

Robert S. Feldman

ELEMENTS OF PSYCHOLOGY



Elements of Psychology



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Elements of Psychology

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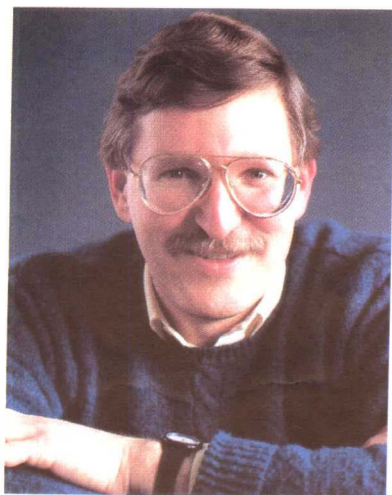
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ABOUT THE AUTHOR



Robert S. Feldman is Professor of Psychology at the University of Massachusetts at Amherst. A graduate of Wesleyan University and the University of Wisconsin-Madison, he is a former Fulbright Senior Research Scholar and Lecturer. He is a Fellow of the American Psychological Association and the American Psychological Society and author of more than eighty scientific articles, book chapters, and papers. His research interests include nonverbal behavior and the social psychology of education. He has written or edited eight books, including *Social Psychology: Theories,*

Research, and Applications (McGraw-Hill), *The Social Psychology of Education* (Cambridge University Press), and *Fundamentals of Nonverbal Behavior* (Cambridge University Press). His spare time is most often devoted to serious cooking, which he does well, and piano playing, which he doesn't. He lives with his wife, also a psychologist, and three children in a home overlooking the Holyoke mountain range in Amherst, Massachusetts.

Preface

The people and events in the world around us defy easy explanation. We see good behavior and bad; we encounter sensible and irrational conduct; and we find cooperation and violent competition among the world's peoples.

Elements of Psychology reflects the efforts of psychologists to understand and explain the myriad forms of behavior that we see in the world. The book provides a broad and concise introduction to psychology. It focuses on the basic building blocks of the field, those essentials that are critical for an understanding of the discipline of psychology. While concentrating on the fundamentals of the discipline, it also makes clear the relevance of psychology to people's everyday lives.

In writing *Elements of Psychology*, I had three overriding goals in mind. First, the book is designed to cover the major areas of the field of psychology, introducing its principal theories, research, and applications. Second, the book is meant to foster an appreciation of the scientific basis of the field, as well as providing an impetus for critical thinking. Finally, the book is intended to be engaging and interesting, a book arousing a reader's natural curiosity about the world. Ultimately, then, *Elements of Psychology* is designed to nurture an appreciation of how psychology can be used to understand the society in which we live.

These three goals, of course, are interdependent. In fact, I would argue that if *Elements of Psychology* is successful in accurately communicating the nature of psychology, understanding and interest regarding the field will follow naturally. To that end, I have lavished considerable attention on the book's writing style. It is intended to provide as close a facsimile to two people sitting down and discussing psychology as can be conveyed with the written word. When I use the word "we," then, I am referring to the two of us—you, the reader, and me, the author.

In addition, this text has special features that highlight the everyday relevance of psychology to the world around you ("Psychology and Society" boxes) and aim to improve the quality of your life ("Informed Consumer of Psychology" sections). It is also a book carefully designed to promote learning. Every chapter presents material in rational, manageable sections. A set of factual and conceptual questions on the information

("Ask Yourself") follows each of these sections. If you thoughtfully answer these questions, you will have a critical head start on mastery and long-term recall of the information.

In sum, *Elements of Psychology* is, as I mention in the first chapter, designed to be user-friendly. It is a book that not only introduces you to the basic content—and promise—of psychology, but it does so in a way that brings alive the excitement of the field. My hope is that your initial exposure to the realm of psychology will forge an ongoing enthusiasm and passion for the discipline—one that lasts a lifetime.

AN OVERVIEW OF ELEMENTS OF PSYCHOLOGY

Elements of Psychology is based on the second edition of the widely used 21-chapter *Understanding Psychology*, a broad and comprehensive introduction to the field of psychology. Like the book from which it is derived, *Elements of Psychology* includes coverage of the traditional topical areas of psychology. It covers, for example, the biological foundations of behavior, sensation and perception, learning, cognition, development, personality, abnormal behavior, and the social psychological foundations of behavior.

