

Preface

Throughout its four editions, my vision for *Psychology* has remained the same: to merge rigorous science with a broad human perspective in a book that engages both mind and heart. Across the dozen years spent shaping this book, my aim has been to create a state of the art introduction to psychology's methods and findings, written with sensitivity to students' needs and interests. I aspire to help students gain insight into, and appreciate the wonder of, important phenomena of their everyday lives. I also want to convey the inquisitive, critical, and compassionate spirit in which psychologists *do* psychology. Believing with Thoreau that "Anything living is easily and naturally expressed in popular language," I seek to communicate today's scholarship with crisp narrative and vivid storytelling.

New to the Fourth Edition

This new edition retains the voice, and much of the organization and content of its predecessors. It is, however, the most effortful and significant revision to date.

Enhanced "Thinking Critically" Theme

New Chapter 1, Thinking Critically With Psychological Science, takes an innovative critical thinking approach to teaching methods (see table of contents at right). The chapter shows how psychology's methods address everyday questions of behavior with a set of formal procedures for gathering and evaluating evidence that diminish the errors of everyday intuition. It looks at how psychology's methods can help us answer many significant questions and think more intelligently. Later chapters reinforce the "thinking critically" theme, often with boxes that model critical analysis. A Critical Thinking Exercise at the end of each chapter tests student understanding of the principles, with sample answers in an end-of-book appendix. These creative exercises use the model established by well-known critical thinking researcher Jane Halonen, whose new *Critical Thinking Companion for Introductory Psychology* is available from Worth Publishers for use with this text. By the book's end, students should not only have learned psychology's most important concepts and findings, but also how and why we play the science game.

Chapter 1

Thinking Critically With Psychological Science

The Scientific Attitude

The Limits of Intuition and Common Sense

Did We Know It All Along?

The Hindsight Bias

Overconfidence

Research Strategies: How Psychologists Ask and Answer Questions

The Scientific Method

Description

Correlation

Experimentation

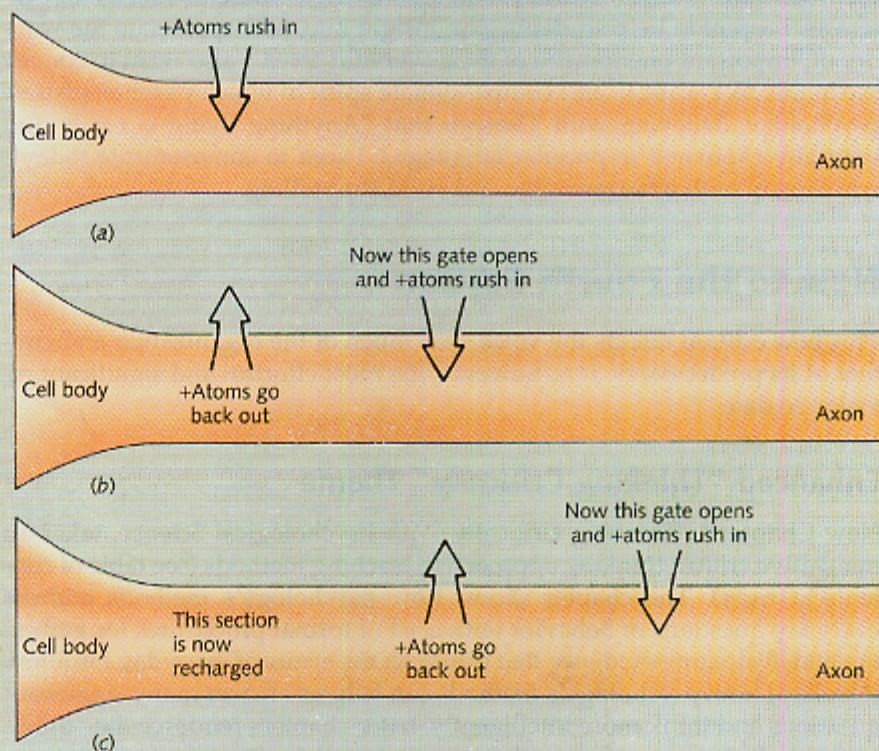
Commonly Asked Questions About Psychology

Strengthened Neuroscience Perspective

Chapter 2, now titled Neuroscience and Behavior, offers increased and updated coverage of psychology's neuroscience foundations. The art program has been enhanced and expanded so that it more effectively helps students visualize what is presented in the text (for example, see Figure 2-2 below). On the stated assumption that "everything psychological is simultaneously biological," information on the neurobiology and genetics of behavior, cognition, and emotion is also integrated throughout the text at more than three dozen locations (see cross-reference guide, page 74).

Figure 2-2

Axonal Transmission A neuron fires an impulse when stimulated by pressure, heat, light, or chemical messages from adjacent neurons. This brief electrical charge, called an action potential, travels down the axon, beginning (a) at the juncture of the cell body and the axon. A thousandth of a second later (b), the electrical change produces another action potential a little farther along the axon, and the first section begins to recharge. After another thousandth of a second (c), the action potential appears to have moved farther along the axon, and the first section has completely recharged.



New Pedagogical Aids

A new system of study aids has been introduced—**PRTR**. Major chapter sections now begin with a “Preview” that helps focus student reading on each section’s overarching concepts (see sample below from Chapter 5 section on Hearing). Chapters have been broken down into more digestible sections to help students chart their Reading. Critical Thinking is incorporated as a theme throughout the book—within the narrative, in “Thinking Critically About . . .” boxes, and in end-of-chapter exercises. Each major section ends with a “Summing Up” that Reviews the most important concepts (see sample below). To enhance student review, the key terms are now defined and organized by major chapter section at the end of each chapter.

Samples of “Preview” and “Summing Up”

Hearing

Somewhat less mysterious than sight, but still pretty amazing, is another aspect of our ordinary experience: the process by which we convert air pressure waves into neural messages that the brain interprets as a meaningful symphony of sound. How do we do it? What breaks in the system typically cause hearing loss? What is it like to live without hearing?

Summing Up

The Stimulus Input: Sound Waves The pressure waves we experience as sound vary in frequency and amplitude, and correspondingly in perceived pitch and loudness.

The Ear Through a mechanical chain of events, sound waves traveling through the auditory canal cause minuscule vibrations in the eardrum. Transmitted via the bones of the middle ear to the fluid-filled cochlea, these vibrations create movement in tiny hair cells, triggering neural messages to the brain.

Research on how we hear pitch supports both the place theory, which best explains the sensation of high-pitched sounds, and frequency theory, which best explains the sensation of low-pitched sounds. We localize sound by detecting minute differences in the loudness and timing of the sounds received by each ear.

Hearing Loss and Deaf Culture Hearing losses linked to conduction and nerve disorders can be caused by prolonged exposure to loud noise and by diseases and age-related disorders. Those who live with hearing loss face social challenges.