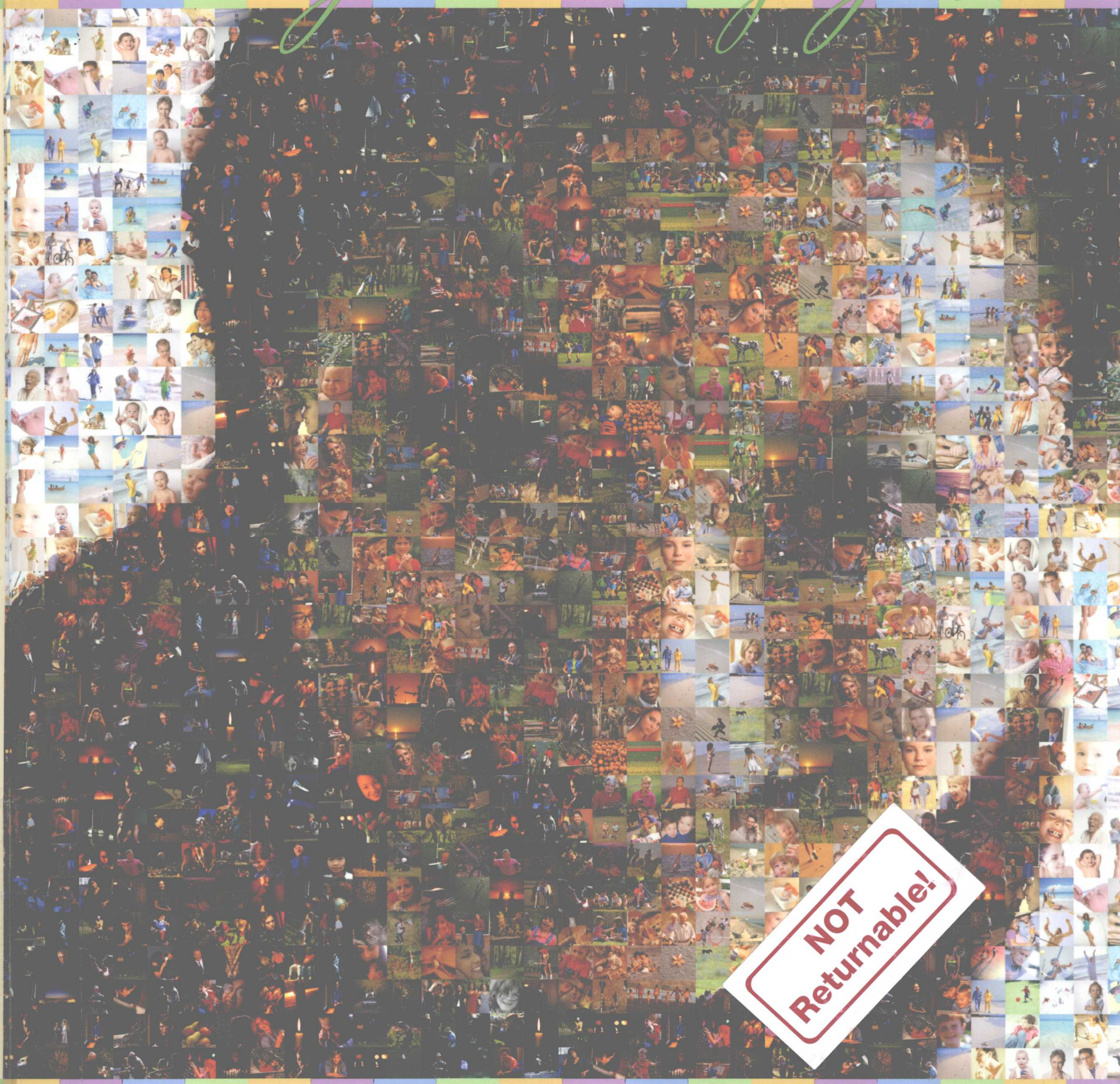


# Psychology 4e



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Kowalski/Weston



# Psychology

Fourth Edition

Robin Kowalski

Clemson University

Drew Westen

Emory University



WILEY

John Wiley & Sons, Inc.

