

# PSYCHOLOGY TODAY

## An Introduction

SIXTH EDITION



# PSYCHOLOGY TODAY

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SIXTH EDITION

AN INTRODUCTION

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*with Part Introductions by*  
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# A NOTE FROM THE PUBLISHER

Instructors who teach introductory psychology must choose from a bewildering array of over 100 different texts. Every year, amid tumultuous fanfare and great beating of drums, another dozen or so new candidates come off the press, and each of them promises to be different and better than all the rest. Drowned out by the blare of trumpets is the disquieting news that most of these texts quietly fade away, never to appear in a second or third edition. Only a select few join the ranks of dependable texts, those tried and true best sellers that go through edition after edition.

The books that are chosen by instructors most frequently year after year have two features in common: each has a unique character, and each is flexible enough to change with the times. *Psychology Today* is such a text. It is special and unique, yet it has kept pace with the ever-growing, continually changing field of psychology. Through five editions *Psychology Today* has successfully served the teaching needs of thousands of instructors and the learning needs of more than a million students.

Published in the late 1960s by CRM Books, the first edition of *Psychology Today* took the market by storm, selling more copies in its first year than any other psychology text ever! It was written in a lively, conversational style, designed in an open and inviting magazine format, and sprinkled generously with exciting full-color illustrations. The text was produced in the CRM style by an illustrious crew of thirty-eight academics who provided chapter drafts. These drafts were then rewritten by professional writers to make them more appealing to students.

The fourth edition of *Psychology Today* (published in 1979) was the first edition produced by Random House. It differed from the earlier editions in its improved academic content, which provided solid coverage in all areas of psychology. For the first time, *Psychology Today* appealed as much to faculty as it did to students.

In the fifth edition a team of three distinguished academic advisors worked closely with a professional writer and editor to produce a book that was solid, current, and complete, yet exciting to read and easy to understand.

This sixth edition uses the same approach that was so successful with the fifth edition. We have fine-tuned the book, further strengthening its coverage, and changed the content somewhat to follow current theory and research in the field.

As in the fifth edition, our author team is

headed by **Richard R. Bootzin**, professor and chairman of the Department of Psychology at Northwestern University. Dr. Bootzin is a specialist in personality and abnormal psychology and a prominent researcher in the areas of sleep and sleep disorders, principles of behavior change, and mental health evaluation. He is coauthor of *Abnormal Psychology: Current Perspectives*, 4th edition, published in 1984 by Random House.

**Gordon H. Bower**, professor of psychology at Stanford University, is the second and newest member of our team. A prominent researcher and theorist in the areas of learning, memory, and cognition, his current research interest is the study of emotional influences on cognitive processes. Dr. Bower is coauthor of *Theories of Learning*, 5th edition, with Ernest Hilgard, and editor of the prestigious series, *The Psychology of Learning and Motivation: Advances in Research and Theory*, published annually since 1968. Among his numerous awards and honors are the APA Distinguished Contribution Award and the Albert Ray Lang Professorship Chair at Stanford. In 1984 ten of his former PhD students published a volume entitled, *Tutorials in Learning and Memory: Essays in Honor of Gordon Bower*.

The third distinguished member of our team is again **Robert B. Zajonc**, professor of psychology at the University of Michigan and director of its Research Center for Group Dynamics. Dr. Zajonc, a specialist in social psychology, is known for his research on the effects of mere exposure, social facilitation, family structure and intellectual development, and emotion and cognition. In 1978 he won the APA Distinguished Scientific Contribution Award.

As in the fifth edition, the smooth writing style and even reading level of this book are the work of **Elizabeth Hall**. Ms. Hall is the coauthor of *Child Psychology Today*, 2nd edition, published by Random House in 1986; and of *Adult Development and Aging*, published in 1985. She was Editor-in-Chief of *Human Nature* magazine and managing editor of *Psychology Today* magazine. Her interviews with many eminent psychologists, including Jean Piaget, Jerome Bruner, B.F. Skinner, Erik Erikson, and Bruno Bettelheim, continue to appear in the magazine.

The work of our team is now complete. The sixth edition of *Psychology Today* is one of the most exciting educational tools on the market. We hope that students will continue to enjoy it and to learn from it for many more editions.

