

Psychology: Essentials

UPDATED SECOND EDITION

John W. Santrock

University of Texas at Dallas



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PSYCHOLOGY: ESSENTIALS, UPDATED SECOND EDITION

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1 2 3 4 5 6 7 8 9 0 VNH/VNH 0 9 8 7 6 5 4 3

ISBN 0-07-293762-9

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Cover image: © *Moonrunner Design*

Manager, Art: *Robin Mouat*

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Lead supplement producer: *Marc Mattson*

Compositor: *The GTS Companies*

Typeface: *9.5/12 Meridian Roman*

Printer: *Von Hoffmann Press*

The credits section for this book begins on page C-1 and is considered an extension of the copyright page.

Library of Congress Cataloging-in-Publication Data

Santrock, John W.

Psychology: Essentials / John W. Santrock.—Updated 2nd ed.

p. cm.

Includes bibliographical references and index.

ISBN 0-07-293762-9

I. Psychology—Textbooks. I. Title.

BF121.S2642 2005

150—dc22

2003070616

The Internet addresses listed in the text were accurate at the time of publication. The inclusion of a website does not indicate an endorsement by the authors or McGraw-Hill, and McGraw-Hill does not guarantee the accuracy of the information presented at these sites.

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Critical Controversy

Is Hypnosis a Window to Forgotten Events?

In 1977, two nurses were accused of poisoning nine patients at a Veterans Administration Hospital in Ann Arbor, Michigan. Two of the patients died. At first, no clear evidence was found to link the nurses to the crime. In an attempt to prove their case, FBI agents hypnotized the surviving victims and several staff members. Under hypnosis, one victim gradually began to remember the presence of one of the two nurses in his room. Were the memories of this witness accurate? How do we know whether events recalled under hypnosis actually happened as people recall them? Although this critical testimony resulted in a conviction, a judge ordered a new trial and the prosecution chose to not retry the case (Lofus, 1979).

Hypnosis is sometimes used to enhance people's ability to recall forgotten events (Barriger, Bryant, & Britco, 2001; Nash, 2001; Stafford & Lynn, 2002). Police departments use hypnosis occasionally to help eyewitnesses remember forgotten crime scene details. In 1976, for example, a school bus carrying 26 schoolchildren from Chowchilla, California, disappeared. It turns out that three armed men kidnapped the bus driver and the children and buried them alive in a trailer in a gravel quarry some distance away. After 16 hours underground, they were rescued. When the school bus driver was hypnotized, he recalled all but one digit of the license plate on the kidnapper's vehicle. This memory proved critical in tracking down the suspects (Lofus, 1979).

Therapists sometimes use hypnosis to age-regress patients back to an earlier stage in life in order to help them work through long-forgotten painful experiences. However, research suggests that improvements in memory due to hypnosis may often be more apparent than real. In one study, participants watched a videotape of a mock armed robbery and then were asked to recall specific crime details six times: twice immediately after seeing the videotape, twice 1 week after seeing the videotape, once during hypnosis, and once after hypnosis (Klein, Lanyon, & Perry, 1991). Highly hypnotizable participants remembered more specific crime details under hypnosis than they did just before hypnosis; less hypnotizable participants did not. At the same time, however, high-hypnotizability participants misremembered more false crime details than did low-hypnotizability participants. In other words, when people are hypnotized, they may remember more correct and more incorrect information. One possibility is that hypnosis may make participants more confident about whatever comes to mind, but not more accurate.

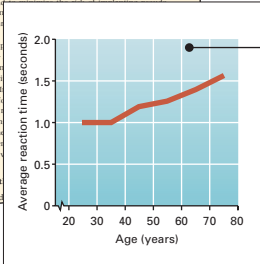
of the bus driver's hypnotic recall. In the Ann Arbor case, with no corroborating evidence, it was impossible to confirm or disconfirm the accuracy of the victim's recovered memory.

This uncertainty about the accuracy of memories recalled under hypnosis is magnified by the tendency of hypnotized participants to be influenced by leading questions. For example, after viewing a photo, hypnotized individuals might be asked, "What color was that person's mustache?" The individuals then often create an image of the person they saw and supply the person with a mustache, even though the photo did not show a mustache. Later they might recall, with confidence, the person as having a mustache. A number of studies have shown that hypnotized witnesses are more confident about the inaccurate aspects of their recall or about misidentifications than are non-hypnotized witnesses (Orne, 1959). In a court of law, hypnotized witnesses have so much confidence in their pseudo-memories—false memories that are believed to be real—that they are effectively immune from cross-examination (Orne, 1959). Jane Pyman (1999) has proposed that increased confidence in memories recovered under hypnosis is due to an illusion of familiarity that hypnosis helps to produce.

Because of its questionable reliability, hypnotic testimony is banned in some states. If hypnotic testimony is allowed in court, extreme caution must be exercised to obtain corroborating evidence and to ensure that the witness is not suggesting memories when hypnotized. Similar to using hypnosis accidentally (Green, Lynn, & Spertzel, 1999), there is not hypnosis eye-witness also sometimes non-hypnotic in non-hypnotic in the same problem accuracy of recall.

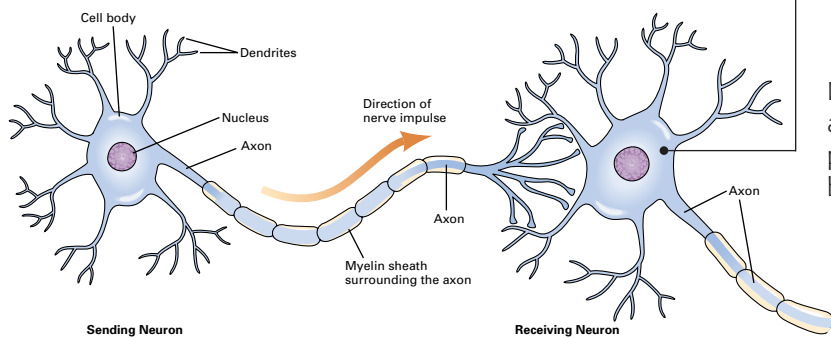
Research

Critical Controversy boxes in each chapter highlight current debates in psychology and pose thought-provoking questions to encourage students to examine the evidence on both sides of an issue.