## Dedication

To my sweet little boys, Noah and Jordan.  
I love you more than you could ever know,  
and  
To my parents, Randolph and Frances Kowalski.  
Thank you for being such great parents, role models, and friends.  
RMK

To Laura and Mackenzie.  
DW

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# Preface

From the moment I enrolled in my first psychology course—a college transfer class in high school—I was hooked. I loved the content of the course, but I also remember two other very specific things about the class. First, the professor, Dr. John Pellew, was a superb teacher and thus was instrumental in my becoming the psychologist I am today. Second, the textbook was user-friendly, interesting, and even enjoyable. I still have the book and, suffice it to say, high school was many years ago.

Stemming from that early experience, my philosophy of teaching and my philosophy of writing an introductory psychology book are similar. I love interactions with students, either directly in the classroom, or indirectly through writing or email contacts. I want my students to enjoy the process of learning, to be exposed to the story of psychology in a way that captures their attention, and to see applications of what they learn in introductory psychology to their everyday lives. As a teacher I try to accomplish these goals by establishing good relationships with my students, by maintaining my own excitement and energy for the subject matter, and by using many stories and illustrations as I teach them the concepts of psychology.

As the new author of this edition, I have pursued similar goals. My expertise is in the area of social psychology, with secondary emphases in health psychology and gender. My primary research interests focus on aversive interpersonal behaviors, such as complaining and teasing, that occur frequently in the context of people's ongoing interactions with one another. I also conduct research on organ donation and transplantation within the field of health psychology. Given my areas of expertise, it won't surprise you to learn that the fourth edition of *Psychology* includes more extensive coverage of research related to gender. Furthermore, a separate chapter is now devoted to health psychology, one of the most rapidly growing subdisciplines within psychology.

I hope that my enthusiasm for psychology is apparent as you proceed through the text. And I encourage you to contact me ([rkowals@clemson.edu](mailto:rkowals@clemson.edu)) regarding what it is that you like and dislike, what is immediately clear, and what you find confusing. As a student, you are the primary means of improving this book.

The overall vision for *Psychology* is that it is the "thinking student's introduction to psychology." The goal is that you as students are drawn into the material in such a way that you begin to ask probing questions about the information and begin to see psychology at work in your everyday lives. The aim from the start of this revision has also been to give you a sense of the "big picture," that is, of how we human beings think, feel, and behave, and how our evolving science continually addresses and re-addresses the key questions that brought most of us into the field—questions about the relation between psychological events and their neural underpinnings, between cognition and emotion, between cultural processes and human evolution, between nature and nurture, and so forth. Introductory psychology is probably the last time most students—and psychologists—get a broad overview of the depth and breadth of our field. In fact, one of the greatest personal benefits for those of us who teach introductory psychology is that we are continually exposed to new information, often in domains far from our own areas of expertise, that stretch and challenge our imaginations.

As the “thinking student’s introduction to psychology,” I wrote this edition of *Psychology* to tell the “story of psychology.” As a teacher and writer, I try to make use of one of the most robust findings in psychology: that memory and understanding are enhanced when target information is associated with vivid and personally relevant material. Thus, each chapter begins with an experiment, a case, or an event that lets you know why the topic is important and why anyone might be excited about it. None of the cases is invented; each is a real story. Chapter 2, for example, begins with the case of a young woman who lost her entire family in a car accident and found herself suddenly contracting one minor ailment after another until finally starting to talk about the event with a psychologist. I then juxtapose this with an experiment by James Pennebaker on the influence of emotional expression on physical health to show how a researcher can take a striking phenomenon or philosophical question (the relation between mind and body) and turn it into a researchable question.

Writing a textbook is always a balancing act, with each addition adjusting scales that were tipped a bit too far in one direction in the previous one. Probably the most difficult balance to achieve in writing an introductory text is how to cover what we know (at least for now) and what’s on the cutting edge without making an encyclopedia, particularly when the field of psychology is moving forward so rapidly. Another balancing act involves helping those of you who might desire more structure to learn the material, without placing roadblocks in the path of students who would find most pedagogical devices contrived and distracting. A final balancing act involves presenting solid research in a manner that is accessible, lively, and thought-provoking. I believe that this edition of *Psychology* successfully achieves the balance across these different issues.

