. How can one text, *Real World Psychology (RWP 2e)*, capture all the essential content, while still engaging and inspiring you—our readers and professors?

Designed for introductory psychology teachers and their students, this text is *concise, comprehensive,* and *comprehensible* (see the following details):

- **Concise**   When textbook chapters (or classroom lectures) are too long, attention strays and educational goals are lost. But brevity is more than just fewer words. The true goal of concise writing is clarity. Textbooks and teachers must be as brief and clear as possible because *brevity with clarity matters*!

- **Comprehensive**   Knowing that the overarching goal of all instructors is to present the essentials of our field, this text is dedicated to comprehensive coverage of all the core concepts because *content matters!* For example, given that the scientific method and its various components is one of the most common learning objectives in psychology, we believe students need more practice and exposure than just the basic introductory material most texts traditionally provide.

Therefore, we include a special **PsychScience** feature that offers an expanded discussion of the latest research on various "Hot Topics," such as the impact of distracted driving and whether or not animals have distinct personalities. The detailed example is then followed by a special, interactive *Research Challenge*, which asks the reader to identify the research method, independent variable (IV), dependent variable (DV), and so on. This exercise helps reinforce the core learning objective on research methods, while also building student appreciation and engagement with the latest research. Answers are provided in Appendix B. (See three **PsychScience** boxes below.)

PS PsychScience

Does Wearing Red Increase Your Sex Appeal?

To examine this question, researchers recruited women who had on-line dating profiles expressing interest in meeting a man, and had posted color photographs (Guéguen & Jacob, 2014). Through the magic of photoshop, the researchers changed the color of the woman's shirt in the photograph every 12 weeks: the color rotated at random through red, black, white, yellow, blue, and green. The women were asked to notify the researchers of how many emails they received from men during the eight to nine-month period of the study. As hypothesized, women received more contacts from men when they wore red (see photo) as opposed to any of the other five colors. In fact, they received about a five percent increase in emails.

Does the color red also impact a man's sex appeal? In a related study, researchers showed female college students photographs of a man who was wearing a red, white, blue, or green shirt (Elliot et al., 2010). They then asked the women to rate his attractiveness, as well as their interest in dating, kissing, and engaging in other types of sexual activity with him. As predicted, men who were wearing a red shirt seemed more powerful, attractive, and sexually desirable. This effect was also seen across a variety of cultures, including the United States, England, Germany, and China, suggesting that these links between the color red and perceptions of attractiveness are partially rooted in our biology, not merely social learning.

Reggie Casagrande/Getty Images

and/or experimental research? (Tip: Be sure to look for two separate answers for the two different studies.)

2. If you chose:
   • *descriptive research*, is this a naturalistic observation, survey/interview, case study, and/or archival research?
   • *correlational research*, is this a positive, negative, or zero correlation?
   • *experimental research*, label the IV, DV, experimental groups(s), and control group.
   • both *descriptive* and *correlational*, answer the corresponding questions for both.

Check your answers with those provided.

Note: The information provided in this study is a[t a] level of detail is similar to what is presented in m[ost] reports of research findings. Answering these que[stions, and then compar]ing your answers to those provided, will help yo[u become a better critical] thinker and consumer of scientific research.

Research Challenge

1. Based on the information provided, did this research (Guéguen & Jacob, 2014; Elliot et al., 2010) use descriptive, correlational,

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PS PsychScience

Can Taking Photos Impair Our Memories?

Researchers interested in this and related questions set up two studies using participants who were led on a guided tour of an art museum (Henkel, 2014). During the tour participants were asked to take note of certain objects, either by photographing them or by simply observing them. The next day their memory for the specific objects was tested. As you may have suspected, participants were less accurate in recognizing the objects they had photographed, and weren't able to answer as many questions about the objects' details, compared to those they had only observed.

However, when participants were asked to zoom in and photograph a specific part of the object, their subsequent recognition and detail memory was not impaired. Furthermore, participants' memories for features that were NOT zoomed in on were just as strong as memory for features that were zoomed in on. Can you see how this finding suggests that the selective attention and deeper levels of processing engaged by this focused activity improve overall encoding, and may eliminate the photo-taking-impairment effect?

This research has important implications. Given that it's difficult to always be paying full focused attention, we need to keep in mind that while we're mindlessly taking numerous "selfies" and other photos we may encode fewer details. This means that taking photos the whole time we're on vacation or during a child's dance recital may not only interfere with our full enjoyment of the event, but our actual memories of those special occasions as well! (Study Tip: While reading this and other college texts and/or listening to lectures, you can improve your learning and memory by consciously directing your brain to pay focused, selective attention to important details. You can also process the material at a deeper level by "zooming in" on important details.)

Owen Franken/Getty Images

Research Challenge

1. Based on the information provided, did this study (Henkel, 2014) use descriptive, correlational, and/or experimental research?

2. If you chose:
   • *descriptive research*, is this a naturalistic observation, survey/interview, case study, and/or archival research?
   • *correlational research*, is this a positive, negative, or zero correlation?
   • *experimental research*, label the IV, DV, experimental group(s), and control group.
   • both *descriptive* and *correlational*, answer the corresponding questions for both.

Check your answers with those provided.

Note: The information provided in this study is admittedly limited, but the level of detail is similar to what is presented in most text books and public reports of research findings. Answering these questions, and then comparing your answers to those provided, will help you become a better critical thinker and consumer of scientific research.

PS PsychScience

Can Watching Movies Prevent Divorce?

As we all know, roughly half of all U.S. marriages end in divorce. Numerous secular and religious institutions have attempted to reduce this rate with various early marriage intervention programs. To examine whether simple self-help strategies, such as watching and discussing movies about relationships, might offer some of the same benefits as these professionally led intervention programs, researchers randomly assigned 174 couples to one of four groups (Rogge et al., 2013):

• Group 1 (control) received no training or instructions.
• Group 2 (conflict management) learned active listening strategies to help discuss heated issues.
• Group 3 (compassion and acceptance training) learned strategies for finding common ground and showing empathy.
• Group 4 (minimal intervention—movie and talk) attended a 10-minute lecture on relationship awareness and how watching couples in movies could help increase awareness of their own behaviors.

Following this initial assignment to groups, Group 1 received no training at all, but members of this group were similar to those in the three other groups in terms of age, education, ethnicity, relationship satisfaction, and other dimensions. Groups 2 and 3 attended weekly lectures, completed homework assignments, and met with a trained therapist periodically. In contrast, Group 4 only attended a 10-minute lecture, watched a romantic comedy, and then discussed 12 questions about the screen couple's interactions (such as, "Did they try using humor to keep things from getting nasty?"). They were then sent home with a list of 47 relationship-oriented movies and allowed to choose their favorite one to watch and discuss once a week for the next month.

The researchers then followed up with all couples 3 years later to see which of these approaches was most effective for preventing divorce. Much to their surprise, couples in all three of the intervention groups were much less likely to get divorced compared to those in the control group. Specifically, 24% of couples in the control group were divorced, compared to only 11% of those in any of the other three groups. Even more surprising, this study shows that a simple self-help strategy of watching and discussing five relationship movies over 1 month's time can be just as effective at reducing the divorce or separation rate as more intensive early marriage counseling programs led by trained psychologists.

MAD_Production / Shutterstock

Do you see how this study has exciting wide-scale, national applications? If "movie date night" can double as therapy, many U.S. couples might be saved from the very high emotional and financial costs of divorce. What about your own current or future relationships? If simply sharing and discussing a relationship movie now and then with your romantic partner might strengthen that relationship, why not try it? You can learn more about this study (and see a list of recommended movies with guided discussion questions) at: www.couples-research.com.

Research Challenge

1. Based on the information provided, did this study (Rogge et al., 2013) use descriptive, correlational, and/or experimental research?

2. If you chose:
   • *descriptive research*, is this a naturalistic observation, survey/interview, case study, and/or archival research?
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Check your answers with those provided.

Note: The information provided in this study is admittedly limited, but the level of detail is similar to what is presented in most text books and public reports of research findings. Answering these questions, and then comparing your answers to those provided, will help you become a better critical thinker and consumer of scientific research.

• **Comprehensible** A good textbook must be more than concise and comprehensive. It must organize and present complex topics in a manner that is easily read and understood by the reader. However, comprehension and retention of abstract concepts is difficult for many students unless they are clearly linked to their daily lives. Therefore, *RWP* uses numerous real world examples and real world applications to scaffold the content of psychology onto the reader's existing schemas (see the two samples on the next page). This real world focus increases comprehension, while at the same time showing our readers why *studying psychology matters*!

Real World Psychology—Understanding the World

Subliminal Music and Food Choices

In a recent study, researchers placed 10 volunteers in different rooms with music playing in the background from one of three regions—the United States, China, or India (North et al., 2016). While listening to different types of music, each participant looked at a menu for 5 minutes with 30 dinner options (10 from each country). The scientists then asked them to recall as many dishes from the menu as they could, and then to choose one dish to order as a meal. Perhaps thanks to subliminal stimuli from the music, participants better remembered and chose dishes that reflected the music they had listened to before looking at the menu. For example, those who listened to American music ("California Girls," "Surfin' U.S.A.," and "Good Vibrations" by the Beach Boys) chose foods like hamburgers and hot dogs (see photo).