Clearly labeled graphs and explanatory captions help students become familiar with visual data presentation.

Expanded and updated coverage of neuroscience and evolutionary psychology reflects psychology's increasing emphasis on the biological bases of behavior.



New coverage of gender and cross-cultural research, as well as positive psychology and evolutionary psychology, is indexed inside the back cover of the book.

Are You Depressed?

Following is a list of the ways that you might have felt or behaved in the past week. Indicate what you felt by putting an X in the appropriate box for each item.

	Rarely or Never in the Past Week (1 Day)	Sometimes (2-3 Days)	Often (4-5 Days)	Most or All of the Time (6-7 Days)
1. I was bothered by things that usually don't bother me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I did not feel like eating; my appetite was poor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I felt that I could not shake off the blues even with help from my family and friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt that I was just as good as other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I had trouble keeping my mind on what I was doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I felt depressed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt that everything I did was an effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I felt hopeful about the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I talked less than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I felt lonely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. People were unfriendly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I was happy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I talked less than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I felt lonely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. People were unfriendly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I enjoyed life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I had crying spells.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I felt sad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt that people disliked me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I could not get going.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For items 4, 8, 12, and 16, give yourself a 3 each time you checked Rarely or None, 2 each time you checked Some or a Little, 1 each time you checked Occasionally or Moderate, and a 0 each time you checked Most or All of the Time, 20 items.

If your score is around 7, the male in terms of how much depressed in the past week. If your score is similar to the average female's. Scores of 16 or more and you are both depressed from professional help. **Keep in mind, there's nothing wrong with you.**

Applications

In each chapter of the text, a **Psychology and Life** feature invites students to apply what they've learned to daily life.

Psychology and Life

In 1950, the newly born Steveland Morris was placed in an incubator in which he was given too much oxygen. The result was permanent blindness. In 1962, 12-year-old singer and musician Stevie Wonder began a performing and recording career that has included such hits as "My Cherie Amour" and "Signed, Sealed, Delivered." At the beginning of the twenty-first century, his music is still perceived by many as "wondrous."

At age 12, Andrea Bocelli lost his sight in a soccer mishap. Now in his 40s, after a career as a lawyer, Andrea has taken the music world by storm with his magnificent, classically trained voice.

An individual lacking either vision or hearing has great difficulty doing all the things that a hearing, sighted person can do, yet people who lose one channel of sensation—such as vision—often adapt and compensate for the loss by enhancing their sensory skills in another area—such as hearing or touch. For example, researchers have found that blind individuals are more accurate at locating a sound source and have greater sensitivity to touch than sighted individuals (Lesand & others, 1998; Levanen & Hamdorf, 2001). Other studies indicate that the auditory cortex of deaf individuals becomes more responsive to touch than does this area of the brain in normal, hearing individuals (Levanen & others, 1998). These changes

illustrate an important point made in chapter 2: how *adapt* the brain is.

In this chapter, I explore the way our senses work. A general introduction to basic concepts of sensation and perception leads to a detailed discussion of vision, the sense that scientists know the most about. Then I examine hearing, the skin senses, taste and smell, and the senses related to movement. Throughout, I will explain how the information taken in through our senses is processed in the brain and thus affects behavior.

Two "sensations"—Stevie Wonder and Andrea Bocelli—have adapted to life without sight.

1 HOW WE SENSE AND PERCEIVE THE WORLD

The Purpose of Sensation and Perception Thresholds Attention and Predisposition

Sensory Receptors

Introductory vignettes relate to each chapter's application of psychology with real-life examples.

Stay Focused and Learn!

Students need help finding the key ideas in introductory psychology. Santrock's unique **learning system** keeps students **focused** on these ideas so they learn and remember fundamental psychological concepts.

Chapter Outline and Learning Goals

Learning Goals are linked directly to the primary section headings in the text and supplementary resources to underscore key ideas.

Section Maps and Chapter Summary Map

Primary and secondary headings presented graphically provide a quick visual overview of the important topics covered in the chapter.

Learning Goal

At the beginning of each primary section, that section's learning goal reappears in the form of a question.

Chapter Outline

Section	Learning Goal
THE NATURE OF LEARNING	1 Explain what learning is.
Types of Learning	
Biological Factors in Learning	
CLASSICAL CONDITIONING	2 Describe classical conditioning.
Pavlov's Studies	
Applications of Classical Conditioning	
OPERANT CONDITIONING	3 Discuss operant conditioning.
Thorndike's Law of Effect	
Skinner's Approach to Operant Conditioning	
Shaping	
Applications of Operant Conditioning	
COGNITIVE FACTORS	4 Understand observational learning.
Bandura's Studies	
Applications of Observational Learning	
COGNITIVE FACTORS	5 Outline the role of cognition in learning.

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1 CLASSICAL CONDITIONING

Pavlov's Studies

Applications of Classical Conditioning

What is classical conditioning?

In the early 1900s, the Russian physiologist Ivan Pavlov was interested in the way the body digests food. In his experiments, he routinely placed meat powder in a dog's mouth, causing the dog to salivate. Pavlov realized that the meat powder was not the only stimulus that caused the dog to salivate. The dog salivated in response to a number of stimuli associated with the food, such as the sight of the food dish, the sight of the individual who brought the food into the room, and the sound of the door closing when the food arrived. Pavlov recognized that the dog's association of these sights and sounds with the food was an important type of learning, which came to be called **classical conditioning**.