## New Features of the Fourth Edition

### Finding the Take Home Message: “The Big Questions”

Wherever possible, this book and its previous editions have tried to delineate some of the links across topics that our best intellectual efforts often obscure. For example, Chapter 7 presents connectionist models in some detail, linking them to concepts of association described in Chapter 1, Chapter 5 on associative learning, and Chapter 6 on associative memory. Multiple chapters revisit connectionist models, such as research on psychomotor slowing in Chapter 13 and research on stereotype activation and prejudice in Chapter 17. Similarly, in various places throughout the book, I present avenues of integration across theoretical perspectives, showing the roles that biological, psychological, and social factors play in behavior. Chapter 6 on memory concludes by linking the expanded understanding of memory characteristic of the last decade to research from multiple traditions that can now be incorporated under the larger tent of cognitive neuroscience. Students are challenged to consider the link between classical and operant conditioning and implicit and procedural memory and to consider the evolutionary challenge to the concept of an all-purpose, general processing brain.

In the fourth edition, I have taken this integrative approach one step further. Particularly with a comprehensive course such as introductory psychology, students are often left wondering what the take-home message is. What are the key elements or big picture questions that unify all of the different topics covered? To provide you with this take-home message, new to this edition of *Psychology* is the introduction of eight philosophical questions central to the study of psychology—the “Big Picture Questions.”

Many contemporary questions that psychologists raise were debated among early philosophers. However, psychologists do not tackle philosophical issues such as free will versus determinism directly. Rather, classic philosophical questions reverberate through many contemporary psychological discussions. These are the questions on

which much, if not most, psychological theory and research are predicated, as will become evident as you read subsequent chapters of this book. Some of the questions are beginning to be answered as theorists and researchers examine the roots of human self-understanding. Others remain unanswered, yet they still guide current theory and research. These questions are addressed throughout the text where you see the symbol ( $\varphi$ ) followed by the Big Picture Question most relevant to the constructs being discussed at that point in the chapter. Although the following list is not all inclusive, it gives a sense of the overriding questions guiding psychological research today.

**( $\varphi$ ) Question 1: To what extent can mental processes be reduced to the brain or body?** Although hard-core behaviorists argue that mental processes are outside the purview of research and theory, most other psychologists argue that at least part of our mental processes can be reduced to the brain or body. For example, one application of this question might be to ask “Can we understand the loss of a loved one by mapping the neural networks? Or when we hold a phone number in mind briefly as we reach for the phone, are we using different neural ‘hardware’ than when we store that number ‘for keeps’?”

**( $\varphi$ ) Question 2: What is the relationship between reason and desire or, more precisely, between cognition and affect?** For example, to what extent should people choose their mates based on “gut” feelings? Should they carefully weigh a potential partner’s costs and benefits if they want to have a happy, long-lasting marriage? For that matter, to what extent do people’s thoughts actually determine how they feel?

**( $\varphi$ ) Question 3: To what extent is human psychology continuous with the psychology of other animals?** For example, to what extent can studying fear responses in rats inform humans about their own fear responses? Or, conversely, to what extent do current theories of altruism derived from research with humans apply also to animals? Can we understand people’s relationships with animals by examining their patterns of relationship with other humans?

**( $\varphi$ ) Question 4: To what extent is human nature particular versus universal?** In other words, to what extent is human nature relatively invariant as opposed to culturally variable? Is logical reasoning universal, for example, or do people use different kinds of “logic” in different cultures? Do children follow similar patterns of language development throughout the world?

**( $\varphi$ ) Question 5: To what extent are psychological processes the same in men and women?** For example, to what extent do gender differences in linguistic and spatial problem solving reflect differential evolutionary selection pressures? Why might men and women make different attributions for their own successes and failures? Are men and women similarly affected by a partner’s infidelity?