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Psychology and You—Understanding Yourself

Sexual Response Reflexes

Reflexes even influence our sexual responses. Certain stimuli, such as the stroking of the genitals, can lead to arousal and the reflexive muscle contractions of orgasm in both men and women. However, in order for us to have the passion, thoughts, and emotion we normally associate with sex, the sensory information from the stroking and orgasm must be carried on to the appropriate areas of the brain that receive and interpret these specific sensory messages.

Kovalchynskyy Mykola/Shutterstock

For even more real world applications that are tied in with core psychology topics, we've added a **NEW** feature, **PositivePsych**–see the sample below. Psychology has a long history of focusing primarily on dysfunction versus function and negative versus positive outcomes. To offset this imbalance, and further engage our readers, we offer numerous examples and applications from the field of positive psychology, which emphasizes optimal human functioning.

PP PositivePsych

Would You Donate a Kidney to a Stranger?

In what is a particularly remarkable act of altruism, each year people donate one of their kidneys to strangers (people they aren't related to and don't know). They receive nothing in return, and generally experience serious pain and discomfort, along with a somewhat lengthy period of recovery. What prompts this type of generosity? Under what conditions would you donate a kidney to a stranger? Some research suggests that people who feel good about themselves overall are more likely to engage in other types of prosocial behavior, such as volunteering and giving money to charity, which might explain organ donation.

To examine this idea, researchers in the United States compared rates of kidney donations in different states with each state's overall level of well-being (Brethel-Haurwitz & Marsh, 2014). As predicted, states with higher rates of kidney donation tended to have higher rates of well-being. This finding held true even after the researchers took into account other factors that could explain this relationship, such as household income, age, education, religion, and mental and physical health.

What do you think? Beyond giving a kidney while you're alive, are you registered as an organ donor upon your death? Given the thousands of people who die each year who are on waiting lists for donor organs, should we adopt policies like considering everyone to be a donor unless they officially "opt-out?" If you'd like more information on the facts and myths about organ donation, visit: http://www.americantransplantfoundation.org/about-transplant/facts-and-myths/

PA images/Alamy Stock Photo

As you can see, we feel passionate about our second edition and believe that our B (Brevity) and three Cs (Concise, Comprehensive, and Comprehensible) can turn "B" and "C" students into "A"s! We're eager to share our passion for psychology with all instructors and their students. If you have suggestions or comments, please feel free to contact us directly: Catherine Sanderson (casanderson@amherst.edu) and Karen Huffman (khuffman@palomar.edu).

What's New in the Second Edition?

Real World Psychology, Second Edition, includes over 1500 new research citations, a fresh new design and layout, new photos, figures, and tables, and some chapter reorganizations. As in the previous edition, numerous integrated cross cultural examples are found throughout the text, along with **Think Critically** discussion sections generally placed in the "Self-Tests" and sprinkled throughout each chapter.

General Changes—The following list includes the most significant, general changes we incorporated throughout the Second Edition:

- Expanded the *Chapter Overview* to include a summary of the entire chapter.
- Updated and expanded learning objectives for each chapter.
- Reconfigured some figures and/or created NEW **Process Diagrams** for each chapter to better illustrate the step-by-step processes of certain key concepts.
- Replaced "minority" and "minorities" with "person of color" and "people of color."
- Changed references to "African-Americans" and "Caucasians" to "Black" and "White."
- Due to recent findings, which better reflect the actual response of the autonomic nervous system (ANS), we changed "fight or flight" to "fight-flight-freeze."
- In response to reviewer suggestions, we deleted the previous *Voices from the Classroom*, which also allowed us space to include our NEW **PositivePsych** feature in each chapter.
- Each *Self-Test* following the major headings has been updated and expanded to include additional and new questions, as well as changes in the **Think Critically** sections.
- Updated and refined all key term definitions using full sentences.
- Expanded details within each end-of-chapter, narrative **Summary**.

Specific Changes—Below, you will find a listing of the **specific content changes** in each chapter of RWP(2e). Note that the top section highlights the changes to the "Things you'll learn," as well as providing the titles of the NEW and continuing **PositivePsych** and **PsychScience** sections.

Chapter 1 Introduction and Research Methods

Real World **Psychology**
Things you'll learn in Chapter 1
[Q1] How does your culture influence what you look for in a romantic partner?

[Q2] Can a change in posture make you more attractive?
[Q3] Do breast-fed babies have higher IQs?
[Q4] Can a diet high in fats and sugars impair learning and memory?
[Q5] Are older people happier than younger people?
[Q6] What are the two best study techniques for improving your exam performance?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych What Makes Us Happy?
Psych**Science** Why Do Men and Women Lie About Sex?

- Expanded discussion of *pseudopsychology* (p. 2).
- Updated and added new activity to Table 1.1 (p. 5).
- Expanded discussion of evolutionary psychology and added new key term for **natural selection** (pp. 5-6).
- Expanded coverage of *Gender and People of Color* section (p. 6).
- Updated and moved *Psychology's Research Ethics* (pp. 13-15) from previous *Research Methods* to the *Science of Psychology* section.
- Revised Table 1.5 (p. 16) "Psychology's Three Major Research Methods."
- Revised two sections, *Limits of Correlations* and *The Value of Correlations* (pp. 19–20), including two new key terms—the **third-variable problem** and **illusory correlation**. Removed *confounding variable* as a key term.
- NEW Table 1.6 (p. 20) "Superstitions as Illusory Correlations."
- NEW example of "texting while driving" in **Process Diagram 1.2** (p. 21).
- NEW Figure 1.12 (p. 23) "Can a horse, add, multiply, and divide?"
- Revised drawing of Figure 1.13 (p. 24) to better reflect the single- and double-blind set up.
- Added new key term, **placebo effect** (p. 24).
- Significantly revised and expanded *Strategies for Student Success section* (pp. 26–30) to include:
  - NEW **Psychology and You** (p. 26) "Skills for Student Success Checklist."
  - NEW Test Yourself (Stroop effect) "The Importance of Focus and Active Reading" (p. 27).
  - NEW section (pp. 29–30) *Grade Improvement.*
  - NEW section (p. 30) *A Final Word About College Success.*

Chapter 2 Neuroscience and Biological Foundations

Real World **Psychology**
Things you'll learn in Chapter 2
[Q1] Does spending the first few months of life in an orphanage lead to long-term problems in cognitive functioning?

[Q2] How can singing and/or dancing make you feel closer to strangers and also raise your pain threshold?

[Q3] Why does eye contact with your dog make you feel good?

[Q4] How might stem cell injections have saved "Superman"?

[Q5] Can playing video games be good for your brain?

[Q6] Why are former NFL athletes at increased risk of depression, dementia, and suicide?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych The Power of Positive Coaching
PsychScience Phineas Gage—Myths Versus Facts

- Due to reviewer suggestions and chapter length, moved section on *Our Genetic Inheritance* to Chapters 9 and 11, along with these key terms: *behavioral genetics, evolutionary psychology, gene, heritability,* and *natural selection*.

- Added NEW and expanded section, *Understanding the Neuron* (pp. 34–35).

- Added NEW narrative discussion of the three steps of communication within the neuron, and the three steps of communication between neurons (pp. 35, 37).

- Added NEW key term, **all-or-nothing principle** (p. 37).

- Added glutamate to Table 2.1 (p. 39).

- Added NEW Figure 2.5, "Lou Gehrig's disease or repeated head trauma?" (p. 43).

- Expanded and moved the previous section on the *Cerebral Cortex* to the end of the chapter for better chapter coverage and balance.

- Expanded discussion of frontal lobes (pp. 54–56).

- Added NEW **Psychology and You**—"Testing Your Motor Cortex and Somatosensory Cortex" (p. 58).

- Significantly revised part E of Figure 2.19 (p. 59).

- Created new **Applying Real World Psychology** feature and photo (p. 61).

Chapter 3 Stress and Health Psychology

Real World **Psychology**
Things you'll learn in Chapter 3

[Q1] Does frequent checking of your email and social media increase your stress?

[Q2] Can the stress of growing up in poverty cause changes in your brain?

[Q3] Does watching televised coverage of natural disasters increase symptoms of posttraumatic stress disorder?

[Q4] Could thinking about the "silver linings" of a stressful event, or sharing it with others, reduce depression?

[Q5] Are people with stressful jobs at increased risk of experiencing a heart attack?

Throughout the chapter, margin icons for Q1–Q5 indicate where the text addresses these questions.

PositivePsych Mindfulness and Your GPA
PsychScience When Losers Actually Win

- Added NEW Myth Busters feature (p. 63).

- Changed the name of the previous section on *Chronic Stress* to *Acute/Chronic Stress*, and added NEW key term, **acute stress** (p. 64).