Pavlov's Studies

Pavlov wanted to know why the dog salivated to various sights and sounds before eating the meat powder. He observed that the dog's behavior included both learned and unlearned components. The unlearned part of classical conditioning is based on the fact that some stimuli automatically produce certain responses apart from any prior learning; in other words, they are **unlearned**, or **innate**. These often are automatic stimulus-response connections. They include salivation in response to food, nausea in response to spoiled food, shivering in response to low temperature, coughing in response to the throat being irritated, pupil constriction in response to light, and withdrawal in response to blisters or burns. An **unconditioned stimulus (UCS)** is a stimulus that produces a response without prior learning; food was the UCS in Pavlov's experiments. An **unconditioned response (UCR)** is an unlearned response that is automatically elicited by the UCS. In Pavlov's experiments, the saliva that flowed from the dog's mouth in response to food was the UCR. In the case of the baby and the flower, the baby's learning and response did not cause her to cry when the bell rang but her crying was unlearned and occurred automatically. The bell ringing was the UCS, and the crying was the UCR.

In making a dog's response to various stimuli associated with meat powder, Pavlov rang a bell before giving meat powder to the dog. Until then, ringing the bell did not have a particular effect on the dog, except perhaps to make the dog hungry. The bell was a neutral stimulus. But the dog began to associate the sound of the bell with the food and salivated when it heard the bell. In classical conditioning, the **conditioned stimulus (CS)** is a previously neutral stimulus that eventually elicits the unconditioned response after being associated with the unconditioned stimulus. The **conditioned response (CR)** is the learned response to the conditioned stimulus that occurs about 0.5 seconds before (Pavlov, 1927). For the dog, the bell became a **conditioned stimulus (CS)** that salivated a **conditioned response (CR)**. For the

Reach Your Learning Goals

The chapter summary restates the Learning Goals and provides a bulleted review that matches up in a one-to-one fashion with the bulleted review statements in the section reviews.

Review and Sharpen Your Thinking

Learning Goals frame the section reviews, which end with an exercise designed to hone critical thinking skills.

Connections

References to review quizzes, crossword puzzles, and additional resources remind students of the text-specific materials available for content review and enrichment.

1 Explain what learning is.

- Learning is a relatively permanent change in behavior that occurs through experience. Observational learning is learning by watching what other people do. In associative learning, a connection is made between two events. Conditioning is the process by which associative learning occurs. In classical conditioning, organisms learn the association between two stimuli and, in operant conditioning, they learn the association between a behavior and a consequence.
- Biological constraints affect what an organism can learn from experience. These factors include instinctive drift (the tendency of animals to revert to instinctive behavior that interferes with learned behavior), preparedness (the species-specific biological predisposition to learn to associate ways that do not fit with), and taste aversion (the biological predisposition to learn to avoid foods that have caused sickness in the past).

2 Describe classical conditioning.

- Classical conditioning occurs when a neutral stimulus becomes associated with a meaningful stimulus and comes to elicit a similar response. Pavlov discovered that animals can learn the association between an unconditioned stimulus (UCS) and a conditioned stimulus (CS). The UCS automatically produces the unconditioned response (UCR). After conditioning, the CS predicts the UCS and elicits the conditioned response (CR) by itself. Acquisition in classical conditioning is the initial linking of stimuli and responses. Generalization in classical conditioning is the tendency of a new stimulus that is similar to the original conditioned stimulus to elicit a response.

3 Discuss operant conditioning.

- Operant conditioning is a form of learning in which the consequences of behavior produce changes in the probability of the behavior's occurrence. B. F. Skinner described the behavior of the organism as operant. The behavior operates on the environment, and the environment in turn operates on the organism. In operant conditioning, organisms learn the association between an organism's response to the environment, the organism's behavior, and the consequences. In other words, operant conditioning is a form of exploring voluntary behavior that classical conditioning is not.
- Thorndike's law of effect states that behaviors followed by positive outcomes are strengthened, whereas behaviors followed by negative outcomes are weakened. Thorndike's view that the organism's behavior is due to a connection between a stimulus and a response is called S-R theory.
- Skinner believed that the mechanism of learning are the same for all species. He studied lower animals extensively to the hope that the basic mechanism of learning could be more easily understood in organisms simpler than humans. His behaviorist, contemporary behaviorist study on organisms can learn the association between an unconditioned stimulus (UCS) and a conditioned stimulus (CS). The UCS automatically produces the unconditioned response (UCR). After conditioning, the CS predicts the UCS and elicits the conditioned response (CR) by itself. Acquisition in classical conditioning is the initial linking of stimuli and responses. Generalization in classical conditioning is the tendency of a new stimulus that is similar to the original conditioned stimulus to elicit a response.
- Operant conditioning involves generalization (giving the same response to similar stimuli), discrimination (responding to stimuli that signal that a behavior will or will not be reinforced), and extinction (decreasing tendency to perform a previously reinforced behavior when reinforcement is withheld).

Review and Sharpen Your Thinking

1 Describe classical conditioning.

- Summarize the classical conditioning process, including unconditioned stimulus (UCS), conditioned stimulus (CS), unconditioned response (UCR), and conditioned response (CR), as well as acquisition, generalization, discrimination, and spontaneous recovery.
- Discuss the role of classical conditioning in human phobias and other types of behavior.

Think about an attachment that you or someone you know has for a certain object or environment. Explain how classical conditioning might account for the pleasant association.

3 OPERANT CONDITIONING

Thorndike's Law of Effect

Shaping

Applications of Operant Conditioning

Skinner's Approach to Operant Conditioning

Principles of Reinforcement

What is operant conditioning?

Classical conditioning describes an organism's response to the active nature of the response. Another major form of learning—operant conditioning—is the organism's active response to the environment (the learning results in explaining how organisms learn with unlearned, voluntary responses, but a behavior, such as a rat in a maze, is learned in a maze. Operant conditioning is a form of learning in which the consequences of behavior produce changes in the probability of the behavior's occurrence. B. F. Skinner described the behavior of the organism as operant. The behavior operates on the environment, and the environment in turn operates on the organism. In operant conditioning, organisms learn the association between an organism's response to the environment, the organism's behavior, and the consequences. In other words, operant conditioning is a form of exploring voluntary behavior that classical conditioning is not.