**( $\varphi$ ) Question 6: What is the relation between nature and nurture in shaping psychological processes?** For example, how can we understand that the likelihood of getting killed in an accident is heritable? To what extent is intelligence inherited? How do we account for data showing remarkable similarities between identical twins who have been reared apart?

**( $\varphi$ ) Question 7: To what extent are psychological processes conscious or unconscious—that is, explicit versus implicit?** Can, for example, amnesiacs show cognitive dissonance effects, even when they cannot remember having performed a prior act involved in the production of dissonance? Similarly, can people describe themselves accurately or are they unaware of the contents of their minds and the causes of their behavior?

(φ) **Question 8: To what extent can we inform our knowledge through reason or through observation—that is, rationalism versus empiricism?** Relatedly, to what extent are humans passive recipients of, or active constructors of, their understanding? When an air traffic controller notices an anomalous and potentially dangerous “blip” on the radar screen, to what extent is this an active process of construction and decision making or a passive process of sensations inevitably producing perceptions?

## General Organization

The fourth edition of *Psychology* has been organized in a way that should be convenient for most instructors and that follows a coherent design. Of course, different instructors organize things differently, but I do not think many will find the organization idiosyncratic. Following an introductory chapter (Chapter 1) and a chapter on the primary research methods used in psychology (Chapter 2), the content moves on to physiological psychology (Chapter 3), sensation and perception (Chapter 4), learning (Chapter 5), memory (Chapter 6), thought and language (Chapter 7), and intelligence (Chapter 8). Following this, attention is given to consciousness (Chapter 9), motivation and emotion (Chapter 10), and health, stress, and coping (Chapter 11). I then discuss topics related to personality (Chapter 12), developmental psychology (Chapter 13 and Chapter 14), clinical psychology (Chapter 15 and Chapter 16), and social psychology (Chapter 17 and Chapter 18).

Teaching the material in the order presented is probably optimal, for chapters do build on each other. For example, Chapter 9 on consciousness presupposes knowledge of the distinction posed in Chapter 6 between implicit and explicit memory. However, if instructors want to rearrange the order of chapters, they can certainly do so, as material mentioned from a previous chapter is cross-referenced so that students can easily find any information they need.

## Research Focus

This book is about psychological science. A student should come out of an introductory psychology class not only with a sense of the basic questions and frameworks for answering them but also with an appreciation for how to obtain psychological knowledge. Thus, Chapter 2 is devoted to research methods, and the style reflects an effort to engage, not intimidate, so that you can see how methods actually make a difference. The statistical supplement that immediately followed this methodological presentation as an appendix in the third edition is now included in the body of the text. Thus, you can more easily see which statistics are most relevant to particular research designs. From start to finish, you will read about specific studies so that you can learn about the logic of scientific investigation.

## Cutting Edge Information

Many of the changes to the fourth edition of *Psychology* involved updating information that had either become outdated or the substance of which had changed. Additions were made to reflect some of the newer and more cutting edge research within the field of psychology, in large part to align the book with my vision of *Psychology* as the “thinking student’s introduction to psychology.” Some of the highlights in this edition are as follows.

- Chapter 1, “Psychology: The Study of Mental Processes and Behavior,” introduces you to the Big Picture Questions that provide a unifying theme for the entire book.
- Chapter 2, “Research Methods in Psychology,” provides a more integrative perspective of research methods and statistics. Special sections, entitled “Focus on



Methodology," have been added to facilitate your thinking about research methods.