# A NOTE FROM THE AUTHORS

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Our goals for this sixth edition of *Psychology Today* were the same as those we had for the fifth edition. We wanted to strengthen even further the book's exposition of basic concepts and its expanded coverage of physiology. At the same time we wanted to bring to the book our excitement about the work being done on the frontiers of psychological research today. We also wanted to give students a feel for the way psychology developed by retaining the classical studies that changed the direction of the field. In the pursuit of those goals, we made a number of modifications.

**Organization** The text still consists of twenty-eight chapters divided into eight parts, but their sequence has been rearranged. Because it is important for students to understand the genetic and evolutionary influences on behavior before they take up the study of behavior itself, we have moved our chapter on Biological Perspectives on Behavior closer to the beginning. The former Part Five, Feeling and Activation, is now Part Four (Chapter 11, Emotions; Chapter 12, Motivation; Chapter 13, Human Sexuality). This change enables students to move without interruption from the study of learning and cognition to the study of emotions and motivation.

**Chapter Revisions** All chapters have been thoroughly updated and the text carefully examined and rewritten to improve clarity. We have integrated the book—both within each chapter and as a whole—in order to keep relationships within the field of psychology apparent. In a number of cases, our revisions have gone far beyond a simple updating:

- The chapter on the brain has been completely reorganized to help students grasp neuroscience more easily and its coverage strengthened to reflect the newest research and views in the area. (Chapter 3)
- The chapter on biological influences on behavior has been completely redone, and the emphasis has been shifted from animals to human beings. Consistent with revisions in other parts of the book, genetic and evolutionary influences on behavior are extensively covered, and sociobiological theory is carefully explained. (Chapter 4)
- The entire section on learning and cognition has been reorganized to reflect the increased emphasis psychologists place on cognition and information processing. Learning is no longer

presented primarily as a matter of stimulus and response; instead, it is connected with brain function on the one hand and with cognition on the other. The discussion of memory has been heavily revised to present a dynamic picture of memory processes. The coverage of mental concepts has been greatly expanded, as has the material on judgment, problem-solving, and decision making. Exciting new developments in the field of artificial intelligence are integrated into the coverage of cognition. (Part Three: Chapters 8, 9, and 10)

- The chapter on stress has been broadened to cover other aspects of health psychology, one of the newest areas of specialization. Before discussing stress and its effects on health, we examine the attitudes, behavior, and environmental conditions that promote health and aid in the prevention of illness. (Chapter 21)
- The chapter on environmental psychology has been replaced with a totally new chapter, Industrial/Organizational Psychology, in order to cover an area of psychology that is of increasing interest, and one that has direct application to students' lives as they move into the workplace. This chapter, which focuses on the relationship between people and their jobs, covers research and theory on the conditions and effects of employment. (Chapter 28).

**Special Features** Each of the thirty-one boxed features highlights a topic on the cutting edge of psychology that pertains to the chapter in which it appears, and twenty-two of the boxes are entirely new. The new boxes consider such topics as:

- Alzheimer's Disease (Chapter 3, The Brain and Behavior)
- Expert Humans and Expert Systems (Chapter 10, Cognition)
- Children in the Courtroom: Are They Reliable Witnesses? (Chapter 15, Cognitive Development)
- The Stockholm Syndrome (Chapter 25, Attitudes and Attitude Change)
- Hidden Influence in Daily Life (Chapter 27, Social Influences and Group Processes)

Once again, Isaac Asimov has provided us with a thought-provoking introduction to each of the eight parts of the text.

**Pedagogical Aids** Each chapter is followed by a summary written in paragraph form. A list of key

terms and an annotated list of recommended readings completes each chapter. There is a complete glossary with full definitions in the back of the book, as well as name and subject indexes.

**Illustrations** New tables and charts have been selected on the basis of their educational value, and the entire illustration program retains the special flair of previous editions. Key physiological drawings in Chapter 3 (The Brain and Behavior) and Chapter 5 (Sensation and the Senses) have been completely redrawn, presenting the brain and nervous system, the eye, and the ear in greater detail and more vivid color.

These improvements and innovations make this text the best edition yet of *Psychology Today*. Students can embark on their introduction to psychology with full confidence that they will find the experience enjoyable and rewarding. It is our hope that instructors will find this new edition a valuable review of past research integrated with the newest research and ideas in the field of psychology.