Apply Your Knowledge

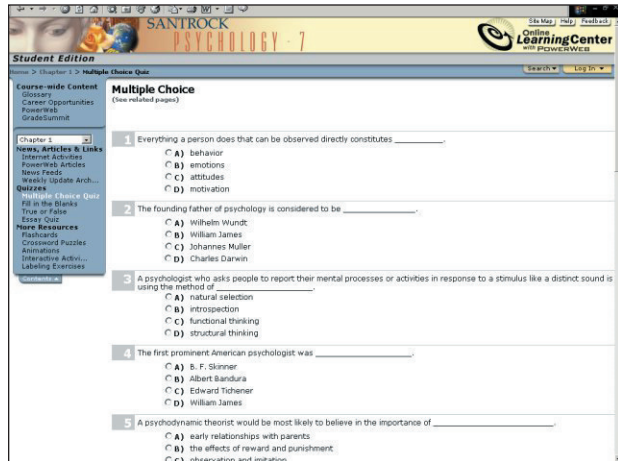
- Many people have a taste aversion, a conditioned association between eating or drinking something and feeling sick. A taste aversion is likelier to occur when the food or drink is something that is relatively unpalatable. Suppose that you have acquired a taste aversion to quinine. Identify what the unconditioned stimulus, unconditioned response, conditioned stimulus, and conditioned response are in this example.
- Positive and negative reinforcement are often difficult concepts to understand. On the following website, examples and a practice exercise may help you figure out the distinction more easily. <http://openstax.org/r/behavioral-terminology>
- Think of all of the things you have learned in the past several days. Write down an example involving each of the following types of learning: classical conditioning, operant conditioning, observational learning, taste learning, and insight learning. Which kind of learning do you use most frequently? Which do you use the least? Are there types of learning you do use that don't seem to fit any category? If so, what aspects of these types exclude them from these categories?

Connections

To see your mastery of the material in this chapter, go to the Study Guide and the BioPsych Plus CD-ROM, as well as the Online Learning Center. There you will find a chapter summary, practice tests, flashcards, lecture slides, web links, and other study tools, with an interactive exercise and reviews as well as current chapter-related news articles.

Make Connections and Succeed!

Supplementary print and media resources include a variety of review and assessment tools that carry through the text's emphasis on key ideas, reinforcing learning and enhancing student **success**.



Online Learning Center

www.mhhe.com/santrockep2u

Student Resources Chapter outlines and practice quizzes are keyed to the text Learning Goals. The student section of the website also contains flashcards, interactive review exercises, and access, via **PowerWeb**, to current news about psychology, research tools, and many other valuable study tools.

Instructor Resources Teaching resources on this password-protected site include the Instructor's Course Planner, Image Bank, PowerPoint files, and Web links to additional resources.

Student Study Guide

A guided review of the chapter is organized by text section and Learning Goals, as are the three practice tests provided for each chapter. As in the text, **Connections** direct students to other text-correlated resources for additional help in mastering key ideas and concepts.

Instructor's Course Planner

The same Learning Goals that reinforce the key ideas in the text and Study Guide frame the teaching suggestions in this valuable manual. Chapter overviews, lecture/discussion suggestions, and goal reinforcement activities are a few of the resources provided in the Instructor's Course Planner.

New! In-Psych Plus CD-ROM

In-Psych Plus features video clips and interactivities that are referenced within the main text. The video clips, chosen for interest and relevance, expand on significant concepts and theories discussed in the text and are accompanied by summaries and quizzes. The CD-ROMs also include practice self-tests with feedback and a learning styles assessment, as well as other valuable features.



Chapter 1—What Is Psychology?

Learning Goals

1. Explain what psychology is and how it developed.
2. Describe six contemporary approaches to psychology.
3. Describe two movements that reflect a positive approach to psychology.
4. Evaluate careers and areas of specialization in psychology.
5. Apply some strategies that will help you succeed in psychology.

The Big Picture: Chapter Overview

Psychology is a science dedicated to the study of behavior and mental processes. In this chapter you are introduced to the history of this science, a variety of contemporary perspectives in psychology, the positive psychology movement, and an overview of psychology-related careers. At the end of the chapter, the reader learns about the most effective methods of studying and learning.

There are three concepts important to the definition of psychology: science, behavior and mental processes. Psychologists use scientific methods to observe, describe, predict, and explain behaviors and mental processes. Behaviors are actions that can be directly observed, while mental processes are experiences that cannot be observed directly, such as thoughts and feelings.

The history of psychology is rooted in philosophy, biology, and physiology. Rene Descartes and Charles Darwin strongly influenced the origins of psychology. Descartes contributed with his view of a separate mind and body, thus opening the door for studies focusing exclusively on the mind. Darwin proposed that humans are part of an evolutionary process he termed *natural selection*. This view led psychologists to consider the role of the environment and adaptation in psychology.

In 1879, Wilhelm Wundt developed the first psychology laboratory. Wundt's approach, which emphasized the importance of conscious thought and classification of the mind's structures, was called *structuralism*. While structuralism focused inside the mind, William James emphasized the functions of the mind in adapting to the environment. James's approach was called *functionalism*.

Structuralism and functionalism were the first two schools of thought in psychology; however, behaviors and piece of the

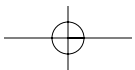
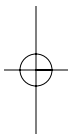
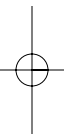
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Chapter Overview

Study: Tiger Woods: By opening the chapter with this feature, Santrock illustrates one of psychology's most important constructs: The psychology of any human being is a complex system of thoughts and behaviors constructed from and influenced by multiple determinants. Because multiple determinants require multiple approaches, psychology studies the complexity of human nature from a multitude of perspectives—each designed to address very different aspects of what makes us human. The Tiger Woods theme is revisited for each psychological approach.