Unlike its predecessor, however, *Elements of Psychology* is a considerably briefer volume. It focuses on the essentials of psychology, providing an initial broad introduction to the field. The book also shows how the field's theories and research have an impact on readers' everyday lives.

There is considerable flexibility to the book's organizational structure. Each chapter contains self-contained units, permitting instructors to choose and omit sections according to their syllabus. In addition, the applications material is well integrated throughout even the chapters that cover the most traditional, theoretical topics. Consequently, courses that omit the more applied topical chapters will still be successful in conveying the relevance of psychology to readers.

Overall, then, the book reflects a combination of traditional core topics and contemporary applied subjects, providing a broad, eclectic—and current—view of the field of psychology. It draws from theoretical and applied approaches, and integrates the two with objective presentations of research that illustrate the way in which the science of psychology has evolved and grown. Indeed, the book exemplifies the view that a theory-application dichotomy is a false one. The text does not present applications as devoid of theory, but places them in a theoretical context, grounded in research findings. Likewise, when the text presents theoretical material, it draws practical implications from the theory.

Some examples can illustrate this approach. If you turn to Chapter 3, you will find that it includes the traditional material on hearing in the ear. But the text moves beyond a mere recitation of the various parts of the ear and explanations of hearing and balance; it also explores current work involving an electronic ear implant in the cochlea to help the deaf. Simi-

larly, the development chapter includes a presentation of the classic work on attachment. This material is tied into the question of the effects of child-care arrangements on development. Finally, the chapter on abnormal behavior not only explores the issues of how we identify abnormal behavior, but relates it to the real-life case of a homeless woman who fights—and ultimately defeats—a court order to be placed in a shelter. In each of these instances, the text shows how applications grow out of the theoretical and research base of the field.

LEARNING AIDS AND FEATURES OF ELEMENTS OF PSYCHOLOGY

Elements of Psychology is designed with its ultimate consumer—the student—in mind. As you can see from the following full list of elements that are common to every chapter, the book incorporates several major educational features. These features, based on learning and cognitive instructional design theory and research, are meant to make the book an effective learning device and, simultaneously, enticing and engaging:

- *Prologue.* Every chapter starts with an account of a real-life situation that involves major aspects of the topics of the chapter. These scenarios demonstrate the relevance of basic principles and concepts of psychology to actual issues and problems. For example, the chapter on the biology underlying behavior begins with a description of a patient undergoing a controversial operation in which adrenal tissue is implanted in his brain, and the chapter on cognition discusses how the mystery of the Challenger space shuttle explosion is solved.
- *Looking Ahead.* A “Looking Ahead” section follows each prologue. It articulates the key themes and issues and lists a set of questions answered in the chapter.
- *Psychology and Society.* The Psychology and Society boxes illustrate an application of psychological theory and research findings to a real-world problem. For example, the chapter on cognition includes a discussion of eyewitness identification in judicial settings, and the chapter on personality and individual differences introduces material on personality tests that might be encountered when applying for a job.
- *The Informed Consumer of Psychology.* Every chapter includes information designed to make readers more informed consumers of psychological information and knowledge by giving them the ability to evaluate critically what the field of psychology offers. For example, this feature covers treatment of drug and alcohol problems (Chapter 7) and evaluating psychological therapy (Chapter 10).

- *Ask Yourself.* Research clearly indicates the importance of careful organization of textual material, learning material in small chunks, and actively reviewing material. Consequently, each chapter is divided into from three to five sections, each of which concludes with an "Ask Yourself" section. Every "Ask Yourself" section includes a variety of questions to answer, including both those that require recall of factual material and those that test higher-level conceptual understanding of the material.
- *Looking Back.* To simplify the review of the material covered in each chapter and to aid in the synthesis of the information covered, a numbered summary is included at the end of every chapter. The summary emphasizes the key points of the chapter.
- *Key terms and Concepts.* When key terms and concepts are introduced, they are highlighted in bold face type and listed at the end of every chapter (with the page numbers where they were first introduced). Each of these key terms is also included in an end-of-book glossary.
- *A full-color graphic design.* To support the instructional design features of the text, a team of graphic designers has developed a design structure to enhance the written material. The thoughtful design and photos make the text inviting and a book from which it is easy to learn.