**Acknowledgments** We would like to thank the many consultants and reviewers who assisted us in this revision. We are indebted to the consultants who supervised the preparation of both new and revised chapters outside our areas of expertise. Our thanks also go to the specialists who

carefully reviewed and helped fine-tune specific chapters. And, of course, we are deeply appreciative of the time and effort our general reviewers gave to the entire revision. Because their contributions were invaluable to us, we have featured the names of the consultants and reviewers on the title page of this book. Our generous thanks to the graduate and postdoctoral students who labored with us at the research stage of development: John Clapper, Nelson Donegan, Dane Lavin, and Deanna Wilkes-Gibbs at Stanford University; and Pamela Adelman at the University of Michigan.

Our special thanks go to Mary Falcon, our editor at McGraw-Hill, who guided the entire project; Susan Tucker, who helped us develop the chapters; Betty Gatewood, Ann Levine, Mary Marshall, and Roberta Meyer, who helped us write some of the chapters; Elaine Rosenberg, who supervised the copyediting and production stages; and Cele Gardner, who was immensely helpful in the art program. The production team at McGraw-Hill has our gratitude for turning the manuscript into a handsome book: Stacey Alexander, production supervisor; Leon Bolognese, designer; and Kathy Bendo, photo editor.

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## ABOUT PSYCHOLOGY

In 1798, William Wordsworth, writing of a dull and unimaginative clod, said:

*A primrose by a river's brim  
A yellow primrose was to him,  
And it was nothing more.*

To some people it may seem that this is the picture of a scientist. Science must limit itself, they may think, to the material aspects of that primrose and nothing more. It must avoid poetry, dismiss beauty, and carefully discipline imagination. There can be nothing in the primrose except that which can be weighed, measured, and demonstrated.

And does that not reduce the world to dusty grayness?

Don't you believe it! The methodology of science may be of no use outside a world of numbering and measuring that all can agree on, but even when constrained within those limits, it uncovers wonders and beauty that the undisciplined imagination, unaware of science, could never grasp.

The microscope applied to the primrose petal produces vistas of order and of dainty interrelationships the unaided eye cannot see. Chemistry reveals the molecular structure of pigments that no one

could otherwise dream of. Turning to the plant that bears the blossom, there are the complex interrelationships of the components of the photosynthetic mechanism that makes it possible for the plant to turn the energy of sunlight into material structure. The whole is more beautiful than anything Wordsworth ever sensed in a primrose, however impassioned it may have made him feel.

And psychology, too, is a science. It deals with matters that must be numbered and measured, but not in as clear-cut a way. All electrons are absolutely alike. What holds for one, holds for all of them from here to the farthest star. All grains of sand are very much alike. All crystals of salt are very much alike. All tennis balls. In many ways, even all automobiles.

But every human being is different—different in appearance; different in ways of thought; different in perception and reaction.

And yet despite that, you have a headstart in your study of psychology. You may know nothing about electrons, salt, and automobiles, but even if you have never taken a single course in psychology, never read a book about it, you still know a great deal about it. You have spent your whole life with

people, learning how to deal with them and react to them, growing interested in and perhaps exasperated by their peculiarities.