Defining Psychology: Psychology is defined as the scientific study of behavior and the mind. The science seeks to observe, describe, and explain behaviors and mental processes.



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Preface

Since I started teaching introductory psychology in 1967, my motivation and love for introducing students to this relevant science have not wavered. This commitment to relevance and to science has been not only a foundation of my teaching but also the heart of this book. This second edition of *Psychology: Essentials* still uses the theme of psychology as a relevant science and, in line with current trends in the discipline, has increased the emphasis on the biological aspects of psychology and on the positive changes psychology can help us achieve in our lives. These themes, together with a stronger focus on the key ideas in psychology, are the main features of this update of *Psychology: Essentials*.

New! Media Integration

References to video clips and interactivities, all drawn from various McGraw-Hill media resources and chosen for their interest and relevancy to the main content, appear within the main text. The *In-Psych Plus* CD-ROM marginal icon provides an additional, visual reference to the media. Each video and interactivity that is mentioned in the text appears on the *In-Psych Plus* CD-ROM, which is packaged free with the text. In addition, pedagogy, activities, test questions, and other features have been created to complement these video clips and reinforce students' grasp of the key concepts they illustrate. These materials are found on the *In-Psych Plus* CD-ROM, in the *Study Guide*, in the *Instructor's Course Planner*, and in the *Test Item Files*.

Psychology: The Relevant Science

Many students go into an introductory psychology class asking why they should study psychology when their major is physics, computer science, or French. To a psychologist, the answer is obvious: It will help you to understand yourself and others better. Psychology is relevant to almost every aspect of daily life. What psychologists have learned from memory research, for example, can be used to study more effectively, no matter what the subject is. Principles of learning can be applied to change undesirable behavior in children. Knowledge of sensation and perception can be used to design computers more effectively. Psychology teaches us about the roots of aggression and the influence of groups on individual behavior, highly relevant topics in light of recent terrorist activities. Research on stress, coping, and health

can help people to live fuller, happier lives, regardless of their circumstances.

In addition to relevance, this edition continues to stress the scientific nature of the discipline. A hallmark of the book has always been its focus on research, the foundation of all sciences. Here the latest research findings are discussed, along with the classic studies that established psychology as an objective science. There are more than 900 citations from the twenty-first century, including many from 2002 through 2004. Also, numerous new graphs show students how scientific data can be presented visually.

To make the second edition an up-to-date reflection of the discipline of psychology, I have interwoven a couple of new themes into the chapters:

- **Biological influences on behavior.** Psychologists are increasingly relying on neuroscience and genetics research to understand the effects of biology on behavior. Evolutionary psychology, which examines the survival value of human behaviors, is another area of increasing interest. Knowing that students often have difficulty understanding why it is important to learn biology in a course on psychology, I've taken particular care to present these topics in a psychological context and to underscore the complex relationship among biology, environment, and behavior wherever appropriate. Neuroscientist Lawrence Cauller provided outstanding guidance for incorporating stronger biological neuroscience in this edition.
- **Positive psychology.** Currently, there is a movement in psychology to focus attention on the positive contributions psychology can make to everyday life. Proponents of positive psychology, notably Mihaly Csikszentmihalyi, share the belief that, for much of the twentieth century, psychology concentrated on the negative aspects of life and that it's time to emphasize the positive aspects. Positive psychology offers us the opportunity to take control of and find balance in our lives. With Csikszentmihalyi's expert guidance, I have incorporated material on positive psychology throughout the book.

Focus on Key Ideas

Mastering the core content of the introductory psychology course is a significant challenge. Students today are often overwhelmed by information from lectures, textbooks, the

Internet, and other media and have more trouble than ever finding the main ideas in their courses. To address these challenges and help students achieve the best possible outcome, I have developed a learning system for this edition that emphasizes basic concepts and ideas, encourages review, and promotes critical thinking. This system frames the presentation in the textbook and the supplements, providing a truly integrated package that facilitates and reinforces learning.

The learning system has several components, all centered on three to six key ideas per chapter. These ideas are encapsulated in learning goals, which correspond with the chapter's main headings, as shown at the opening of each chapter. The learning goals reappear at several places in the chapter: as a question at the beginning of the main section, in a guided review at the end of the section (titled Review and Sharpen Your Thinking), and again in a summary at the end of the chapter. Each main section also begins with a content map of the section and subsection headings. A complete chapter map at the end of the chapter shows how all the sections work together to illuminate the topic. Thus the content maps provide a visual guide to the core concepts that support the learning goals.

To encourage application of the core concepts and increase the likelihood that they will be remembered, the learning system includes critical thinking questions keyed to the learning goals in the Review and Sharpen Your Thinking sections. Additionally, What do you think? exercises accompany the Critical Controversy boxes, and three or more critical thinking exercises follow the review section at the end of each chapter in the Apply Your Knowledge section. For students who have access to the Web, the end-of-chapter exercises include at least one Web-based activity.

To help students make the best use of the student supplements, an additional reminder appears in the Connections section at the very end of each chapter. Repeating the learning goals and maps in the student supplements reinforces the lessons from the book and eliminates the confusion many students have about how to use the supplements to boost performance in a course.

Changes in Coverage

In addition to increased emphasis on neuroscience, evolutionary psychology, and positive psychology, the second edition of this book contains increased coverage of human diversity and controversies in psychology. This material is presented where appropriate throughout the book.

The second edition of *Psychology: Essentials* has much the same table of contents and chapter sequence as the first edition, with two major exceptions. First, the chapter on human development now falls closer to the beginning of the book (chapter 3). Second, a chapter on health and well-being has been added (chapter 13).