- Updated Table 3.1, "Types of Conflict" (p. 66), with new graphics and text.

- Expanded research discussion of cataclysmic events (p. 67).

- Added NEW term of *fight-flight-freeze* to replace previous *fight or flight*, and NEW research discussion of gender differences in reaction to stress (p. 68).

- Added NEW Figure 3.3, "Our brain under chronic stress," and NEW section, *Benefits of Stress*, and two NEW key terms, **distress** and **eustress** (p. 71).

- Added NEW Figure 3.4, "Stress and task complexity," and discussion of the so-called "advantages" of mass trauma events compared to individual-level trauma (p. 72).

- Removed discussion of *Type A* and *Type B behavior patterns* and as key terms from the previous section on *Cardiovascular Disorders*.

- Expanded discussion of PTSD and added two new tables, "Key Characteristics of PTSD" and "Seven Important Tips for Coping with Crisis" (pp. 75–76).

- Added NEW **Real World Psychology** feature—"Helping Someone with PTSD" (pp.76–77).

- Added NEW section, *Cognitive Appraisal* (pp. 78–79).

- Revised previous Figure 3.11 to make it **Process Diagram 3.3** (p. 78).

- Added NEW section, *Personality and Individual Differences,* to include *locus of control, positive affect,* and *optimism* (pp. 79-80).

- Added NEW key term, **optimism** (p. 80).

- Added NEW **Real World Psychology** feature—"Why Are Optimists Healthier?" (p. 80).

- Added NEW **Psychology and You**—"Practicing Progressive Relaxation" (p. 82).

- Moved and revised previous section, *Health Psychology and Stress Management,* to the end of chapter, with NEW sections on *Health Psychology at Work* and *Coping with Job and Technostress* (pp. 85-86).

- Added NEW key term for **technostress** (p. 85).

- Added NEW **Psychology and You**—"Workplace Stress" (p. 86).

Chapter 4 Sensation and Perception

Real World **Psychology**

Things you'll learn in Chapter 4

[Q1] Do athletes have a higher pain tolerance than non-athletes?

[Q2] Can looking at a photograph of a loved one lead you to feel less pain?

[Q3] Can using a lower-pitched voice affect your perceived influence and power?

[Q4] How can listening to loud music on headphones damage your hearing?

[Q5] Why do babies (and adults) need skin-to-skin contact?

[Q6] Are Black football players more likely to be penalized for touch-down celebrations than White football players?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Can Bouncing a Baby Increase Helping?

PsychScience Does Wearing Red Increase Your Sex Appeal?

- Added NEW Figure 4.1, "Sensation and perception" (p. 90).

- Moved discussion of *bottom-up* and *top-down processing* from end of chapter to opening as tie ins and examples of sensation vs. perception (p. 90).

- Slightly revised Table 4.1, "Sensation and Perception" (p. 91).

- Added NEW Figure 4.3, "Why is our difference threshold important?" (p. 92).

- Expanded section on Subliminal Stimuli, and added NEW key term, **priming** (pp. 93–94).

- Added NEW **Real World Psychology** feature—"Subliminal Music and Food Choices" (p. 94).

- Added NEW Figure 4.6, "Treating phantom limb pain" (p. 95).

- In response to reviewers, we move moved *Color Vision* from the perception section at the end of the chapter to the vision section (pp. 98-100).

- Added NEW Figure 4.9, "Primary colors" (p. 99).

- Removed previous Table 4.3, and added research and discussion on the NEW key term, **volley principle for hearing** (p. 102).

- Expanded discussion of taste and smell receptors (p. 104).

- Added NEW Figure 4.15, "Infant benefits from kangaroo care" (p. 107).

- Added new discussion of the distinction between *sensory adaptation* and *habituation* (p. 110).

- Replaced Figure a. from Figure 4.19, "Form perception and "impossible figures" and expanded discussion (p. 110).

- Expanded discussion with NEW research on *depth perception,* and added NEW Figure 4.23, "Visual cues for depth perception" (p. 112).

- Updated and expanded discussion of *Ames room illusion,* Figure 4.28 (p. 114).

- Removed discussion of *fallacy of positive instances* (p. 116).

Chapter 5 States of Consciousness

Real World **Psychology**

Things you'll learn in Chapter 5

[Q1] Could you fail to notice a clearly visible brutal assault (or a person in a gorilla suit) if you were otherwise distracted?

[Q2] Can using a computer or iPad late at night make it harder to fall asleep?

[Q3] Are you addicted to Facebook?

[Q4] Does binge drinking reduce condom use?

[Q5] Can using marijuana decrease your IQ?

[Q6] Can hypnosis decrease the pain of childbirth?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Can Meditation Increase Helping Behaviors?

PsychScience The Very Real Hazards of Distracted Driving

- Added NEW #2 heading, *Understanding Consciousness* (p. 120).

- Expanded discussion of *selective attention* (p. 120).

- Added NEW key term, **inattentional blindess** (p. 120).

- Added NEW section on *Levels of Awareness*, and two NEW key terms, **controlled processes** and **automatic processes** (p. 121).

- Added NEW #2 heading, *Understanding Sleep and Dreams* (p. 123).

- Rearranged and added NEW Part c. to Figure 5.2 (p. 124).

- In response to NEW research, changed the stages of NREM sleep from 4 stages to 3 stages, and adjusted Figure 5.3 (p. 126).

- Added NEW **Think Critically** questions to Table 5.1 (p. 129).

- Changed category of "Opiates" to "Opiates/Opiods" in text, key term, and Table 5.3 to reflect current usage (pp. 134, 137).

- Added NEW Figure 5.8, "Alcohol and rape" discussing the controversy over Brock Turner's light sentence, and added **Think Critically** questions (p. 136).

- Changed and updated photo of Cory Monteith and "High cost of drug abuse" to photo of Prince (p. 138).

- Expanded discussion on the controversial research on marijuana (p. 138).

- Updated section on *Club Drugs* (pp. 138–139).

- Updated section on *Meditation and Hypnosis* (pp. 139–142).

Chapter 6 Learning

Real World **Psychology**

Things you'll learn in Chapter 6

[Q1] Why can simply hearing the sound of a drill in a dentist's office—even if that drill is nowhere near you—make you feel anxious?

[Q2] Can off ering cash incentives and gift cards to smokers actually help them to quit?

[Q3] Why do gamblers have such trouble quitting, even when they continue to lose money?

[Q4] Can children learn anti-fat prejudice and math anxiety from their parents?

[Q5] Why can even young children recognize a picture of a snake much faster than a picture of a frog or caterpillar?

Throughout the chapter, margin icons for Q1–Q5 Indicate where the text addresses these questions.

PositivePsych The Impressive Powers of Prosocial Media

PsychScience Can Television Exposure Change Body Size Preference?

- Expanded discussion of the *six principles of classical conditioning* (pp. 150–152).

- In response to reviewers, removed the word "stimulus" from key terms of **generalization** and **discrimination** and added the words "in classical conditioning" to the term (pp. 150–151).

- Expanded discussion of Skinner's response to Thorndike and his definition of reinforcement and punishment as observable behaviors. Updated Table 6.2, "How Reinforcement Increases (or Strengthens) Behavior" (pp. 154–155).

- Expanded discussion of *primary* and *secondary reinforcers* and *positive* and *negative punishment*, deleted *Premack principle* as a key term, and updated Table 6.3, "How Punishment Decreases (or Weakens) Behavior" (pp. 155–157).

- Added NEW **Real World Psychology** feature (p. 159) discussing the "Eff ective Use of Reinforcement and Punishment."

- NEW Table 6.4 (p. 158) "Potential Side Eff ects of Punishment" with NEW **Think Critically** questions.

- Reorganized and added six NEW *Principles of Operant Conditioning* section with NEW key term—**acquisition** (pp. 158–161).

- Added NEW Figure 6.8, "Shaping in action" (p. 159).

- Added NEW Figure 6.9, "Gambling-a partial schedule of reinforcement" and updated Table 6.5, "Four Schedules of Partial (Intermittent) Reinforcement" (p. 160).

- Added NEW Figure 6.10, "Which schedule is best?" (p. 161).

- Updated Part a. of Figure 6.11, "Operant conditioning in everyday life" (p. 161).

- Updated Table 6.6, "Comparing Classical and Operant Conditioning" (p. 162).

- Added and expanded NEW section, *Cognitive-Social Learning and Everyday Life* (pp. 164–167).

- Added NEW **Psychology and You** (p. 167) "Using Learning Principles to Succeed in College."

- Added NEW Figure 6.16 (p. 168) "How our brains respond to reinforcement versus punishment."

- Added NEW **Think Critically** questions to **Psychology and You** (p. 170).

Chapter 7 Memory

Real World **Psychology**

Things you'll learn in Chapter 7

[Q1] Do video game players have better working-memory skills?

[Q2] How can taking a nap improve your memory?

[Q3] Why do we remember President Lincoln better than President Truman?

[Q4] How might exposure to pornography interfere with memory?

[Q5] Could someone falsely convince you as an adult that you committed a serious crime as a teenager?