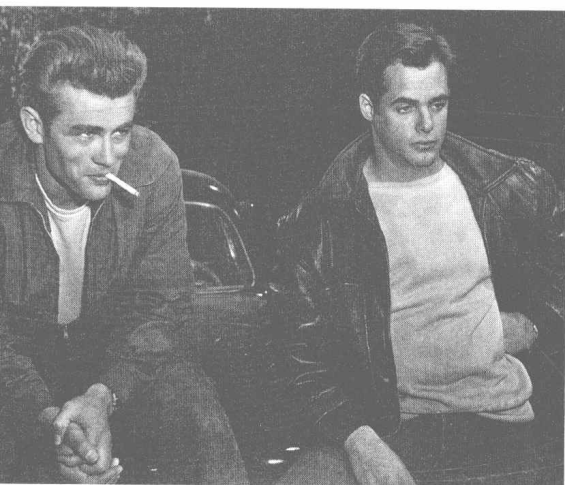
- Chapter 3, "Biological Bases of Mental Life and Behavior," includes an expanded coverage of genetics and evolution, as well as new information on genetic engineering and psychoneuroimmunology.
- Chapter 4, "Sensation and Perception," examines the paradoxical role of Capsaicin, the active ingredient in hot peppers, as a treatment for pain.
- Chapter 5, "Learning," includes new information directly comparing and contrasting classical and operant conditioning.
- Chapter 6, "Memory," includes new information on the relationship between emotional arousal and memory.
- Chapter 7, "Thought and Language," explores several new applications of research on thought and language such as the fact that many hearing-impaired individuals show reasoning deficits, particularly in the areas of inductive reasoning and cognitive flexibility, and the finding that people who are multilingual generate different thoughts depending on the language they are speaking.
- Chapter 8, "Intelligence," addresses many interesting and, at times, controversial issues, including the relationship between emotional intelligence and intelligence as measured by an IQ test, gender differences and similarities in intelligence, and the use of "virtual twins" to tease apart genetic and environmental contributions to intelligence.
- Chapter 9, "Consciousness," examines the various forms of consciousness and unconsciousness, including new information related to the growing abuse of legal prescription drugs such as Oxycontin.
- Chapter 10, "Motivation and Emotion," represents a reorganization of emotion with motivation in a single chapter. Specifically, the chapter addresses the role of thoughts, feelings, and arousal in affecting motivation.
- Chapter 11, "Health, Stress, and Coping," includes new information about health psychology, one of the fastest growing areas within psychology today. Attention is given to the biological, psychological, and social factors involved in health and illness.
- Chapter 12, "Personality," discusses different approaches to the study and measurement of personality, including, most recently, the Five Factor Model of Personality.
- Chapter 13, "Physical and Cognitive Development," provides cutting edge research related to Alzheimer's disease.
- Chapter 14, "Social Development," includes a discussion of attachment in childhood and adulthood, including the problems associated with attachment or the lack thereof, such as that demonstrated by "feral" children.
- Chapter 15, "Psychological Disorders," addresses the role of prenatal trauma as a possible risk factor for schizophrenia. Could exposure to malnutrition, maternal infection during pregnancy, and birth trauma contribute to the onset of schizophrenia later in life?
- Chapter 16, "Treatment of Psychological Disorders," includes cutting edge information on virtual reality therapy (VRT), a technologically innovative technique for helping patients, most recently survivors of 9/11, cope with fears, phobias, and posttraumatic stress disorder.
- Chapter 17, "Social Cognition," gives expanded coverage to the "Self," including recent research on self-esteem and self-presentation.
- Chapter 18, "Interpersonal Processes," takes a new look at the darker side of relationships, with a particular focus on the types of aversive behaviors that people perpetrate in their relationships with family and friends on a regular basis. This chapter also examines everyday social influence tactics to which we all fall victim.



## Making Connections

In many respects, schizophrenia is a disorder of consciousness, in which the normal monitor and control functions of consciousness are suspended (Chapter 9). People with schizophrenia have trouble keeping irrelevant associations out of consciousness and controlling the contents of their consciousness to solve problems. In fact, multiple studies have found deficits in focusing and maintaining attention and in using working memory effectively in patients with schizophrenia (Cornblatt & Kelip, 1994; Gold et al., 1997).

## Apply and Discuss



A recent article in the medical journal *The Lancet* stated that teens who watch movies in which the actors smoke are three times more likely to smoke than those who don't watch those same movies.

- Do you agree with the journal's finding?
- What other factors might be involved that could possibly distort the findings obtained in this study? How many people do you know who started smoking because of someone they had seen smoking in the movies?

## Key Pedagogical Features: An Integrated Package

Consistent with the goal of providing you, the student, with a more integrative perspective on psychology, and with the goal of creating "the thinking student's introduction to psychology," the fourth edition of *Psychology* again includes an integrated study package built into the structure of the text, without cluttering the margins and distracting from the narrative.