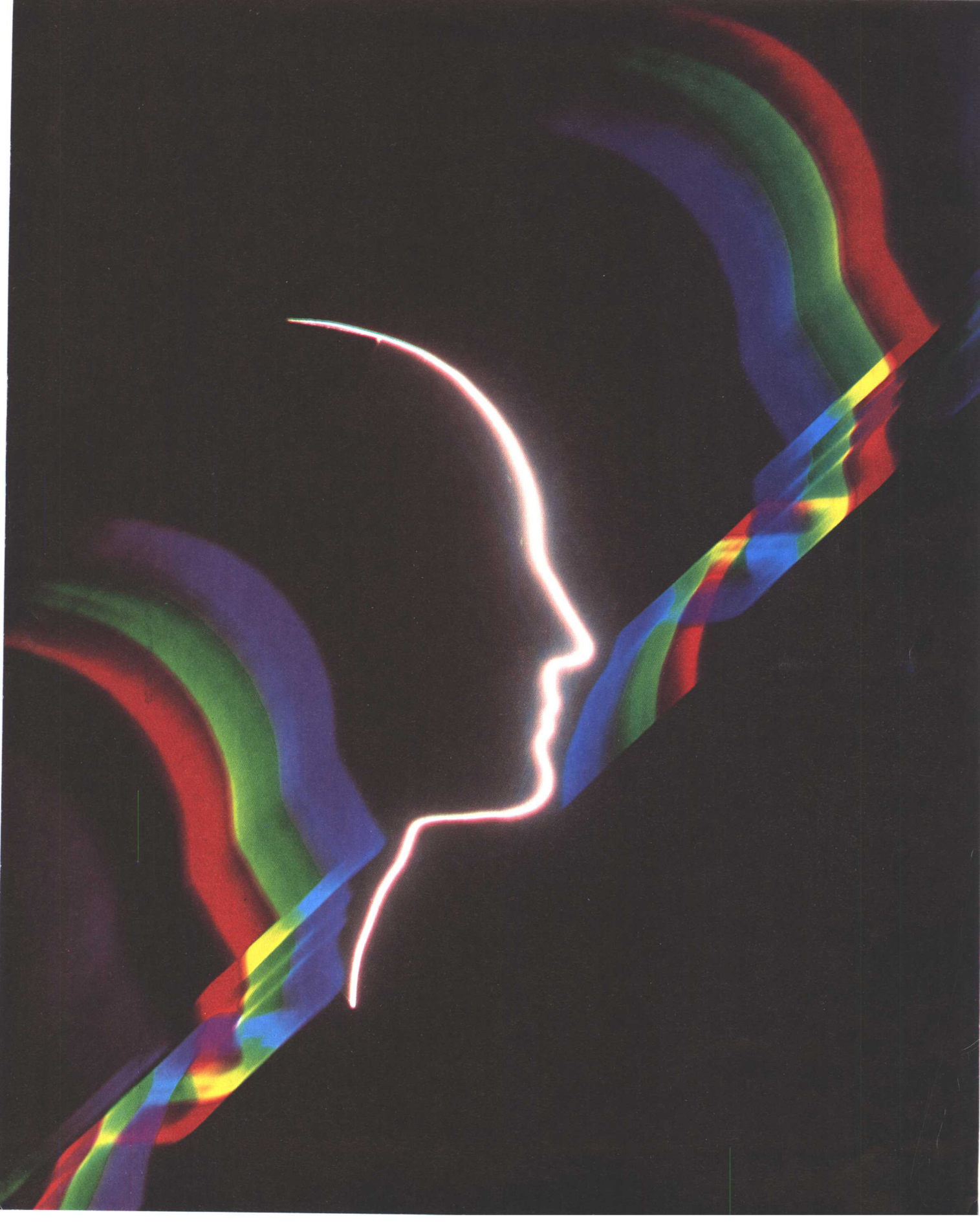
When you study psychology you have a chance to organize the knowledge you already have, systematize it, extend it, and understand it more clearly. How interesting that cannot help but be to you.

And not just interesting to you, but tremendously important to the world. If humanity has advanced through its history, it has been through the activity of the human mind, which has brought us material security and every aspect of culture. And if humanity has been placed in danger, it has been through the activity of the human mind, for it is human motivation, carefully thought out and justified by the mind—greed, envy, rage, and lust—that produces the wars, violence, alienation, and cruelties that other motivations—sympathy, love, the desire to give and build and create—fight so endlessly.

And psychology is the organized study of it all. What can possibly be more important to all of us?

**Isaac Asimov**





## UNDERSTANDING PSYCHOLOGY: AN INTRODUCTION

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### THE GROWTH OF PSYCHOLOGY

Psychology as the Study of  
Conscious Experience  
Psychology as the Study of  
Unconscious Processes  
Psychology as the Study of  
Individual Differences  
Psychology as the Study of  
Observable Behavior

### PSYCHOLOGY TODAY

Fields of Specialization  
Experimental and Physiological  
Psychology  
Developmental Psychology  
Personality Psychology  
Social Psychology  
Educational and School  
Psychology  
Industrial and Organizational  
Psychology

Clinical Psychology  
Emerging Specialties  
Psychology: Basic and Applied  
Science  
*Box: Extrasensory Perception*

### PSYCHOLOGY AS A VOCATION

### LOOKING AHEAD

---

In California a man programs a computer to diagnose illnesses the way a human medical expert does. In Massachusetts a woman interviews executives in large corporations to discover what management techniques put a person in the boardroom. In Colorado a man works with Olympic hopefuls, teaching them to ski down a difficult slope in their imagination. In Alabama a woman teaches a chimpanzee to ask for snacks, games, or company by pressing keys on a computer. In a Florida hospital a man massages the limbs of a baby who was born two months early, talking softly as he rocks the infant and strokes a tiny leg. In New York a woman trains a group of police officers to negotiate with someone who is holding hostages.