ANCILLARY MATERIALS

An extensive ancillary package accompanies *Elements of Psychology*. These materials enhance the value of the text as a teaching and learning tool. The *Study Guide*, by Valerie J. Sasserath and Mark Garrison, comes free to students who purchase the text from us and includes an introductory section on how to study and how to use the *Guide* effectively with the text. There is also an extensive section entitled *A Guide to Critical Thinking*. Following this material are chapters (corresponding to each text chapter) that include chapter outlines and overviews, learning objectives, hundreds of questions in various formats, and application exercises.

The *Test File* offers more than 2,500 multiple-choice and true-false questions that test both factual recall and higher order understanding. The items are keyed to page numbers in the text. This *Test File* was prepared by Louis Banderet of Northeastern University, Dennis Clare of the College of San Mateo, Lynne Kiorpes of New York University, Charles Noble of North Georgia College, and Edward Pflaumer of Loma Linda University. Katherine Vorwerk of the University of Massachusetts was consultant for clarity and construction. The *Test File* is available in a computerized format for use with mainframe and microcomputers.

The *Instructor's Manual* includes chapter overviews, lecture objectives

and topics, key terms, discussion topics, "Take a Stand" sections (which outline issues for debate), Psychology in the News topics, demonstrations and projects, essay questions with answers, and an annotated bibliography of audiovisual resources.

An extensive media package accompanies *Elements of Psychology*. The transparency and slide set includes 100 items, and McGraw-Hill provides a catalog of films and videos for book users.

Finally, several software packages accompany this text. These include *PsychWorld*, 2nd ed. (for IBM 3 $\frac{1}{2}$ and 5 $\frac{1}{4}$ and Apple); *MacLaboratory*, 2nd ed. (for Macintosh); *Computer Activities for Psychology*, 4th ed. (CAPS IV, for IBM and Apple); *Report Card* (a computerized grade-management program, for IBM and Apple); *Experiments and Personal Applications in Psychology* (for IBM and Apple); and *Statistical Computation Program for Students* (for IBM and Apple).

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As the following list of reviewers attests, this book involved the efforts of many psychologists. They lent their expertise in evaluating all or part of the manuscript, providing an unusual degree of quality control. Their careful work and thoughtful suggestions have improved the manuscript many times over from its first-draft incarnations. I am grateful to them all for their comments: Patrick T. DeBoli, Nassau Community College; Joyce Webster Dennis, Southern Union State Junior College; Michael Firmin, Baptist Bible College and Seminary; Claudia Graham, Wake Technical Community College; Sheila P. Greenlee, Columbus State Community College; Leon Keys, Ferris State University; Jack Kirschenbaum, Fullerton State University; Rosalyn Mass, Middlesex Community College; Meg Miele, Fashion Institute of Technology; Richard Richter, Lansing Community College; Lawrence C. Shaffer, SUNY Plattsburgh; Lily Shohat, LaGuardia Community College, CUNY; and Floyd Donald Whitehead, Fayetteville Technical Community College.

Many teachers have shaped my thinking. I was introduced to psychology at Wesleyan University, where several committed and inspiring teachers made the excitement and relevance of the field clear to me. By the time I left Wesleyan I could envision no other career except that of psychologist. Although the nature of the University of Wisconsin, where I did my graduate work, could not have been more different from the much smaller Wesleyan, the passion and inspiration were similar. Again, a cadre of excellent teachers molded my thinking and taught me the beauty and science of the discipline of psychology.

My colleagues and students at the University of Massachusetts at Amherst provide ongoing intellectual stimulation, and I thank them for making the university a very fine place to work. Several people also provided

extraordinary research and editorial help; they include Carolyn Dash, Richard Fleming, Wendy Copes, Frances Ramos, and the late Kate Cleary.

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Finally, I am, as always, indebted to my family. The love and support of my parents, Leah Brochstein and the late Saul D. Feldman, remain a bedrock of my life. My many nieces and nephews, my brother, my various brothers- and sisters-in-law, Ethel Radler, and Harry Brochstein might all be surprised to know of the influence they have over me. I also remain grateful to my late mother-in-law, Mary Evans Vorwerk, for her encouragement in every sphere of life.

Ultimately, my children, Sarah, Joshua, and Jonathan, and my wife, Katherine, remain the focal point and joy of my life. I thank them, with great love.