Throughout the chapter, margin icons for Q1–Q5 indicate where the text addresses these questions.

PositivePsych Memory and Age-Related Happiness

PsychScience Can Taking Photos Impair Our Memories?

- Moved previous **Psychology and You** personal memory test from end of chapter to first pages to demonstrate constructive nature of memory (p. 175).

- Added NEW key term—**levels of processing** (p. 176).

- Added NEW discussion regarding infant memories and NEW key term—**age-related positivity effect** (pp. 180-181).

- Added NEW **Psychology and You** on "Improving Elaborative Rehearsal" (p. 183).

- Updated previous **Psychology and You**, which used the "Penny Test" to demonstrate encoding failure, and replaced it with a test of the "Apple Logo" (p. 187).

- Removed *sleeper effect* as a key term.

- Added NEW **Real World Psychology** feature—"High Price of Forgetting" (p. 188).

- Added NEW **Psychology and You**—"Common FBMs" (p. 191).

- Added NEW **Real World Psychology** feature—"How Emotional Arousal May Threaten Our Survival!" (p. 192).

- Added NEW section on *Traumatic Brain Injury* (TBI) with a NEW **Real World Psychology** feature—"Professional Sports and Brain Damage" (p. 193).

- Added expanded section on *Eyewitness Testimony* and a NEW Figure 7.19 (pp. 196-197).
- Expanded section on *False Versus Repressed Memories*, and a NEW Figure 7.20 on brain scans that detect true versus false memories (p. 198).
- Added NEW section *Memory Improvement—Strategies for Student Success*, which summarizes specific tips found throughout the chapter (pp. 199–201).

Chapter 8 Thinking, Language, and Intelligence

Real World **Psychology**

Things you'll learn in Chapter 8

[Q1] Why might some medical treatments be judged as more effective than they really are?

[Q2] Can outdoor activities or simply taking a walk improve your creativity?

[Q3] Do babies begin to learn language even before they are born?

[Q4] Does speaking multiple languages make you smarter?

[Q5] Can personal traits and character strengths be better predictors of achievement than IQ?

[Q6] Will watching TV dramas increase your emotional intelligence?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Why Talk or Read to Babies?

Psych**Science** The Power of Words

- In response to reviewers, removed *concept, artificial concept*, and *mental image* as key terms.
- Added NEW **Psychology and You**—"Problem Solving and Your Career" (p. 206).
- Added NEW Table 8.1, "Three Problem-Solving Heuristics and Your Career" (p. 208).
- Added NEW section, *Strategies for Better Problem Solving* (p. 210).
- In response to reviewers, changed Table 8.2 to use Nikola Tesla versus Thomas Edison as an exemplar for creative thinking (p. 211).
- Added NEW key term—**convergent thinking** (p. 211).
- Updated Table 8.3, "Resources of Creative People" with new resource and applied to Lady Gaga (p. 212).
- Added NEW **Real World Psychology** feature—"Language Distortions" (p. 215).
- Updated Table 8.4, "Language Acquisition," and in response to reviewers removed *cooing, babbling, overextension, overgeneralization*, and *telegraphic speech* as key terms (p. 216).

- To balance content in the previous *Intelligence* section, we divided it into two sections, *Intelligence* and *Intelligence Controversies*. We then moved *Measuring Intelligence* up in the first section and Sternberg, Gardner, and Goleman's EI into the second section.
- Added two NEW key terms—**mental age (MA)** and **normal distribution** (p. 220).
- Removed *savant syndrome* as a key term.
- Added NEW discussion of gender differences in IQ, NEW Figure 8.13, "Brain sex differences," and NEW Table 8.6, "Problem-Solving Tasks Favoring Women and Men" (pp. 225–226).
- Updated discussion of research on controversial issues in IQ differences (pp. 226–228).
- Added NEW key term—**triarchic theory of intelligence** (p. 229).
- Added NEW **Psychology and You** feature—"Key Traits for Emotional Intelligence (EI)" (p. 230).
- Added NEW **Psychology and You** feature—"Optimizing Your Well-Being" (p. 231).

Chapter 9 Life Span Development

Real World **Psychology**

Things you'll learn in Chapter 9

[Q1] Why are young people more supportive of gay marriage than older adults?

[Q2] Does prenatal exposure to smoke increase the risk of obesity later in life?

[Q3] Why do teenagers sleep so much?

[Q4] Do babies learn faster when they're sitting up than when they're lying down?

[Q5] Does the taking and posting of self-portraits ("selfies") increase narcissism?

[Q6] Do today's college students want women to propose marriage?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Adults Need Hugs Too!

Psych**Science** Deprivation and Development

- Removed *maturation* as a key term (p. 236).
- Updated Figure 9.1 from Lorenz and geese to cranes (p. 236).
- Updated Figure 9.3, "Cross-sectional versus longitudinal research" (p. 238).
- Added NEW **Psychology and You**—"Want to be Happier? Grow Older!" (pp. 239–240).
- Added NEW section on genetics with NEW key terms, **chromosomes, DNA, gene, behavioral genetics,** and **epigenetics** (pp. 241–242).

- Updated Table 9.2, "Sample Prenatal Environmental Conditions that Endanger a Child." Added new discussion of *fetal alcohol spectrum disorder (FASD)*, and removed *fetal alcohol syndrome (FAS)* as a key term (pp. 243–244).
- Added NEW **Real World Psychology** feature—"Puberty and Oversleeping" (p. 246).
- Moved previous discussion of teenage brain from *Cognitive Development* section up to *Physical Development* (p. 246).
- Added NEW section and NEW key term **emerging adulthood** (p. 247).
- Added NEW discussion of theories of aging and why we die, along with a new section, *Late Adulthood brain* (p. 248).
- Added the late Justice Scalia to **Real World Psychology** feature (p. 249).
- Updated previous Table 9.3 and made it **Process Diagram 9.2** (p. 251).
- Expanded discussion and examples of *Preoperational Stage* (p. 252).
- Expanded discussion and examples of *Formal Operational Stage* (p. 254).
- Expanded discussion and examples of *Attachment* (p. 257).
- Updated and added NEW drawings to Figure 9.20, "Research on infant attachment" (p. 259)
- Added NEW discussion of father's role in parenting styles (p. 260).
- In response to reviewers, removed *conventional level, preconventional level*, and *postconventional level* as key terms (pp. 261–262).
- Added NEW section, *Thomas and Chess's Temperament Theory* and NEW key term—**temperament** (pp. 263–264).

Chapter 10 Motivation and Emotion

Real World **Psychology**
Things you'll learn in Chapter 10
[Q1] Is paying students to get good grades a good idea?
[Q2] How can just looking at pictures of high-fat foods make you feel hungry?
[Q3] Is motivation a better predictor of success than IQ?
[Q4] Does sexual frequency predict greater well-being?
[Q5] Can airport security agents increase their effectiveness by simply talking to passengers?
[Q6] Are our emotions contagious?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Can Long-Distance Relationships Survive?
PsychScience Does Your Smile Tell Others Where You're From?

- Expanded discussion of optimal-arousal theory, added NEW Figure 10.3, "The Yerkes-Dodson law," and NEW key term—**Yerkes-Dodson law** (pp. 272–273).

- Added NEW **Psychology and You**—"Test Yourself/Need for Achievement" (p. 281).
- Added discussion of personal control and achievement, and two NEW key terms—**growth mindset** and **grit** (p. 281).
- Moved section on *Extrinsic Versus Intrinsic Motivation* up before sexuality (pp. 281–283).
- Added NEW **Psychology and You**—"Tips for Increasing Motivation" (p. 283).
- Updated Table 10.3, "Sexual Orientation Myths," to include 2015 Obergefell v. Hodges decision legalizing gay marriage (p. 285).
- Added new discussion of Orlando, Florida 2016 attacks on gays as latest example of sexual prejudice (p. 285).
- For better balance in length of #2 heads, we broke the previous *Components and Theories of Emotion* into two *Components and Theories of Emotion* (pp. 286–291) and *Experiencing Emotions* (pp. 292–298).
- Added NEW Figure 10.12, "The three components of emotion—in action!" (p. 286).
- Moved previous Figure 10.18 (p. 296) to this section (p. 287).
- Added NEW section, *Evaluating Theories of Emotion* (pp. 290–291).
- Added NEW information on the 6-12 emotions, and later research that limits it to four—happy, sad, afraid/surprised, and angry/disgusted (pp. 292–293).
- Added NEW Table 10.4, "Sample Basic Emotions," comparing four different groups of theorists with a Test Yourself to identify six photos of infant emotions (p. 293).
- Added NEW section, *The Psychology of Happiness*, which discusses the latest research (pp. 296–298).
- Added NEW **Psychology and You**—"Five Tips for Increased Happiness" (pp. 296-297).
- Added NEW key term—**adaptation-level phenomenon** (p. 297)

Chapter 11 Personality

Real World **Psychology**
Things you'll learn in Chapter 11
[Q1] Are some people with highly negative attitudes toward gay people repressing their own sexual desires?
[Q2] Which personality traits are most important for your career and academic success?
[Q3] What parenting skills are also associated with increased marital satisfaction?
[Q4] Can spending time in a foreign country change your personality?
[Q5] Do our genes predict how much we will give to charity?
[Q6] Can social media postings be used to measure your personality?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Can (and Should) We Improve Our Personality Traits?