The substance and presentation in each chapter have been thoroughly revised. Some of the detail that is less relevant today than it once was has been pruned to make room for cutting-edge research, and some of the presentation was reconceptualized to focus on the key ideas reflected in the learning goals. Although there isn't enough space here to list all of the changes in this edition, here are the highlights:

CHAPTER 1 The Science of Psychology

- New discussion of attitudes central to the scientific approach
- Reorganized section on research methods, focusing on descriptive, correlational, and experimental research and including new coverage of positive and negative correlations and their interpretation
- Expanded, updated coverage of the evolutionary psychology approach and a new section on positive approaches to psychology, including the humanistic movement and the positive psychology movement
- New section on how to get the most out of psychology, focusing on study habits and skills

CHAPTER 2 The Brain and Behavior

- New opening discussion of the characteristics of the nervous system, focusing on complexity, integration, adaptability, and electrochemical transmission
- Revised presentation of neuron structure and function, including new material on neurotransmitters and neural networks
- Updated coverage of functioning in the left and right hemispheres of the brain and many new drawings of the brain
- Separate section on the endocrine system
- New section on genetics and evolution

CHAPTER 3 Human Development

- Added coverage on the brain and how it changes from infancy to adulthood
- Revised discussion of socioemotional development in childhood, including the effects of parenting style and gender development
- New sections on positive psychology and development in childhood, adolescence, and adulthood
- Expanded discussion of biological aspects of aging, including updated information on Alzheimer's disease
- Updated coverage of cognitive changes and aging, including new figures on age-related changes in intellectual abilities and reaction time
- Discussion of research on what makes a successful marriage and research on emotion, social networks, and aging

CHAPTER 4 Sensation and Perception

- Completely revised discussion of how we sense and perceive the world
- New coverage on parallel processing in the visual cortex
- New information on sound localization in the discussion of the auditory system
- Expanded coverage of pain, including new discussions of the “fast” and “slow” pain pathways and pain control and treatment

CHAPTER 5 States of Consciousness

- Neuroscience coverage incorporated in sections on consciousness, stages of sleep, dreams, and psychoactive drugs
- Greater coverage of circadian rhythms
- New coverage of the role of sleep in the storage and maintenance of long-term memory
- Addition of recent research on sleep deprivation in adolescents and older adults
- Inclusion of new research on dream content across cultures
- Most recent data on trends in adolescent drug use

CHAPTER 6 Learning

- Expanded and clarified discussion of classical conditioning, including the role of classical conditioning in health problems and applications to consumer psychology
- Easier-to-understand examples of positive and negative reinforcement
- Improved comparison of punishment and negative reinforcement
- Expanded discussion of applications of operant conditioning, including the use of shaping and behavior modification in the classroom

CHAPTER 7 Memory

- Revised coverage of memory encoding, including the effects of divided attention
- Revised coverage of memory storage with a new section on connectionist networks
- Revised discussion of forgetting, including the forgetting curve, decay and transience, and motivated forgetting
- Complete reorganization of memory and study strategy section to correspond to the organization of the preceding discussion of memory

CHAPTER 8 Thinking, Language, and Intelligence

- Earlier discussion of the link between cognition and language
- Revised section on language acquisition and development, including material on the effects of maternal

speech on vocabulary development in infants and a new figure showing language milestones

- Added sections on theories of multiple intelligences and emotional intelligence
- New section on the influence of heredity and environment on intelligence, including gender and cultural comparisons

CHAPTER 9 Motivation and Emotion

- Improved section on motivation theory, including additional information on the evolutionary approach to motivation, arousal and sensation seeking, and intrinsic and extrinsic motivation
- Expanded and updated discussion of blood chemistry and obesity, neurotransmitters and hunger, obesity in the U.S., and anorexia nervosa and bulimia nervosa
- New discussion of the importance of self-generated goals in achievement, along with a cross-cultural comparison of math achievement in the United States, Japan, and Taiwan
- New discussion of the roles of neural circuits and neurotransmitters, including the links between emotion and the brain’s hemispheres
- New focus on positive emotions and how they might enhance people’s well-being

CHAPTER 10 Personality

- Revision of social cognitive theory section to include discussions of personal control, perceptions of control, and optimism
- Expansion of section on personality assessment to include assessment of the big five factors and locus of control

CHAPTER 11 Psychological Disorders

- Greater coverage of the multiaxial system in *DSM-IV*, including a new figure on the major categories of psychological disorders, organized according to Axis I and Axis II
- Introduction of the concept of etiology, new discussion of the etiology of anxiety disorders, and expanded discussion of post-traumatic stress disorder
- Updated discussion of mood disorders, including new coverage on neurobiological abnormalities and new material on the depressive realism view of depression
- New section on suicide, including comparison of suicide rates across cultures
- Expanded discussion of schizophrenia, including recent information about heredity and neurobiological factors

CHAPTER 12 Therapies

- Substantial reorganization to place biological therapies at the beginning of the chapter
- Updated discussion on the effects of drug therapies, including Prozac and Risperdal
- New sections on cognitive-behavior therapy and the use of cognitive therapy to treat psychological disorders
- New section on sociocultural approaches, including coverage of the community mental health movement
- New discussion of the relationship between the effectiveness of psychotherapy and ethnicity and gender

CHAPTER 13 Health and Well-Being

- Discussion of stress that focuses on sources—including the workplace—and physical, sociocultural, and cognitive responses
- Section on stress and illness that covers the link between positive emotions and health
- Section on coping strategies that covers problem-focused and emotion-focused coping, optimism and positive thinking, and the role of religion in helping people cope with stress
- Section on healthful living, with coverage of the effectiveness of the antidepressant Zyban, nicotine patches, and other methods in helping people to quit smoking

CHAPTER 14 Social Psychology

- Expanded discussion of the symptoms of groupthink and strategies for avoiding groupthink
- Discussion of leadership styles in women and men
- Expanded, updated discussion of prejudice, focusing on the reasons people develop prejudice
- Updated section on social interaction, including discussion of neurotransmitters and recent information on children's TV viewing habits and possible links to aggression
- Addition of recent research on gender and relationships

Print and Media Supplements

For the Student

Online Learning Center for Students The official website for *Psychology: Essentials* contains chapter outlines, practice quizzes that can be emailed to the professor, key term flashcards, interactive exercises, Internet activities, Web links to relevant psychology sites, drag-and-drop labeling exercises, Internet primer, career appendix, and a statistics primer. New and exclusive to this edition of the Online Learning Center is a collection of brief “FYI” enrichment articles about selected topics tied to each chapter at www.mhhe.com/santrockp2u.

