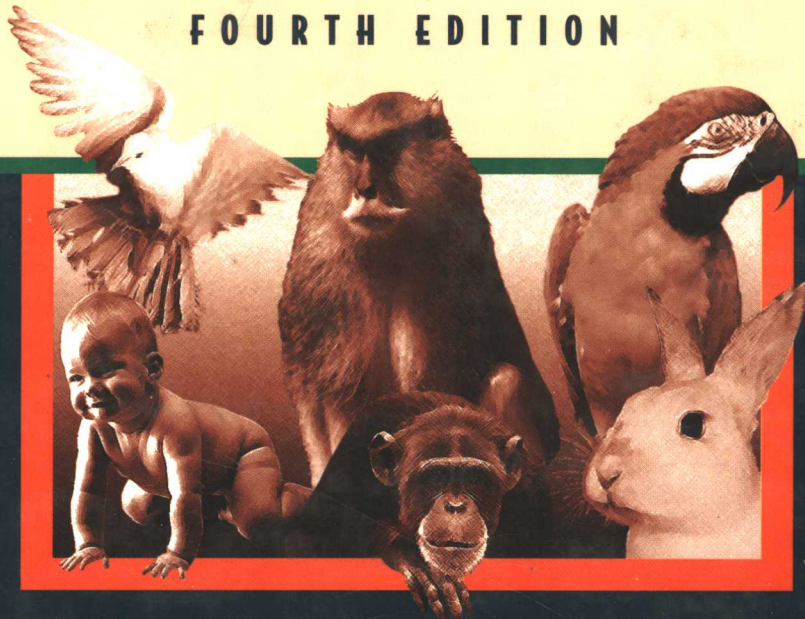


MICHAEL  
DOMJAN

THE PRINCIPLES OF  
LEARNING AND  
BEHAVIOR

FOURTH EDITION



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**THE PRINCIPLES  
OF LEARNING  
AND BEHAVIOR  
FOURTH EDITION**

**MICHAEL DOMJAN**

*University of Texas*



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# PREFACE

**T**HE investigation of learning and behavior has been an integral part of the study of psychology throughout much of the twentieth century. Studies of learning provide important insights into the ways in which experience can lead to long lasting changes in behavior. Basic associative learning phenomena also provide the building blocks for some prominent theories of cognitive function. In addition, studies of learning provide behavioral techniques that are useful in many allied fields, including behavioral neuroscience, psychopharmacology, behavioral medicine, and behavioral toxicology. These factors put the study of learning at the crossroads of many different approaches to the investigation of behavior.

## **Balance between contemporary and historical approaches in learning**

The fourth edition, like earlier editions, introduces contemporary phenomena and theories about learning and behavior. For example, this edition discusses memory and complex cognition in detail, including a new discussion of directed forgetting, serial pattern learning in simultaneous arrays, and language learning in animals. Rather than advocate a particular point of view, the book strives to present a balanced perspective of the field in which strengths and weaknesses of each approach are discussed evenhandedly. Further, to help students see how ideas develop, contemporary findings are introduced within a historical context. Although some contemporary ideas cannot fully be integrated with previous findings, you'll find as integrated an account as possible.

## **Organized and streamlined for today's student**

As with earlier editions, information is presented in increasing order of complexity, both within and across chapters. The basic ideas presented at the beginning of each chapter serve as a foundation for subsequent chapters with critical concepts repeated as needed. To make it even more accessible for today's student, this edition has been streamlined such that it is now 15% shorter, and I hope more readable. To make concepts more accessible, all of the art has been redone so that many of the figures, like the endpapers you see at the front of the book, read at a glance for the student. You'll also find a more user-friendly one-column design, researcher photos, and more

frequent illustrations and subheadings, all in an attempt to make this edition work better for students.

### What's remained the same?

This book covers both animal and human examples of learning phenomena so that students can see the relevance of animal models and can remember the concepts better. To make the human examples more apparent, you'll find an index of them directly following the table of contents. Throughout the book, boxes highlight human applications and extensions of the basic research findings. In addition, everyday examples and analogies are used to clarify concepts and make them more memorable for the student. For example, pay scales at a restaurant are used to illustrate the effects of schedules of reinforcement, the sounds of a symphony orchestra are used to illustrate configural cues, a shopping trip is used to illustrate the difference between retrospective and prospective memory, and miniature golf courses are used to illustrate the mechanisms of serial pattern learning.

Biological constraints on learning are integrated throughout the book instead of being segregated in one chapter, because they cannot easily be understood separately. Chapter 2 covers the ethological foundations of behavior, which are further described later on, as appropriate in other chapters. Adaptive specializations in learning are described in chapters on classical conditioning, instrumental conditioning, stimulus control, aversive control, and memory.

### What's changed in the content?

- Of the 1,400 references more than a quarter have been published since 1990
- Chapter 7 now covers behavioral regulation and the determinants of the elasticity of demand.
- Chapter 8 has been reorganized to clarify and simplify the material.
- Chapter 10 has been reorganized to better integrate historical and contemporary approaches to the interaction between classical and instrumental conditioning.
- Chapter 12 has a reorganized section on teaching language to chimps.
- Modern theoretical approaches such as Pearce's configural cue theory have been added—in the context of historical findings as much as possible.
- Memory interference accounts of the Conditioned Stimulus and the Unconditioned Stimulus pre-exposure effects have been added.
- Discussion of the conditioning model of drug tolerance has been updated.
- The directed forgetting section has been redone in light of recent methodological concerns about this area of research.

### What's changed in the pedagogy?

- New chapter previews and outlines are provided at the beginning of each chapter.
- Boxes are highlighted to be more prominent, many focused on human examples.
- Technical terms are boldfaced when they first appear, and a list of key terms and their definitions appears at the end of each chapter.
- Thought questions for student review appear at the end of each chapter.
- "At-a-glance" endpapers enable students to easily compare habituation and classical, second-order, and instrumental conditioning.
- The art program has been revised for greater comprehension and appeal.

## More instructor support

The improved and much-expanded instructor's manual with test bank includes for each chapter: chapter summaries, a list of key words and key concepts in their order of appearance, suggested readings, short-answer questions, essay questions, multiple-choice questions, suggested class exercises, transparency masters, and (where appropriate) specific suggestions for incorporating *Sniffy: The Virtual Rat, Version 4.5* for Macintosh and Windows into your learning class. Brooks/Cole offers special discounts for instructors who use *Sniffy the Virtual Rat, Version 4.5* together with the fourth edition of *The Principles of Learning and Behavior*. Contact Brooks/Cole at 1-800-354-0092 or [marianne\\_taflinger@brookscole.com](mailto:marianne_taflinger@brookscole.com) for more information on discounts available.

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*Michael Domjan*

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