PsychScience Do Nonhuman Animals Have Unique Personalities?

- Deleted *pleasure principle, reality principle*, and *morality principle* as key terms (pp. 302–303).

- Expanded narrative discussion of psychosexual stages of development (pp. 303–306).

- Updated previous Figure 11.5 and made it **Process Diagram 11.1** (p. 305).

- Added NEW **Real World Psychology** feature—"Freud and Modern Western Culture" (p. 306).

- Added NEW **Psychology and You**—"Constructing Your Own Personality Profile" (p. 309).

- Added NEW **Real World Psychology** feature—"The Stanford Marshmallow Test" (p. 319).

- Added NEW section, *Personality and Behavioral Genetics,* added NEW Figure 11.12, "Identical versus fraternal twins," and NEW Figure 11.14, "Adoption studies" (pp. 321–322).

- Added NEW discussion of social media outlets as a measure of personality, and added NEW Figure 11.18, "Facebook test of your personality" (p. 324).

- Deleted previous Table 11.3, "Subscales of the MMPI-2."

- Replaced previous term of *fallacy of positive instances* with more accurate term of *confirmation bias* in the **Psychology and You** section (p. 328).

Chapter 12 Psychological Disorders

Real World **Psychology**

Things you'll learn in Chapter 12

[Q1] How can media coverage of mass shootings create negative misperceptions about people with mental illness?

[Q2] What is the most "contagious" psychological disorder?

[Q3] Can internet and cell phone use increase mental health problems?

[Q4] Are children who experience trauma at increased risk of developing schizophrenia later in life?

[Q5] How do changes in the brain help explain severe antisocial personality disorder?

[Q6] Are symptoms of depression in women more distressing, deserving of sympathy, and difficult to treat than the same signs in men?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Resilience in Children and Adults
PsychScience Creativity and Bipolar Disorder

- Updated Table 12.1, "Common Myths About Mental Illness" (p. 333).

- Added NEW Figure 12.2, "Witchcraft or mental illness" (p. 333).

- Updated Figure 12.4, "The insanity plea—guilty of a crime or mentally ill," with Eddie Ray Routh's shooting of "American Sniper" Chris Kyle and Chad Littlefield (p. 335).

- Added NEW section, *The Dangers and Stigma of Mental Illness* (pp. 335, 337).

- Added NEW **Real World Psychology** feature—"The Media, Myths, and Mental Illness" (p. 337).

- Updated psychological factors of anxiety disorders with discussion of anxiety as the "most contagious" of all disorders (pp. 339–341).

- Rearranged previous two Psychology and You features, "Danger Signs for Suicide," and "What to Do if You Think Someone is Suicidal." And created NEW Table 12.3, "Common Myths About Suicide," a Test Yourself, "Danger Signs for Suicide," and a NEW **Real World Psychology** feature—"What to do if You Think Someone is Suicidal," with a new photo and description of Robin William's suicide (pp. 346–347).

- Added NEW section, *Prenatal and Other Environmental Factors*, to cover new research on schizophrenia (pp. 350–351).

- Removed previous discussion of James Holmes as an example of antisocial personality disorder.

Chapter 13 Therapy

Real World **Psychology**

Things you'll learn in Chapter 13

[Q1] Can changing your irrational thoughts and self-talk make you feel better about your body?

[Q2] How might accepting fears and worries rather than trying to eliminate them decrease PTSD?

[Q3] Could therapy help you hold a tarantula?

[Q4] Does simply watching other children play with dogs reduce dog phobias in young children?

[Q5] Do psychedelic drugs cause psychosis?

[Q6] Can therapy that is delivered over the telephone lead to lower levels of depression?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Protecting Your Mental Health
PsychScience Can Watching Movies Prevent Divorce?

- Expanded discussion of *psychotherapy* (p. 362).

- Added NEW Figure13.3, "The five key techniques for psychoanalysis" (p. 364).

- Added NEW Figure 13.3, "Freud's free association" (p. 364).

- Added NEW **Psychology and You**—"Overcoming Irrational Misconceptions" (p. 368).

- Updated **Psychology and You**, "A Cognitive Approach to Lifting Depression," and changed "magnification" to "magnification and minimization," and added "personalization" (p. 370).

- Updated Table 13.2, "Psychotherapeutic Drug Treatments for Psychological Disorders" (p. 376).

- Added NEW **Real World Psychology** feature—"Do Psyche-delic Drugs Cause Psychosis" (p. 378).
- Updated and rearranged section on *Evaluating Biomedical Therapies*, and placed deep brain stimulation (DBS) in the psychosurgery section 379–380).
- Updated the *Gender and Therapy* section, and added gender-role conflict as part of the unique gender concerns (pp. 385–386).
- Added NEW key term—**well-being therapy (WBT)** (p. 387).

Chapter 14   Social Psychology

Real World **Psychology**

Things you'll learn in Chapter 14

[Q1] Why do athletes often blame their losses on bad officiating?
[Q2] How can taking a pain pill reduce attitude change?
[Q3] Can reading books about Harry Potter increase positive feelings toward gay people?
[Q4] If popular high-school students are anti-bullying and anti-drinking, does that reduce these behaviors among their peers?
[Q5] Why are we so surprised when our preferred presidential candidate loses?
[Q6] How does simple nearness (proximity) influence attraction?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

PositivePsych Would You Donate a Kidney to a Stranger?
Psych**Science** Can a 10-Minute Conversation Reduce Prejudice?

- Updated and added three NEW myths to **Psychology and You**—"How Much Do You Know About the Social World?" (p. 392).
- Added NEW Figure 114.1 "Attribution in action" (p. 393).
- Updated, rearranged, and added NEW *Attributional Errors and Biases* section (p. 393).
- Added NEW **Psychology and You**—"Reducing Attribution-al Biases" (p. 394).
- Expanded discussion of cognitive dissonance (pp. 395–396).
- Change the previous Figure 14.3 to **Process Diagram 14.1** and added new "Overall Summary" at the bottom of the figure (p. 397).
- To balance the length of the three major headings and improve the flow of the chapter, we moved the topic of

prejudice from the end of the chapter to the first, right after attitudes (pp. 396–402).

- In response to reviewers, removed "discrimination" from the title of "Prejudice and Discrimination" section, but kept the distinction.
- Added NEW Figure 14.8, "The high price of prejudice" with a recent photo of the Orlando, FL massacre in 2016 (p. 399).
- Added NEW section on *Empathy Induction* as one of the five methods for reducing prejudice (p. 401).
- Added two NEW Figures—14.10, "Breaking the Gay barrier" and 14.11, "Harry Potter reduces prejudice?" (p. 401).
- Added NEW "norm violation" exercise to the **Real World Psychology** feature on cultural norms for personal space (p. 404).
- Added NEW "Adherence to ideologies" section to the factors that influence obedience (p. 407).
- Added NEW section on how to prevent or minimize group-think (p. 410).
- Updated **Real World Psychology** feature—"Aggression in Sports" to include Italian soccer player biting another player (p. 411).
- Deleted previous (and outdated) **frustration-aggression hypothesis**, and expanded section on *Reducing Aggression* (p. 412).
- Added NEW sections on *When and Why Do We Help?* and *Why Don't We Help?* with discussion of Kitty Genovese case (pp. 412–413).
- Added NEW key term—**diffusion of responsibility** (p. 414).
- Added expanded discussion on flirting with references to helpful websites (p. 416).
- Added NEW research on oxytocin as a link between proxim-ity and attraction (p. 416).
- Added a NEW "sign off" note to students to close this chapter, this text, and their first course in psychology (p. 419).
- Deleted five previous key terms throughout the chapter—**interpersonal attraction, mere-exposure effect, social cognition, social influence, and social relations**.

A list of the "What's NEW?" changes for Chapters 15 and 16 is available upon request.

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Introduction and Research Methods

Uniquely India/Getty Images

Real World Psychology

Things you'll learn in Chapter 1

[Q1] How does your culture influence what you look for in a romantic partner?

[Q2] Can a change in posture make you more attractive?

[Q3] Do breast-fed babies have higher IQs?

[Q4] Can a diet high in fats and sugars impair learning and memory?

[Q5] Are older people happier than younger people?

[Q6] What are the two best study techniques for improving your exam performance?

Throughout the chapter, margin icons for Q1–Q6 indicate where the text addresses these questions.

Chapter Overview

Welcome to **Real World Psychology!** As our title suggests, we believe psychology's unique contributions to the scientific world are best shown through every day, real-life examples. Our innermost thoughts, our relationships, our politics, our "gut" feelings, and our deliberate decisions are all shaped by a complex psychological system that affects us at every level, from the cellular to the cultural. Psychology encompasses not only humankind but our nonhuman compatriots as well—from rats and pigeons to cats and chimps.