PowerWeb This unique online tool, accessed through the Online Learning Center, provides current articles, curriculum-based materials, weekly updates with assessment, informative and timely world news, refereed Web links, research tools, study tools, and interactive exercises. A PowerWeb access card is packaged FREE with each new copy of *Psychology: Essentials*.

New! In-Psych Plus Student CD-ROM *In-Psych Plus* sets a new standard for introductory psychology multimedia. Packaged FREE with the book, *In-Psych Plus* is organized according to the textbook's chapter outlines and features video clips, audio clips, and interactivities chosen to illustrate especially difficult core concepts in introductory psychology. *In-Psych Plus* also includes a pre-test, follow-up assignments, Web resources, chapter quizzes, a student research guide, and an interactive timeline that puts events, key figures, and research in psychology in historical perspective.

GradeSummit This Internet service is a diagnostic self-assessment and exam-preparation tool designed to focus student attention on the key material and to make study time more efficient. *GradeSummit* reveals student strengths and weaknesses in comprehension and provides feedback and direction for increasing understanding. *GradeSummit* contains thousands of unique examlike questions written by professors and peer-reviewed for quality and accuracy. For more information, visit www.gradesummit.com.

Study Guide

Ruth Hallongren, Triton College

Designed to reinforce the key ideas in *Psychology: Essentials*, the *Study Guide* contains the following features for each chapter: content overview, learning objectives, guided review for each section, three practice tests, essay questions, crossword puzzle, learning goal checklist, and diagram labeling exercises.

Psych On-Line This supplement points the way to the Internet for psychology research and provides general resource locations. Psychology sites are grouped by topic with a brief explanation of each site.

For the Instructor

Instructor's Course Planner

Susan Weldon, Eastern Michigan University

This manual provides many useful tools to enhance teaching. For each chapter, the manual provides teaching objectives, chapter overviews, key terms, Teaching the Chapter, lecture/discussion suggestions, goal reinforcement classroom activities, an Experiencing Psychology boxed feature, critical thinking questions, video/media suggestions, and references and sources of bibliographical information.

Test Item Files

Test Item File I: Ron Mulson, Hudson Valley Community College

Test Item File II: Susan E. Swithers, Purdue University

Two sets of test items provide a wide variety of questions, enough to last the life of this edition. The questions in the *Test Item Files* are available in computerized format, as well as in Word and Rich Text formats, on the *Instructor's Resource CD-ROM*. With the computerized version, instructors can easily select questions and print tests and answer keys. Instructors can also customize questions, headings, and instructions; add or import their own questions; and print tests in a choice of printer-supported fonts.

PowerPoint Lectures Available on the Internet and on the *Instructor's Resource CD-ROM*, these presentations cover the key points of the chapter and include charts and graphs from the text. Helpful lecture guidelines are provided in the Notes section for each slide. They can be used as they are or modified to meet instructional needs.

Overhead Transparencies More than 70 key images from the text are available to the instructor upon adoption. A separate package, the *Introductory Psychology Transparency Set*, provides more than 100 additional images illustrating key concepts in general psychology.

Online Learning Center for Instructors The password-protected instructor side of the text website contains the *Instructor's Course Planner*, a sample chapter from the textbook, PowerPoint presentations, Web links, and other teaching resources at www.mhhe.com/Santrocek2u.

PageOut™ This exclusive McGraw-Hill product allows even the most inexperienced computer user to quickly and easily create a professional-looking course website. The instructor simply fills in templates with course-specific information and with content provided by McGraw-Hill and then chooses a design. Best of all, it's FREE! www.pageout.net

Instructor's Resource CD-ROM This comprehensive CD-ROM includes the contents of the *Instructor's Course Planner*; *Test Item Files* in computerized, Word, and Rich Text Versions; an image gallery; and PowerPoint slides. The Presentation Manager provides an easy-to-use interface for the design and delivery of multimedia classroom presentations.

Acknowledgments

Many people guided this update of *Psychology: Essentials*. The McGraw-Hill team of Steve DeBow, president; Thalia Dorwick, editor in chief; Stephen Rutter, publisher; Melissa

Caughlin, marketing manager; Judith Kromm, director of development; and Sienne Patch, developmental editor, all played key roles and spent long hours in the planning, revision, and publication process for this update.

Reviewers for the Second Edition

Psychology: Essentials has benefited considerably from advice and analysis provided by the reviewers of the seventh edition of the comprehensive book, *Psychology*, on which this volume is based. The following individuals deserve special thanks for their in-depth input:

Tamara L. Brown, University of Kentucky
 Larry Cauller, University of Texas at Dallas
 Peter B. Crabb, Pennsylvania State University–Abington
 Mihaly Csikszentmihalyi, Claremont Graduate University
 William Fabricius, Arizona State University
 Linda E. Flickinger, St. Clair County Community College
 Edwin E. Gantt, Brigham Young University
 Debra L. Hollister, Valencia Community College
 Richard Kandus, Mt. San Jacinto College
 Saera Khan, Western Washington University
 Maria LeBaron, Randolph Community College
 Brennis Lucero-Wagoner, California State University–Northridge
 Wendy Mills, San Jacinto College North
 John Mitterer, Brock University
 Doug Peterson, The University of South Dakota
 James S. Previte, Victor Valley College
 Steven V. Rouse, Pepperdine University
 John Ruys, University of California–Davis
 H.R. Schiffman, Rutgers University
 Susan Spencer, Eastern Oklahoma State College
 Meredith Stanford-Pollack, University of Massachusetts at Lowell
 Susie Swithers, Purdue University
 Katharine Webb, Maria College
 Fred Whitford, Montana State University