What do all these individuals have in common? Surprising as it may seem, they share a very important interest. They are all psychologists. Since its birth about a century ago, psychology has become a wide-ranging discipline that embraces an almost endless array of basic research problems and a broad range of practical matters. Most psychologists would agree that **psychology** is the study of behavior, but the meaning of "behavior" varies among psychologists. To encompass all psychologists, we would have to define **behavior**

as including thoughts, feelings, and dreams—anything a person does or experiences.

As this expanded definition indicates, the subject matter of psychology is extraordinarily diverse. Psychologists study behavior in the hope of discovering why we fall in love, how soon a baby can recognize its mother, why some people are creative, why other people become schizophrenic, whether your personality is partially determined before you are born, what happens in hypnosis, how drugs affect human functioning, and whether chimpanzees and dolphins can acquire language. Psychologists investigate everything from how flatworms learn to how a symphony is created, from the seemingly undifferentiated howls of a hungry infant to the complex reactions of an adult to the death of a spouse.

Psychology is not, of course, the only scientific study of human behavior; it overlaps with both the biological and the other behavioral sciences. For example, neurophysiologists and biochemists have made strides toward discovering physiological influences on mental disorders. Anthropologists and sociologists have investigated the customs, manners, morals, and social structures of a wide range of societies, complementing psychology's focus on the individual with a perspective on



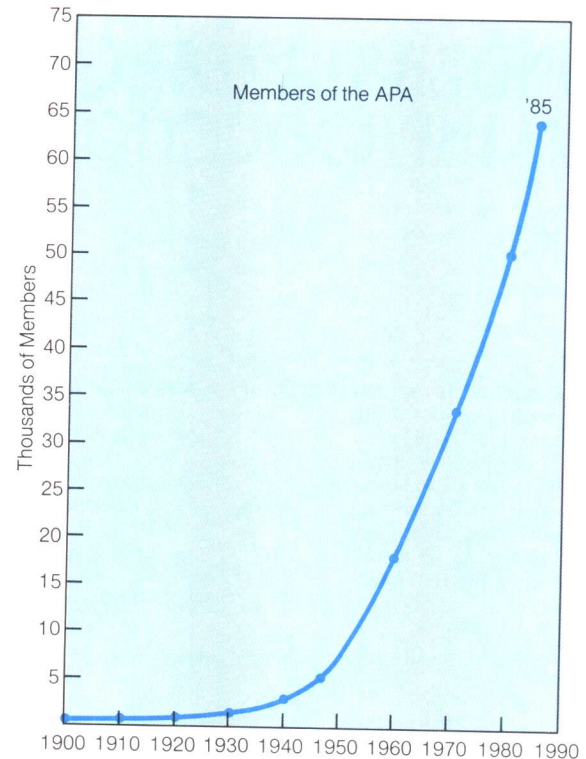
groups of people. Some psychologists have begun to collaborate with researchers in these other fields, further broadening the scope of the discipline. No corner of our lives escapes the interest of psychologists, for every aspect of human behavior—from the moment of conception to the moment of death—raises issues that are important if we are finally to understand why human beings do what they do.

## THE GROWTH OF PSYCHOLOGY

It has been more than a hundred years since psychology broke away from philosophy and physiology to emerge as a separate discipline. In the past century this young and fertile area of study has undergone a series of expansions in subject matter as well as in research methods. During this period even the basic nature of psychology has been at issue: Is it the study of conscious experience? The study of unconscious processes? The study of individual differences, or of observable behavior? As we will discover when we examine a few of these basic ideas, these differences of opinion have contributed to the tremendous growth of psychology (see Figure 1.1).