Given that this first chapter is an overview of the entire field of psychology, we begin with a formal definition of psychology, followed by its brief history as a scientific discipline. Next, we discuss the seven major perspectives of modern psychology, as well as its many different specialties and career options. Then, we explore the science of psychology, the scientific method and how psychologists apply it when conducting research. Following this, we examine the four major goals of psychology. We close with a section called, *Strategies for Student Success,* that provides proven, research-based techniques for improving your study habits, time management, and grades. These techniques will help you enjoy and master the material in this and all your other college textbooks and courses.

We invite you to let us know how your study of psychology (and this text) affects you and your life. You can reach us at casanderson@amherst.edu and khuffman@palomar.edu. We look forward to hearing from you.

Warmest regards,

courtesy of Catherine Sanderson

Courtesy of Karen Huffman

1.1   Introducing Psychology

LEARNING OBJECTIVES

Retrieval Practice   While reading the upcoming sections, respond to each Learning Objective in your own words.

Summarize psychology, its past and present.

- **Define** psychology, critical thinking, and pseudopsychologies.
- **Review** structuralism, functionalism, and the psychoanalytic perspectives.

- **Discuss** modern psychology's seven major perspectives, and the contributions of women and people of color.
- **Describe** the biopsychosocial model, along with individualistic and collectivistic cultures.
- **Summarize** psychology's major career options and specialties.

Psychology   The scientific study of behavior and mental processes.

The term **psychology** derives from the roots *psyche*, meaning "mind," and *logos*, meaning "word." Modern psychology is most commonly defined as the *scientific study of behavior and mental processes*. *Scientific* is a key feature of the definition because psychologists follow strict scientific procedures to collect and analyze their data. *Behavior* (such as crying, hitting, and sleeping) can be directly observed. *Mental processes* are private, internal experiences that cannot be directly observed (like feelings, thoughts, and memories).

Psychology also places high value on *empirical evidence* that can be objectively tested and evaluated. In addition, psychologists emphasize **critical thinking**, *the process of objectively evaluating, comparing, analyzing, and synthesizing information* (Caine et al., 2016; Halpern, 2014).

Critical thinking   The process of objectively evaluating, comparing, analyzing, and synthesizing information.

Be careful not to confuse psychology with *pseudopsychologies*, which are based on common beliefs, folk wisdom, or superstitions. (*Pseudo* means "false.") These sometimes give the appearance of science, but they do not follow the basics of the scientific method. Examples include purported psychic powers, horoscopes, mediums, and self-help and "pop psych" statements such as "I'm mostly right brained" or "We use only 10% of our brains." For some, horoscopes or palmists are simple entertainment. Unfortunately, some true believers seek guidance and waste large sums of money on charlatans purporting to know the future or to speak with the deceased (e.g., Wilson, 2015b). Broken-hearted families also have lost valuable time and emotional energy on psychics claiming they could locate their missing children. As you can see, distinguishing scientific psychology from pseudopsychology is vitally important (Lilienfeld et al., 2010, 2015; Loftus, 2010). Given the popularity of these misleading beliefs, be sure to test your own possible myths in the *Test Yourself* section.
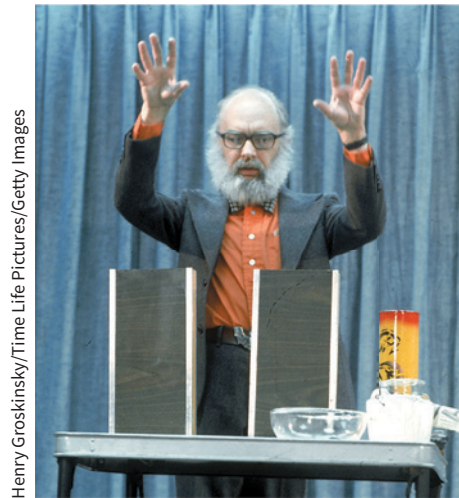
Psychology and You—Understanding Yourself

Test Yourself | **Psychology Versus Pseudopsychology**

True or False?

_____ **1.** The best way to learn and remember information is to "cram," or study it intensively during one concentrated period.

_____ **2.** Advertisers and politicians often use subliminal persuasion to influence our behavior.

_____ **3.** Most brain activity stops when we're asleep.

_____ **4.** Punishment is the most effective way to permanently change behavior.

_____ **5.** Eyewitness testimony is often unreliable.

_____ **6.** Polygraph ("lie detector") tests can accurately and reliably reveal whether a person is lying.

_____ **7.** Behaviors that are unusual or violate social norms may indicate a psychological disorder.

_____ **8.** People with schizophrenia have multiple personalities.

_____ **9.** Similarity is one of the best predictors of satisfaction in long-term relationships.

_____ **10.** In an emergency, as the number of bystanders increases, your chance of getting help decreases.

The magician James Randi has dedicated his life to educating the public about fraudulent pseudopsychologists. Along with the

prestigious MacArthur Foundation, Randi has offered $1 million to "anyone who proves a genuine psychic power under proper observing conditions" (Randi, 2014; The Amazing Meeting, 2011). Even after many years, the money has never been collected, and the challenge has since been terminated. For details, please see— http://web.randi.org/home/jref-status

Henry Groskinsky/Time Life Pictures/Getty Images

Answers: 1. False (Chapter 1), 2. False (Chapter 4), 3. False (Chapter 5), 4. False (Chapter 6), 5. True (Chapter 7), 6. False (Chapter 10) 7. True (Chapter 12), 8. False (Chapter 12), 9. True (Chapter 14), 10. True (Chapter 14)

Psychology's Past

Although people have long been interested in human nature, it was not until the first psychological laboratory was founded in 1879 that psychology as a science officially began. As interest in the new field grew, psychologists adopted various perspectives on the "appropriate" topics for psychological research and the "proper" research methods. These diverse viewpoints and subsequent debates molded and shaped modern psychological science.

Psychology's history as a science began in 1879, when Wilhelm Wundt [VILL-helm Voont], generally acknowledged as the "father of psychology," established the first psychological laboratory in Leipzig, Germany. Wundt and his followers were primarily interested in how we form sensations, images, and feelings. Their chief methodology was termed "introspection," and it relied on participants' self-monitoring and reporting on conscious experiences (Freedheim & Weiner, 2013; Goodwin, 2012).

A student of Wundt's, Edward Titchener, brought his ideas to the United States. Titchener's approach, now known as _structuralism_, sought to identify the basic building blocks, or "structures," of mental life through introspection and then to determine how these elements combine to form the whole of experience. Because introspection could not be used to study animals, children, or more complex mental disorders, however, structuralism failed as a working psychological approach. Although short-lived, it did establish a model for studying mental processes scientifically.

Structuralism's intellectual successor, _functionalism_, studied the way the mind functions to enable humans and other animals to adapt to their environment. William James was the leading force in the functionalist school (**Figure 1.1**). Although functionalism also eventually declined, it expanded the scope of psychology to include research on emotions and observable behaviors, initiated the psychological testing movement, and influenced modern education and industry. Today, James is widely considered the "father" of American psychology.

During the late 1800s and early 1900s, while functionalism was prominent in the United States, the **psychoanalytic perspective** was forming in Europe. Its founder, Austrian physician Sigmund Freud, believed that a part of the human mind, the unconscious, contains thoughts, memories,

Psychoanalytic perspective
An earlier approach to psychology developed by Sigmund Freud, which focuses on unconscious processes, unresolved conflicts, and past experiences.

Bettmann/Getty Images

FIGURE 1.1   William James (1842–1910)   William James founded the perspective, known as functionalism, and established the first psychology laboratory in the United States, at Harvard University. In modern times, he is commonly referred to as the "father" of American psychology, whereas Wundt is considered the "father" of all psychology.

Psychodynamic perspective   A modern approach to psychology that emphasizes unconscious dynamics, motives, conflicts, and past experiences; based on the psychoanalytic approach, but focuses more on social and cultural factors, and less on sexual drives.

Behavioral perspective   A modern approach to psychology that emphasizes objective, observable, environmental influences on overt behavior.

Humanistic perspective   A modern approach to psychology that perceives human nature as naturally positive and growth seeking; it emphasizes free will and self-actualization.

Positive psychology   The study of optimal human functioning; emphasizes positive emotions, traits, and institutions.

Cognitive perspective   A modern approach to psychology that focuses on the mental processes used in thinking, knowing, remembering, and communicating.

FIGURE 1.2   B. F. Skinner (1904–1990)   B. F. Skinner was one of the most influential psychologists of the twentieth century. Here he uses the so-called "Skinner box" to train a rat to press a lever for a reward.

Nina Leen/Time & Life Pictures/Getty Images

and desires that lie outside personal awareness yet still exert great influence. For example, according to Freud, a man who is cheating on his wife might slip up and say, "I wish you were her," when he consciously planned to say, "I wish you were here." Such seemingly meaningless, so-called "Freudian slips" supposedly reveal a person's true unconscious desires and motives.