Robert S. Feldman

Strategies for Effective Study and Critical Thinking

Elements of Psychology has been written with the reader in mind, and it therefore includes a number of unique features that will help you to maximize your learning of the concepts, theories, facts, and other kinds of information that make up the field of psychology. To take advantage of these features, there are several steps that you should take when reading and studying this book. By following these steps, you will not only get the most out of this book, but you will also develop habits that will help you to study other texts more effectively and to think critically about material you are learning. Among the most important steps to follow:

- Familiarize yourself with the logic of the book's structure. Begin by reading the Table of Contents. It provides an overview of the topics that will be covered and gives a sense of the way the various topics are interrelated. Next, review the Preface, which describes the book's major features. Note how each chapter is divided into three to five self-contained units; these provide logical starting and stopping points for reading and studying. Also note the major highlights of each chapter: a chapter-opening outline, a Prologue, a Looking Ahead section that includes chapter objectives, Ask Yourself questions, and—at the end of every chapter—a Looking Back section and Key Terms and Concepts. Because every chapter is structured in the same way, you are provided with a set of familiar landmarks as you chart your way through new material, allowing you to organize the chapter's content more readily.
- Use a study strategy. Although we are expected to study and ultimately learn a wide array of material throughout our schooling, we are rarely taught any systematic strategies that permit us to study more effectively. Yet, just as we wouldn't expect a physician to learn human anatomy by trial and error, it is the unusual student who is able to stumble upon a truly effective studying strategy.

Psychologists, however, have devised several excellent (and

proven) techniques for improving study skills, two of which are described here. By employing one of these procedures—known by the initials “SQ3R” and “MURDER”—you can increase your ability to learn and retain information and to think critically, not just in psychology classes but in all academic subjects.

The SQ3R method includes a series of five steps, having the initials S-Q-R-R-R. The first step is to *survey* the material by reading the chapter outlines, chapter headings, figure captions, recaps, and Looking Ahead and Looking Back sections, providing yourself with an overview of the major points of the chapter. The next step—the “Q” in SQ3R—is to *question*. Formulate questions—either aloud or in writing—prior to actually reading a section of the material. For instance, if you had first surveyed this section of the book, you might jot down in the margin, “what do “SQ3R” and “MURDER” stand for?” The reviews that end each section of the chapter are also a good source of questions. But it is important not to rely on them entirely; making up your own questions is critical. Such questioning helps you to focus in on the key points of the chapter, while putting you in an inquisitive frame of mind as well.

It is now time for the next, and most crucial, step: to *read* the material. Read carefully and, even more important, actively and critically. For instance, while you are reading, answer the questions you have asked yourself. You may find yourself coming up with new questions as you read along; that’s fine, since it shows you are reading inquisitively and paying attention to the material. Critically evaluate material by considering the implications of what you are reading, thinking about possible exceptions and contradictions, and examining the assumptions that lie behind the assertions made by the author.

The next step—the second “R”—is the most unusual. This “R” stands for *recite*, in which you look up from the book and describe and explain to yourself, or to a friend, the material you have just read and answer the questions you have posed earlier. Do it aloud; this is one time when talking to yourself is nothing to be embarrassed about. The recitation process helps you to clearly identify your degree of understanding of the material you have just read. Moreover, psychological research has shown that communicating material to others (even imaginary others, if you are reciting aloud to yourself and not a friend) aids you in learning it in a different—and deeper—way than material which you do not intend to communicate. Hence, your recitation of the material is a crucial link in the studying process.

The final “R” refers to *review*. Reviewing is a prerequisite to fully learning and remembering material you have studied. Look over the information; reread the Recaps and Looking Back sum-

maries; answer in-text review questions; and use any ancillary materials you may have available. (There is both a traditional and a computerized student study guide available to accompany *Elements of Psychology*.) Reviewing should be an active process, in which you consider how different pieces of information fit together and develop a sense of the overall picture.

An alternative approach to studying—although not altogether dissimilar to SQ3R—is provided by the MURDER system of Dansereau (1978). Despite the unpleasant connotations of its title, the MURDER system is a useful study strategy.