### Psychology as the Study of Conscious Experience

Psychology had its formal beginnings in Leipzig, Germany, where Wilhelm Wundt founded the first psychological laboratory in 1879. Wundt is considered the first psychologist, as opposed to the philosophers or physiologists who were also interested in psychology (Boring, 1957). He stringently limited the subject to the study of conscious experience. Wundt believed that all our conscious experiences are merely intricate combinations of elemental sensations—that is, intellectual towers made of sensory building blocks. In much the same way that a chemist uses certain processes to discover the basic elements composing all the complex substances in the world, Wundt attempted to use introspection to find the basic sensations. He trained people carefully in the technique of introspection, teaching them to observe and report the “content” or “elements” of awareness in a particular situation. Wundt also tried to discov-



**Figure 1.1.** The growth of membership in the American Psychological Association over the past eighty-five years. (Updated from Daniel, 1975.)

er the principles—the “mental chemistry”—by which those sensations combine to become conscious experience. In essence, Wundt’s approach to establishing a discipline of psychology was confined to analyzing detailed descriptions of how people perceive things in the world. Psychology was formally defined as the study of conscious experience. Would-be psychologists flocked to Wundt’s laboratory from Europe and North America, and the first generation of American psychologists was trained by him (Bringmann, 1979).

Wundt’s approach, which fell out of favor in the early decades of this century, has been coming back in new form. In recent years our knowledge about perception, memory, emotion, and cognition (all the processes involved in *knowing*) has grown immensely, reawakening interest in consciousness and the workings of the mind. In fact, during the past twenty years psychology has been in the midst of what might be called a “cognitive



revolution.” Today a great deal of psychological theory and research focuses on the workings of the mind. We will discuss the work of these cognitive psychologists in Chapters 8, 9, and 10.

### Psychology as the Study of Unconscious Processes

For Sigmund Freud, a physician who practiced in Vienna until 1938, conscious experiences were only the tip of the iceberg. Beneath the surface, he believed, lay primitive biological urges that seek expression but are in conflict with the requirements of society and morality. According to Freud, these unconscious motivations and conflicts are powerful influences on our conscious thoughts and actions; they thus are responsible for much human behavior, including many of the physical symptoms that troubled Freud’s patients (R. Watson, 1963).

Since unconscious processes could not be directly studied through introspection, Freud employed an indirect method for their study. In this technique, known as **free association**, a patient said everything that came to mind, making no attempt to produce logical, meaningful statements out of what seemed like absurd or irrelevant thoughts. Freud sat and listened, and then interpreted the associations. Free associations, Freud believed, reveal the operation of unconscious processes. He also believed that dreams express primitive unconscious urges. To learn more about these urges he developed dream analysis, an extension of free association in which the patient free-associated to his or her dreams (Freud, 1949).

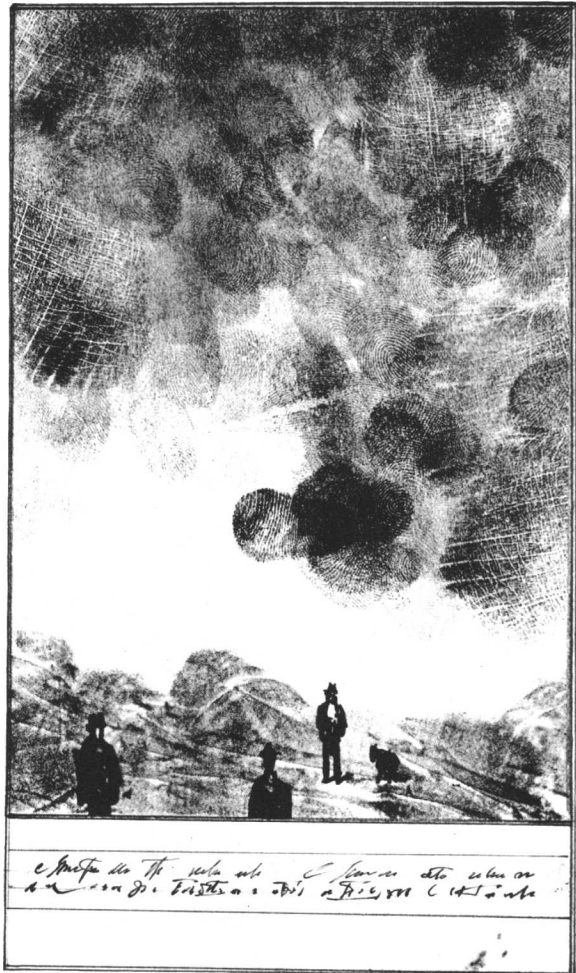
While working out his ideas, Freud took meticulous notes on his patients and treatment sessions. He used these records, or case studies, to develop and illustrate a comprehensive theory of personality—that is, of the total, functioning person (Hall and Lindzey, 1978). Freud’s theory of personality is discussed in Chapter 18.