Freud also believed many psychological problems are caused by unconscious sexual or aggressive motives and conflicts between "acceptable" and "unacceptable" behaviors (Chapter 11). His theory led to a system of therapy known as *psychoanalysis* (Chapter 13).

Modern Psychology

As summarized in **Table 1.1**, contemporary psychology reflects seven major perspectives: *psychodynamic*, *behavioral*, *humanistic*, *cognitive*, *biological*, *evolutionary*, and *sociocultural*. Although there are numerous differences among these seven perspectives, most psychologists recognize the value of each orientation and agree that no one view has all the answers.

Freud's nonscientific approach and emphasis on sexual and aggressive impulses have long been controversial, and today there are few strictly Freudian psychoanalysts left. However, the broad features of his theory remain in the modern **psychodynamic perspective**. The general goal of psychodynamic psychologists is to explore unconscious *dynamics*— internal motives, conflicts, and past experiences.

In the early 1900s, another major perspective appeared that dramatically shaped the course of modern psychology. Unlike earlier approaches, the **behavioral perspective** emphasizes objective, observable environmental influences on overt behavior. Behaviorism's founder, John B. Watson (1913), rejected the practice of introspection and the influence of unconscious forces. Instead, Watson adopted Russian physiologist Ivan Pavlov's concept of *conditioning* (Chapter 6) to explain behavior as a result of observable stimuli (in the environment) and observable responses (behavioral actions).

Most early behaviorist research was focused on learning; nonhuman animals were ideal participants for this research. One of the best-known behaviorists, B. F. Skinner, was convinced that behaviorist approaches could be used to "shape" human behavior (**Figure 1.2**). As you'll discover in Chapters 6 and 13, therapeutic techniques rooted in the behavioristic perspective have been most successful in treating observable behavioral problems, such as those related to phobias and alcoholism (Anker et al., 2016; Botella et al., 2014; Tyner et al., 2016).

Although the psychoanalytic and behavioral perspectives dominated U.S. psychology for some time, in the 1950s a new approach emerged—the **humanistic perspective**, which stresses *free will* (voluntarily chosen behavior) and *self—actualization* (an inborn drive to develop all one's talents and capabilities). According to Carl Rogers and Abraham Maslow, two central figures with this perspective, all individuals naturally strive to develop and move toward self-actualization. Like psychoanalysis, humanistic psychology developed an influential theory of personality, and its own form of psychotherapy (Chapters 11 and 13). The humanistic approach also led the way to a contemporary research specialty known as **positive psychology**— the study of optimal human functioning, as shown in the following **PositivePsych** special feature (Diener et al., 2015; Lopez et al., 2015; Seligman, 2003, 2015).
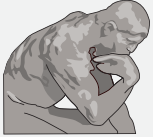
One of the most influential modern approaches, the **cognitive perspective**, emphasizes the mental processes we use in thinking, knowing, remembering, and communicating (Goldstein, 2015; Greene, 2016). These mental processes include perception, memory, imagery, concept formation, problem solving, reasoning, decision making, and language. Many cognitive psychologists also use an *information-processing approach*, likening the mind to a computer that sequentially takes in information, processes it, and then produces a response.

During the past few decades, scientists have explored the role of biological factors in almost every area of psychology. Using sophisticated tools and technologies, scientists who adopt this **biological perspective** examine behavior through the lens of genetics and biological processes in the brain and other parts of the

TABLE 1.1   Modern Psychology's Seven Major Perspectives

Perspectives	Major Emphases	Sample Research Questions	
Psychodynamic	Unconscious dynamics, motives, conflicts, and past experiences	How do adult personality traits or psychological problems reflect unconscious processes and early childhood experiences?	
Behavioral	Objective, observable, environmental influences on overt behavior; stimulus–response (S-R) relationships and consequences for behavior	How do reinforcement and punishment affect behavior? How can we increase desirable behaviors and decrease undesirable ones?	
Humanistic	Free will, self-actualization, and human nature as naturally positive and growth seeking	How can we promote a client's capacity for self-actualization and understanding of his or her own development? How can we promote international peace and reduce violence?	
Cognitive	Mental processes used in thinking, knowing, remembering, and communicating	How do our thoughts and interpretations affect how we respond in certain situations? How can we improve how we process, store, and retrieve information?	
Biological	Genetic and biological processes in the brain and other parts of the nervous system	How might changes in neurotransmitters or damage to parts of the brain lead to psychological problems and changes in behavior and mental processes?	
Evolutionary	Natural selection, adaptation, and reproduction	How does natural selection help explain why we love and help certain people, but hurt others? Do we have specific genes for aggression and altruism?	
Sociocultural	Social interaction and the cultural determinants of behavior and mental processes	How do the values and beliefs transmitted from our social and cultural environments affect our everyday psychological processes?	
		Why do we need multiple perspectives? What do you see in this figure? Is it two profiles facing each other, a white vase, or both? Your ability to see both figures is similar to a psychologist's ability to study behavior and mental processes from a number of different perspectives.	

nervous system. For example, research shows that genes influence many aspects of our behavior, including how kind we are to other people, whom we vote for in elections, and even whether or not we decide to purchase a handgun (Barnes et al., 2014; Ksiazkiewicz et al., 2016; Wilson, 2015a).

The **evolutionary perspective** stresses natural selection, adaptation, and reproduction (Buss, 2011, 2015; Dawkins, 2016; Goldfinch, 2015). This perspective stems from the writings of Charles Darwin (1859), who suggested that natural forces select traits that aid an organism's survival. This process of **natural selection** occurs when a particular genetic trait gives an organism a reproductive advantage over others. Because of natural selection, the fastest, strongest, smartest, or otherwise most fit organisms are most likely to live long enough to reproduce and thereby pass on their

Biological perspective   A modern approach to psychology that focuses on genetics and biological processes.

Evolutionary perspective   A modern approach to psychology that stresses natural selection, adaptation, and reproduction.

PP PositivePsych

What Makes Us Happy?

One of the most consistent findings in positive psychology is that other people make us happy! "Simply" building and maintaining relationships tends to significantly improve our overall happiness and well-being (Diener & Tay, 2015; Galinha et al., 2016; Gander et al., 2016). As shown in the photo, even just talking with strangers leads to higher levels of happiness. Researchers who asked riders on trains and buses to either quietly sit alone or to talk to a stranger found that those who talked to a stranger reported more positive feelings than those who sat alone (Epley & Schroeder, 2014). In addition, contrary to the popular belief that "money buys happiness," research shows that once we have enough income to meet our basic needs, additional funds do not significantly increase our levels of happiness and well-being (Kushlev et al., 2015; Whillans et al., 2016).

Furthermore, when adults are given money and told to spend it on others, they experience higher levels of happiness than do those who are told to spend it on themselves (Dunn et al., 2008). In short, powerful evidence suggests that forming and maintaining human connections and giving to others are very important predictors of happiness. (Recognizing the increasing research focus on positive psychology, as well as its direct applicability to the real world and your everyday life, we have included a special **PositivePsych** feature in each chapter of this text. We hope you enjoy them.)

Hill Street Studios/Getty Images

Natural selection Darwin's principle of an evolutionary process in which heritable traits that increase an organism's chances of survival or reproduction are more likely to be passed on to succeeding generations.

Sociocultural perspective A modern approach to psychology that emphasizes social interaction and the cultural determinants of behavior and mental processes.

FIGURE 1.3 Kenneth Clark (1914–2005) and Mamie Phipps Clark (1917–1985) Kenneth Clark and Mamie Phipps Clark conducted experiments with Black and White dolls to study children's attitudes about race. This research and their expert testimony contributed to the U.S. Supreme Court's ruling that racial segregation in public schools was unconstitutional.

Library of Congress Prints and Photographs Division

genes to the next generation. According to the evolutionary perspective, there's even an evolutionary explanation for the longevity of humans over other primates–it's grandmothers! Without them, a mother who has a two-year-old and then gives birth would have to devote her time and resources to the newborn at the expense of the older child. Grandmothers act as supplementary caregivers.

Finally, the **sociocultural perspective** emphasizes social interactions and cultural determinants of behavior and mental processes. Although we are often unaware of their influence, factors such as ethnicity, religion, occupation, and socioeconomic class, all have an enormous psychological impact on our mental processes and behavior. For example, in countries with low levels of gender equality, women are more likely to be attracted by their partner's resources and men by physical attractiveness (Zentner & Mitura, 2012). **[Q1]**

Surprisingly, recent studies conducted within the U.S. found that both men and women with bigger postures—outstretched arms and spread apart legs—were judged as more romantically appealing than those with limbs held tight (Vacharkulksemsuk et al., 2016). Why? The researchers suggested that this type of expansive posture signals dominance, which is socially and culturally desirable in the U.S., and thereby increases an individual's chance of being selected as a potential mate. Note that this research was conducted via speed dating and smartphone-based dating applications. The results may not hold up past a second date! **[Q2]**

Gender and People of Color

During the late 1800s and early 1900s, most colleges and universities provided little opportunity for women and people of color, either as students or as faculty members. One of the first women to be recognized in the field of psychology was Mary Calkins. Her achievements are particularly noteworthy, considering the significant discrimination that she overcame. For example, married women could not be teachers or professors in co-educational settings during this time in history. In Mary Calkins' case, even after she completed all the requirements for a Ph.D. at Harvard University in 1895, and was described by William James as his brightest student, the university refused to grant the degree to a woman. Nevertheless, Calkins went on to perform valuable research on memory, and in 1905 served as the first female president of the American Psychological Association (APA). The first woman to receive her Ph.D. in psychology was Margaret Floy Washburn from Cornell University in 1894. She also wrote several influential books and served as the second female president of the APA.