In MURDER, the first step is to establish an appropriate mood for studying by setting goals for a study session and choosing a time and place in which you will not be distracted. Next comes reading for understanding, in which careful attention is paid to the meaning of the material being studied. Recall is an immediate attempt to recall the material from memory, without referring to the text. Digesting the material comes next; you should correct any recall errors, and attempt to organize and store newly learned material in memory.

You should work next on expanding (analyzing and evaluating) new material, and try to apply it to situations that go beyond the applications discussed in the text. By incorporating what you have learned into a larger information network in memory, you will be able to recall it more easily in the future. Finally, the last step is review. Just as with the SQ3R system, MURDER suggests that systematic review of material is a necessary condition for successful studying.

- The last aspect of studying that warrants mention is that *when* and *where* you study are in some ways as important as *how* you study. One of the truisms of the psychological literature is that we learn things better, and are able to recall them longer, when we study material in small chunks over several study sessions, rather than massing our study into one lengthy period. This implies that all-night studying just prior to a test is going to be less effective—and a lot more tiring—then employing a series of steady, regular study sessions.

In addition to carefully timing your studying, you should seek out a special location to study. It doesn't really matter where it is, as long as it has minimal distractions and is a place that you use *only* for studying. Identifying a special "territory" allows you to get in the right mood for study as soon as you begin.

A final comment: By using the proven study strategies presented above, as well as by making use of the pedagogical tools integrated in the text, you will maximize your understanding of the material in this book

and you will master techniques that will help you learn and think critically in all your academic endeavors. More importantly, you will optimize your understanding of the field of psychology. It is worth the effort: the excitement, challenge, and promise that psychology holds for you is immense.

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Introduction to Psychology



*Prologue: The San Francisco Earthquake ♦ Looking Ahead ♦ Psychologists at Work ♦
A Science Evolves: The Past and the Future ♦ Psychological Research ♦ Looking Back*

PROLOGUE: THE SAN FRANCISCO EARTHQUAKE



The devastation of the San Francisco earthquake produced a wide range of behavior of interest to psychologists.

For most of the people in the San Francisco area, the day began routinely. At 5:04 P.M., however, that routine was abruptly shattered when the ground literally began to shake under people's feet. A major earthquake had started.

The quake brought about the deaths of dozens of people and billions of dollars in property damage. Some people emerged as heroes, digging through tons of rubble in a desperate search to find those buried underneath. Others exhibited a less positive side of human nature, looting homes and stores that were temporarily abandoned by their owners after the quake.

No area resident emerged unscathed from the earthquake. Although the majority of residents were not physically harmed by the quake, most felt anxiety and apprehension that another quake might hit. They received little comfort from geologists, who predicted that the odds were greater than 50

percent that a much worse earthquake would occur at some point within the next three decades.

LOOKING AHEAD

Although its origin was a geological event far beneath the surface of the earth, the San Francisco earthquake raises issues that are primarily psychological in nature. Consider, for example, the ways in which different kinds of psychologists would look at the disaster.

- Psychologists who specialize in the biology underlying behavior would examine changes in the body's internal activity as it prepared to deal with the emergency situation of the disaster.
- Those psychologists who specialize in the study of learning and memory would investigate the kinds of details concerning mishaps that people are most apt to learn about and later recall.
- Psychologists who study people's thinking processes would consider how people view risks and perceive how such risks apply to them personally.
- Developmental psychologists, who study children, might consider how stress brings about an increase in child abuse.
- Health psychologists, who study the relationship between physical and psychological factors, would study the ways in which experiencing the disaster might produce later illness.
- Clinical and counseling psychologists, who provide therapy, would examine how to reduce people's anxiety.
- Social psychologists, who study questions related to interpersonal interaction, would try to understand the reasons behind the helpfulness of some and the aggressiveness of others.

The Common Link among Psychologists: The Study of Behavior and Mental Processes

Although the approaches taken by different psychologists in considering the earthquake are very diverse, the common link among them is that each represents a specialty area within the general area of study called psychology. **Psychology** is the scientific study of behavior and mental processes.

This definition, although clear-cut and accurate, is also deceptively simple. In order to encompass the breadth of the field, "behavior and mental processes" must be understood to mean many things: It includes not just what people do but also their thoughts, their feelings, their perceptions, their reasoning processes, their memories, and even, in one sense, the biological activities that keep their bodies functioning.

When psychologists speak of "studying" behavior and mental processes, their interests are equally broad. To psychologists, it is not