In many areas of psychology, Freud’s view of unconscious motivation remains a powerful and controversial influence. Modern psychologists may support, alter, or attempt to refute it—but most have a strong opinion about it. (Freud’s theories are discussed in Chapters 17, 18, and 23.) The technique of free association is still used by psychoanalysts, and the method of intensive case study is still a tool for investigating behavior.

### Psychology as the Study of Individual Differences

A lasting impact on psychology came from a nineteenth-century Englishman’s concern with the way in which biology causes one person’s abilities, character, and behavior to differ from those of other people. In searching for the determinants of these individual differences, Sir Francis Galton (1869) traced the ancestry of various eminent people. He found that greatness runs in families. (Such a finding was appropriate, for

What makes each person unique? The nineteenth-century English physiologist Francis Galton studied the biological determinants of individual differences and concluded that genius is hereditary. He spent immense time collecting, collating, and analyzing thumbprints in order to identify inherited characteristics.



Galton himself was considered a genius and his family included at least one towering intellectual figure—a cousin named Charles Darwin.) Galton concluded that genius or eminence is a hereditary trait—a premature conclusion. He did not consider the possibility that the tendency of genius to appear in eminent families might well be a result of the exceptional environments and socioeconomic advantages that also tend to run in such families.

The data Galton used were based on his study of biographies. Not content to limit his inquiry to indirect accounts, Galton went on to invent procedures for testing human abilities and characteristics. These tests were the primitive forebears of the modern personality and intelligence tests that most people take at some time in their lives. Galton also devised statistical techniques that are still used today (see Chapter 2).

Although Galton began his work before psychology emerged as an independent discipline, his theories and techniques quickly became central aspects of the new science. His book *Inquiries into Human Faculty and Its Development* (1883) is regarded as having defined the beginnings of individual psychology. Galton's writings raised the issue of whether behavior is determined by heredity or environment—a subject that has remained a focus of heated controversy (see Chapters 4 and 20). Galton's influence can also be seen in the widespread use of psychological tests, in the continuing controversy over their use, and in the statistical methods employed to evaluate their findings (see Chapter 20).

### **Psychology as the Study of Observable Behavior**

A Russian physiologist, Ivan Pavlov, charted a different course for psychological investigation. Pavlov, who received the Nobel Prize in 1904 for his early work on digestive secretions, conducted a series of studies with dogs that were to have a major influence on the development of psychology. In one experiment, Pavlov (1927) set a metronome ticking each time he gave a dog some meat powder. At first the dog salivated the moment it saw the meat powder; after the procedure was repeated several times, the dog would salivate each time it heard the metronome, even if no food appeared.

The concept of the conditioned reflex that grew out of these studies gave psychologists a new tool

with which to explore the development of behavior. By applying this concept, in which a response (salivation) is brought about by a stimulus (the metronome) different from the one that first produced it (food), psychologists could begin to account for behavior as the product of prior experience (see Chapter 8). This enabled them to explain certain behavior and certain differences among individuals as the result of learning.

Pavlov was part of a school of Russian neurophysiologists who rejected the introspective approach to psychology in favor of a strictly objective, experimental approach that was to become the hallmark of behaviorism (Kazdin, 1978). Pavlov and his colleagues simply pursued this method of study; it was left for others to turn it into a program for a new psychology.

It is John B. Watson (1878–1958), an American psychologist, who is credited with founding **behaviorism**, the approach to psychology that limits its study to observable responses to specific stimuli—responses that can be measured. He contended that all behavior, even behavior that appeared to be instinctive, is the result of conditioning and that it occurs in response to an appropriate stimulus. Watson (1913) maintained that introspection, the subjective analysis of thoughts and emotions used by Wundt, was as inappropriate in psychology as it was in chemistry. Theology, not psychology, was the proper place for introspection, he argued. The province of psychology was behavior, and its goal was the prediction and control of that behavior.