Francis Cecil Sumner became the first Black person to earn a Ph.D. in psychology (Clark University, 1920). Dr. Sumner later chaired one of the country's leading psychology departments, at Howard University. In 1971, one of Sumner's students, Kenneth B. Clark, became the first person of color to be elected APA president. Clark's research with his wife, Mamie Clark, documented the harmful effects of prejudice and directly influenced the Supreme Court's landmark 1954 ruling against racial segregation in schools, Brown v. Board of Education (**Figure 1.3**).

Calkins, Washburn, Sumner, and Clark, along with other important people of color and women, made significant and lasting contributions to psychology's development. Today, women earning doctoral degrees in psychology greatly outnumber men, but, unfortunately, people of color are still underrepresented (American Psychological Association, 2014; Willyard, 2011).

Biopsychosocial Model

The seven major perspectives, as well as women and people of color, have all made significant contributions to modern psychology. This explains why most contemporary psychologists do not adhere to one single intellectual perspective. Instead, a more integrative, unifying theme—the **biopsychosocial model**—has gained wide acceptance. This model views biological processes (genetics, neurotransmitters, evolution), psychological factors (learning, personality, motivation), and social forces (family, culture, gender, and ethnicity) as interrelated. It also sees all three factors as influences inseparable from the seven major perspectives (**Figure 1.4**).

Why is the biopsychosocial model so important? As the old saying goes, "A fish doesn't know it's in water." Similarly, as individuals living alone inside our own heads, we're often unaware of the numerous, interacting factors that affect us—particularly cultural forces. For example, most North Americans and Western Europeans are raised to be very individualistic and are surprised to learn that over 70% of the world's population lives in collectivistic cultures. As you can see in **Table 1.2**, in *individualistic cultures*, the needs and goals of the individual are emphasized over the needs and goals of the group. When asked to complete the statement "I am . . . ," people from individualistic cultures tend to respond with personality traits ("I am shy"; "I am outgoing") or their occupation ("I am a teacher"; "I am a student").

In *collectivistic cultures*, however, the person is defined and understood primarily by looking at his or her place in the social unit (Conway et al., 2014; Fang et al., 2016; Saucier et al., 2015). Relatedness, connectedness, and interdependence are valued, as opposed to separateness, independence, and individualism. When asked to complete the statement "I am . . . ," people from collectivistic cultures tend to mention their families or nationality ("I am a daughter"; "I am Chinese"). Keep in mind, however, that these sample countries and their sample values exist on a continuum, and that within each country there is a wide range of individual differences.

Looking again at the photos from the cultures in Figure 1.4, can you see how learning more about the biopsychosocial model offers increased understanding of ourselves, our friends, and our families, and how it may improve our understanding and sensitivity to other

Biopsychosocial model   An integrative, unifying theme of modern psychology that sees biological, psychological, and social processes as interrelated and interacting influences.

| **FIGURE 1.4**   **The biopsychosocial model** | **Real** World **Psychology** |

When we consider people as individuals (**Figure a**), we don't always get a complete picture of their emotions and motivations. Stepping back to see the same individuals in a broader context (**Figure b**) can provide new insights. With this "bigger picture" (the child's immediate surroundings and his or her group's behavior) in mind, can you better understand why each child might be feeling and acting as he or she is? The biopsychosocial model recognizes that there is usually no single cause for our behavior or our mental states (**Figure c**). For example, our moods and feelings are often influenced by genetics and neurotransmitters (biological), our learned responses and patterns of thinking (psychological), and our socioeconomic status and cultural views of emotion (sociocultural).

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© Jurgen Schulzki/Imagebroker/Age Fotostock America, Inc.

TABLE 1.2	A Comparison Between Individualistic and Collectivistic Cultures	**Real** World **Psychology**
Sample Individualistic Countries	**Sample Collectivistic Cultures**	
United States	Korea	
Australia	China	
Great Britain	India	
Canada	Japan	
The Netherlands	West Africa region	
Germany	Thailand	
New Zealand	Taiwan	
Sample Individualistic Values	**Sample Collectivistic Values**	
Independence	Interdependence	
Individual rights	Obligations to others	
Self-sufficiency	Reliance on group	
Individual achievement	Group achievement	
Independent living	Living with kin	
Personal failure leads to shame and guilt	Failing the group leads to shame and guilt	

cultures? For example, Americans generally define *sincerity* as behaving in accordance with our inner feelings, whereas people from collectivist cultures tend to see their equivalent word for sincerity as behavior that conforms to a person's role expectations and duties (Yamada, 1997). This explains why collectivistic behaviors might appear insincere to Americans.

Careers and Specialties in Psychology

Many people think of psychologists only as therapists, and it's true that the fields of clinical and counseling psychology do make up the largest specialty areas. However, many psychologists have no connection with therapy. Instead, we work as researchers, teachers, or consultants in academic, business, industry, and government settings, or in a combination of settings. As you can see in **Table 1.3**, there are several career paths and valuable life skills associated with

TABLE 1.3	What Can I Do with a Bachelor's Degree in Psychology?	**Real** World **Psychology**
Top Careers with a Bachelor's Degree in Psychology		
Management and administration		
Sales		
Social work		
Labor-relations, personnel and training		
Sample Skills Gained from a Psychology Major		
Real estate, business services, insurance		
Improved ability to predict and understand behavior		
Better understanding of how to use and interpret data		
Increased communication and interpersonal skills		
Increased ability to manage difficult situations and high-stress environments		
Enhanced insight into problem behavior		
Note that the U.S. Department of Labor predicts only an average rate of growth for psychologists in the next decade. However, the good news is that a degree in our field, and this course in general psychology, will provide you with invaluable lifetime skills.		

a bachelor's degree in psychology. Of course, your options are even greater if you go beyond the bachelor's degree and earn your master's degree, Ph.D., or Psy.D.—see **Table 1.4**. For more information about what psychologists do—and how to pursue a career in psychology—check out the websites of the American Psychological Association (APA) and the Association for Psychological Science (APS).

TABLE 1.4   **Sample Careers and Specialties in Psychology**   **Real** World **Psychology**

CAREER/SPECIALTY	DESCRIPTION
Biopsychologist/ neuroscientist	Investigates the relationship between biology, behavior, and mental processes, including how physical and chemical processes affect the structure and function of the brain and nervous system
Clinical psychologist	Specializes in the evaluation, diagnosis, and treatment of psychological disorders
Cognitive psychologist	Examines "higher" mental processes, including thought, memory, intelligence, creativity, and language
Comparative psychologist	Studies the behavior and mental processes of nonhuman animals; emphasizes evolution and cross-species comparisons
Counseling psychologist	Overlaps with clinical psychology, but generally works with less seriously disordered individuals and focuses more on social, educational, and career adjustment
Cross-cultural psychologist/ psychological anthropologist	Studies similarities and differences in and across various cultures and ethnic groups
Developmental psychologist	Studies the course of human growth and development from conception to death
Educational psychologist	Studies the processes of education and works to promote the academic, intellectual, social, and emotional development of children in the school environment
Environmental psychologist	Investigates how people affect and are affected by the physical environment
Experimental psychologist	Examines processes such as learning, conditioning, motivation, emotion, sensation, and perception in humans and other animals (Note that psychologists working in almost all other areas of specialization also conduct research.)
Forensic psychologist	Applies principles of psychology to the legal system, including jury selection, psychological profiling, assessment, and treatment of offenders
Gender and/or cultural psychologist	Investigates how men and women and different cultures vary from one another and how they are similar
Health psychologist	Studies how biological, psychological, and social factors affect health, illness, and health-related behaviors
Industrial/ organizational psychologist	Applies principles of psychology to the workplace, including personnel selection and evaluation, leadership, job satisfaction, employee motivation, and group processes within the organization
Personality psychologist	Studies the unique and relatively stable patterns in a person's thoughts, feelings, and actions
Positive psychologist	Examines factors related to optimal human functioning
School psychologist	Collaborates with teachers, parents, and students within the educational system to help children with special needs related to a disability and/ or their academic and social progress; also provides evaluation and assessment of a student's functioning and eligibility for special services
Social psychologist	Investigates the role of social forces in interpersonal behavior, including aggression, prejudice, love, helping, conformity, and attitudes
Sport psychologist	Applies principles of psychology to enhance physical performance

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