In this edition, I continue to integrate photos with the text in a way that fosters critical thinking and helps you to see the connections between concepts presented in different chapters. Instead of using photos primarily to brighten the color of the book or provide interesting diversions (both lofty aims, of course), I have used the photos to *link concepts and visual images*, through the two pedagogical features called **Making Connections** and **Apply & Discuss**.

**Making Connections** illustrates and links material from different chapters, so that you can see the threads that tie the discipline together. For example, as you consider the fact that schizophrenia is a disorder of consciousness (Chapter 15), you are reminded of the role and function of consciousness discussed in Chapter 9.

**Apply and Discuss** combines visual imagery with critical thinking to challenge you to apply what you have just learned. For example, in discussing variables that influence teens to smoke (Chapter 11), you will see a photograph of an actor in a movie smoking. You will be asked to think about the extent to which teens are influenced by such media images of a health-compromising behavior, and to generate other factors that might be involved in teen smoking. The visual example pulls you in, while the questions require you to apply what you have just learned about facilitators and inhibitors of health-compromising behaviors, such as smoking.

Key words are **boldfaced** in the text, and the *definitions of those words are italicized* in the text where they appear, so that you can readily understand every term introduced. Each chapter ends with a list of **Key Terms** with page numbers, so that you, the student, can be certain that you understand all the major terms introduced in the chapter.

## Key Conceptual Features

Several key conceptual features remain from the third edition that give *Psychology* its distinctive "signature." They arose from five objectives in creating this book:

- To focus on both the biological basis of psychology and the role of culture in shaping basic psychological processes;
- To provide a conceptual orientation that would capture the excitement and tensions in the field;
- To help students understand the logic of scientific discovery and hypothesis testing as applied to psychological questions;
- To suggest ways of integrating psychological theories and knowledge across subfields; and
- To employ language that would be sophisticated but engaging.

## Biology and Culture: A Micro to Macro Approach

A consistent theme of the book, introduced in the first chapter, is that biology and culture form the boundaries of psychology. Understanding people means attending

simultaneously to biological processes, psychological experience, and cultural and historical context. The focus on biological and neural underpinnings echoes one of the major trends in contemporary psychological science, as technological developments allow progressively more sophisticated understanding of the neural substrates of psychological experience. The focus on culture has been a central feature of *Psychology* since publication of the first edition.

Each chapter of this book contains at least two extended discussions that show the way psychological experience is situated between the nervous system and cultural experience.

**From Brain to Behavior** focuses on concepts and findings from biopsychology and the neurosciences, providing a detailed discussion of a specific issue, such as psychoneuroimmunology (Chapter 3), the neural basis of classical conditioning (Chapter 5), or individual differences in IQ (Chapter 8; see below). One of the key features of this text, however, is the integration of neuroscientific research into the fabric of the narrative.

## Individual Differences in IQ From Brain to Behavior

The influence of both nature and nurture on individual differences in intelligence is well established (see Sternberg, 1997b, 2000a). With respect to environmental effects, as we saw in Chapter 3, early enrichment of the environments of rats not only makes them better learners but actually increases their brain mass (see Bors & Forrin, 1996). In humans, some of the best predictors of a child's performance on tests of IQ and language in the toddler and preschool years include an enriched home environment, positive mother-child interactions that foster interest and exploration, and maternal knowledge about child rearing and child development (Bee, 1982; Benasich & Brooks-Gunn, 1996; Hart & Risley, 1992; Landau & Weissler, 1993).

A **Global Vista** uses ethnographic material and cross-cultural studies to explore psychological phenomena in other cultures, with an eye to addressing the universality or culture-specificity of psychological theories and observations. For example, menopause has a very different meaning, and hence different symptoms, in a Mayan village than it does in North America (Chapter 13), and the concept of "the self" differs across individualistic and collectivistic cultures (Chapter 17). Like research in the neurosciences, cross-cultural research is integrated into the structure of each chapter, so that students do not isolate cross-cultural issues as distinct from the "psychology of white people" but instead ask cross-cultural questions from the start.