Watson did not succeed in restricting psychology to the study of observable behavior. In fact, he expanded the field considerably by extending the range of problems and phenomena with which psychologists could deal. In this sense his emphasis on the mechanisms of learning and on the significance of the environment in developing and maintaining behavior were major contributions. By using conditioned reflexes and other techniques for the study of learning processes, Watson also contributed to the development of such areas of psychological investigation as learning (see Chapter 8), memory (see Chapter 9), and problem solving (see Chapter 10).

Although Watson defined and solidified the behaviorist position, and many other learning theorists such as Clark Hull, Edward Tolman, and Edwin Guthrie contributed to it, it was B. F. Skinner, the contemporary American psychologist, who refined and popularized it. Skinner both

narrowed the specific predictive claims of behaviorism and broadened its social implications.

Skinner sought to show that the consequences of behavior provide the basic mechanism for predicting and shaping future behavior. He even wrote a utopian novel, *Walden Two* (1948), to indicate how learning principles might be applied to an entire society.

Skinner exerted great influence on both the general public and the science of psychology. His face became familiar to nationwide television audiences, and his book *Beyond Freedom and Dignity* (1971) was a best seller. *Walden Two* communities have been formed in various parts of the country (Cordes, 1984), and many people toilet train their children, lose weight, quit smoking, and learn new skills using methods inspired by Skinner.

Skinner has been widely criticized, for many are convinced that “manipulative” conditioning could limit personal freedom; however, others have applauded him as a social visionary. The theories and methods developed by Skinner have permeated psychology. Behaviorist-inspired techniques vie with traditional psychotherapy for primacy in the treatment of various psychological disorders. The techniques of reinforcement, or controlling the consequences that follow behavior, have become increasingly popular in education, and Skinner’s teaching machine was the forerunner of modern programmed education. Moreover, a vast number of today’s psychologists use Skinner’s research methods to obtain precise findings in their laboratory experiments (Herrnstein, 1977).

As we have seen, psychology has expanded from an infant discipline characterized by a focus on conscious experience to a vast modern science that embraces the study of all behavior. This brief survey is far from comprehensive, touching as it does on only a few of the most important contributions to the scope, substances, and methods of psychological investigation. A look at the practice of psychology today will give some further idea of the field’s expansion.

## PSYCHOLOGY TODAY

Psychology’s roots can be traced back to ancient Greece and to speculations about the nature of

sensation, perception, reason, emotion, dreams, and memory (Klein, 1970). Developments in many countries over many years have contributed to the modern science of psychology, which now flourishes around the world: in Germany, where Wundt established his laboratory; in England, where Galton worked; in Russia, where Pavlov discovered the conditioned reflex; in Japan, where the discipline is still relatively new; and in numerous other countries.

Psychology has gained wide public acceptance in the United States, and this support has encouraged the broad scope of research and study in the field. Of the estimated 260,000 psychologists in the world, about 102,000 live in the United States. And the rapid growth of American psychology has been matched by a similar growth in psychology around the world. While American psychology still dominates the world scene, several other countries have proportionately as many psychologists as the United States, where there are 300 psychologists for each million inhabitants. These countries are all Western industrialized societies; they include Spain, Finland, Israel, the Netherlands, Belgium, and Denmark (Rosenzweig, 1984). One way to grasp the discipline’s present diversity is to look at the major fields of specialization in which American psychologists engage.

### Fields of Specialization

The national professional organization for psychologists, the American Psychological Association (APA), was founded in 1892 to advance the science of psychology by encouraging research, increasing professional competence, and disseminating psychological knowledge (APA, 1981). In 1985, the APA had more than 64,000 members, most of whom belonged to one or more of forty specialized divisions. Twenty-four of these divisions have more than 1,000 members, and their relative sizes are shown in Figure 1.2. Some members belong to several divisions, but the list gives an idea of the variety of psychologists’ interests. The following brief descriptions of problems and research taken from some of the major specialties further indicate the diversity of concerns among psychologists, whose interests run from the firing of a single brain cell to the formulation of public policies.