In addition, I would like to thank the following expert reviewers, who provided in-depth comments on neuroscience and cognitive psychology:

James C. Bartlett, University of Texas at Dallas
 Mike Kilgard, University of Texas at Dallas

The following psychologists directly helped to make the second edition of *Psychology: Essentials* a much better book through their thoughtful reviews of the first edition:

Lisa Ansara, University of Massachusetts at Lowell
 John Biondo, Community College of Allegheny County
 Heather Frasier Chabot, New England College
 Marcella Desrochers, College of Charleston
 John Foust, Parkland College
 Peggy F. Malone, St. Gregory's University
 Paul J. Mullen, North Central College
 Doris Van Auken, Holy Cross College

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Reviewers for and contributors to both the previous edition of *Psychology: Essentials* and all seven editions of *Psychology* have also helped in ways too numerous to mention: Valerie Ahl, University of Wisconsin–Madison; Susan Amato, Boise State University; Richard Anderson, Bowling Green State University; Jim Backlund, Kirtland Community College; Stella B. Baldwin, Wake Technical Community College; James Bartlett, University of Texas at Dallas; Jackson Beatty, UCLA; Ludy Benjamin, Texas A&M; Pearl Berman, Indiana University of Pennsylvania; Joy L. Berrenberg, University of Colorado at Denver; John Best, Eastern Illinois University; Michelle Boyer-Pennington, Middle Tennessee State University; Charles Brewer, Clemson University; Richard Brislin, University of Hawaii; Frederick M. Brown, Penn State University; David Buss, University of Texas at Austin; James Calhoun, University of Georgia; Richard Cavasina, California University of Pennsylvania; George A. Cicala, University of Delaware; Lillian Comas-Diaz, Transcultural Mental Health Institute; Pamela Costa, Tacoma Community College; Mihaly Csikszentmihalyi, Claremont Graduate University; Donna Dahlgren, Indiana University Southeast; Florence Denmark, Pace University; Ellen Dennehy, University of Texas at Dallas; Kim Dielmann, University of Central Arkansas; G. William Domhoff, University of California, Santa Cruz; Leta Fenell, Chesapeake College; Roseanne L. Flores, Hunter College; James Francis, San Jacinto College; Bety Jane Fratzke, Indiana Wesleyan University; Stanley Gaines, Pomona College; Robert Gallen, Indiana University of Pennsylvania; J. P. Garofalo, University of Pittsburgh; Michael Kaye Garza, Brookhaven College; Robert Gifford, University of Victoria; Roderick C. Gillis, University of Miami; Jean Berko Gleason, Boston University; James Greer, Louisiana State University; Leslie Grout, Hudson Valley Community College; Arthur Gutman, Florida Institute of Technology; Richard Halgin, University of Massachusetts–Amherst; Christine Harness, University of Wisconsin, Milwaukee; John Harvey, University of Iowa; James R. Heard, Antelope Valley College; Paul Hernandez, South Texas Community College; N. C. Higgins, University of North British Columbia; James J. Johnson, Illinois State University; James Jones, University of Delaware; Karen Jordan, University of Illinois at Chicago; Seth Kalichman, Georgia State University; Kevin Keating, Broward Community College; Saera Khan, Western Washington University; Brian Kim, University of Maryland College Park; Laura King, Southern Methodist University; Paul R. Kleinginna, Georgia

Southern University; Linda Kline, California State University, Chico; Karen Kopera-Frye, University of Akron; Phil Kraemer, University of Kentucky; Eric Landrum, Boise State University; Gary D. Laver, California Polytechnic State University, San Luis Obispo; Michele K. Lewis, Northern Virginia Community College, Annandale; Marta Losonczy, Salisbury State University; Karen E. Luh, University of Wisconsin–Madison; Jerry Marshall, University of Central Florida; Diane Martichuski, University of Colorado at Boulder; Vicki Mays, University of California, Los Angeles; Wanda McCarthy, Northern Kentucky University; Glenn E. Meyer, Trinity University; Fred Miller, Oregon Health Sciences University, Portland Community College; Richard Miller, Western Kentucky University; Ann Miner, Indiana University of Pennsylvania; David Mostofsky, Boston University; Carol Nemeroff, Arizona State University; David Neufeldt, Hutchinson Community College; Illene Noppe, University of Wisconsin–Green Bay; Cindy Nordstrom, Illinois State University; Arthur G. Olguin, Santa Barbara City College; Alice O’Toole, University of Texas at Dallas; Raymond Paloutzian, Westmont College; David Penn, Louisiana State University; James Pennebaker, University of Texas at Austin; Jeffrey Pedroza, Lansing Community College; Lawrence A. Pervin, Rutgers University; Michelle Perry, University of Illinois at Urbana, Champaign; Vincent Punzo, Earlham College; Barbara Radigan, Community College of Allegheny County, Allegheny Campus; Ed Raymaker, Eastern Main Technical College; Pamela Regan, California State University, Los Angeles; Bob Riesenberg, Whatcom Community College; Daniel Schacter, Harvard University; Susan J. Shapiro, Indiana University East; Judith A. Sheiman, Kutztown University; Paula Shear, University of Cincinnati; Cynthia Sifonis, University of Illinois; Charles M. Slem, California Polytechnic State University, San Luis Obispo; Steven Smith, Texas A&M; John E. Sparrow, University of New Hampshire, Manchester; Meredith Stanford-Pollock, University of Massachusetts–Lowell; Keith E. Stanovich, University of Toronto; Barry Stein, Tennessee Technological University; Jutta M. Street, Wake Technical Community College; Susan Swithers, Purdue University; Roger M. Tardy, Jr., Bucknell University; Christopher Taylor, University of Arizona; Jeremy Turner, University of Tennessee at Martin; David Wasieleski, Valdosta State University; Leonard Williams, Rowan University; Marek Wosinski, Arizona State University; Michael Zickar, Bowling Green State University.