## Culture and Self A Global Vista

The notion that people have a self-concept and some core of selfhood that distinguish them from others seems intuitively obvious to people living in twenty-first century Western societies. This view would not, however, be commonsensical to people in most cultures in most historical epochs (Geertz, 1974; Markus & Kitayama, 1991; Shweder & Bourne, 1982). That the term "the individual" is synonymous with "the person" in contemporary usage demonstrates how the individualism of our culture is reflected in its language. Not coincidentally, the prefix "self-," as in "self-esteem" or "self-representation," did not evolve in the English language until around the time of the Industrial Revolution.

## Learning Aids

Given the breadth of information that is included within an introductory psychology book, students often find it beneficial to have learning aids. The learning aids from the last edition that were most effective in helping students learn were retained in the present edition: *Interim Summaries*, a feature called *One Step Further*, and *Chapter Summaries*.

**Interim Summaries.** At the end of major sections, **Interim Summaries** recap the “gist” of what has been presented, not only to help you consolidate your knowledge of what you have read but also to alert you if you failed to “get” something important (see below). The inclusion of these summaries reflects both feedback from professors and the results of research suggesting that distributing conceptual summaries throughout a chapter and presenting them shortly after students have read the material is likely to optimize learning.

### INTERIM SUMMARY

Myriad reasons exist to account for why people continue to engage in negative health behaviors and why they fail to engage in positive health behaviors. A useful way of compartmentalizing these reasons is to group them into four barriers to health promotion: individual barriers, family barriers, health system barriers, and community barriers. However, as with most things in life, barriers can be overcome, and the barriers to health promotion presented here are no exception.

**One Step Further.** This edition, like the last, includes a feature called **One Step Further**. Like the other recurring features in the book, these discussions flow naturally from the text but are highlighted in color. Generally, these are advanced discussions of some aspect of the topic, usually with a strong methodological or conceptual focus. These sections are intended to be assigned by professors who prefer a high-level text, or to be read by students who find the topic intriguing and want to learn more about it even if it isn’t assigned. Highlighting these sections gives professors—and students—some choice about what to read or not to read.

For example, in Chapter 5, the **One Step Further** section addresses why reinforcers are reinforcing (see below). In Chapter 6, this feature describes research tracking down the neuropsychology of working memory, linking primate studies, basic laboratory research with humans, and the latest neuroimaging research.

## One Step Further

### Why Are Reinforcers Reinforcing?

Learning theorists aim to formulate general laws of behavior that link behaviors with events in the environment. Skinner and others who called themselves “radical behaviorists” were less interested in theorizing about the mechanisms that produced these laws, since these mechanisms could not really be observed. Other theorists within and without behaviorism, however, have asked, “What makes a reinforcer reinforcing or a punisher punishing?” No answer has achieved widespread acceptance, but three are worth considering.

**Chapter Summaries.** Each chapter concludes with a summary of the major points, which are organized under the headings in which they were presented. These summaries provide an outline of the chapter.



## Summary

### Health

1. Health psychology examines the psychological and social influences on how people stay healthy, why they become ill, and how they respond when they do get ill.
2. Although the field has taken off only in the last two decades, it has a rich heritage in the fields of medicine and philosophy. This history began with the early theorists and the practice of trephination, continued through the humoral theory of illness, and the Renaissance, and received one of its major boosts from Freud and the field of psychosomatic medicine.

### Stress

10. Stress refers to a challenge to a person's capacity to adapt to inner and outer demands, which may be physiologically arousing and

emotionally taxing and call for cognitive and behavioral responses. Stress is a psychobiological process that entails a transaction between a person and her environment. Selye proposed that the body responds to stressful conditions with a general adaptation syndrome consisting of three stages: alarm, resistance, and exhaustion.

12. Events that often lead to stress are called stressors. Stressors include life events, catastrophes, and daily hassles.

### Coping

14. The ways people deal with stressful situations are known as strategies for coping; these coping mechanisms are in part culturally patterned. People cope by trying to change the situation directly, changing their perception of it, or changing the emotions it elicits.

## Supplementary Materials

*Psychology, Fourth Edition*, features a full line of teaching and learning resources developed to help professors create a more dynamic and innovative learning environment.

These resources—including print, software, and Web-based materials—are integrated with the text and take an active learning approach to help build students' ability to think clearly and critically.

### For Students

**Study Guide.** Written by Alastair Younger of the University of Ottawa, the *Study Guide* offers students a comprehensive way to review materials from the text and test their knowledge. Each chapter in the text has a corresponding chapter in the *Study Guide*. Six tools help students master the material: chapter outlines, learning objectives, key terms, fill-in exercises, critical thinking exercises, and sample test questions with answers.

**Kowalski *Psychology 4e* Web Site at [www.wiley.com/college/kowalski](http://www.wiley.com/college/kowalski).** Students have access to the following supplements to help them succeed in the course.

- **Vocabulary Flash Cards.** This interactive module gives students the opportunity to test their knowledge of vocabulary terms. In addition, students can take self-tests and monitor their progress throughout the semester.
- **Interactive Animations.** Prepared by Marvin Lee of Shenandoah University and Margaret Olimpieri of Westchester Community College, the interactive modules help students understand concepts featured in the text. Each interactive animation includes a preface and a summary to reinforce students' understanding of the module.

## For Instructors

**Instructor's Manual.** Prepared by Paul J. Wellman of Texas A&M University, this comprehensive resource includes for each text chapter an outline, student learning objectives, outline/lecture organizer (referenced to text pages), lecture topic extensions, in-class demonstrations and discussion questions, out-of-class student exercises, website resources, suggested Web links, software, videos, PowerPoint presentations, and numerous student handouts.

**Instructor's Resource CD-ROM.** This multiplatform CD-ROM is an invaluable resource for in-class lectures and out-of-class preparation. It includes:

- The entire **Instructor's Manual**
- The student **Study Guide**
- The **Computerized Test Bank**
- **PowerPoints**

**PowerPoint Presentation Slides and Lecture Notes.** This includes 450 original lecture slides and 215 art slides that can be sequenced and customized by instructors to fit any lecture. The PowerPoint slides contain a combination of key concepts, images, and problems from the textbook for use in the classroom. Designed according to the organization of the material in the textbook, this series of electronic transparencies can be used to illustrate concepts visually and graphically.

**Web CT and Blackboard Courses.** Web CT and Blackboard courses, prepared by John S. Conklin of Camosun College, are available with this edition of the textbook. This powerful Web program allows professors to set up their own online course with chat rooms, bulletin boards, quizzing, and student tracking. These course-management systems are tools that facilitate the organization and delivery of course materials on the Web. Easy to use, these tools help broaden communication and provide in-depth content for easy and flexible course administration and sophisticated online testing and diagnostic systems.

**Computerized Test Bank.** Prepared by Michael Russell of Washburn University, this multiplatform CD-ROM has nearly 2000 test items, which have been meticulously proofread and reviewed. Each multiple-choice question has been linked to the text's learning objectives, coded "Factual" or "Applied," and referenced to its source in the text. The easy-to-use test-generation program fully supports graphics, print tests, student answer sheets, and answer keys quickly and easily. The software's advanced features allow you to create an exam to your exact specifications, with an easy-to-use interface.

**Transparencies.** Full-color traditional acetate transparencies of every single illustration from the text are available for professors who cannot or do not wish to use the slides available on the *Instructor's Resource CD-ROM*.

**Video Library.** A number of the videotapes available to adopters of the text are new to this edition. Please contact your local Wiley representative for details of this rich resource.

**Kowalski Psychology 4e Web Site at [www.wiley.com/college/kowalski](http://www.wiley.com/college/kowalski).** Our on-line resources add a rich, interactive learning experience designed to give professors the tools they need to teach and students the tools and foundations needed to grasp concepts and expand their critical thinking skills. The Kowalski Psy-

*chology 4e* website provides instructors with the following: Instructor's Manual, Test Bank, Student Study Guide, Discussion Questions, Chapter Summaries, Interactive Animations, Web Links, PowerPoint Slides and Lecture Notes, Additional Reading Suggestions, and Supplementary Content.



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## Reviewers

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