

NINTH EDITION

Behavior Modification

What It Is and How To Do It

Garry Martin
Joseph Pear

Ninth Edition

BEHAVIOR MODIFICATION

WHAT IT IS AND HOW TO DO IT

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To
Jack Michael, Lee Meyerson, Lynn Caldwell, Dick Powers, and Reed Lawson, who taught us so much and made learning so enjoyable
and
Toby, Todd, Kelly, Scott, Tana, and Jonathan, who live in a better world because of such dedicated teachers

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PREFACE

This ninth edition of *Behavior Modification: What It Is and How to Do It*, like its predecessors, assumes no specific prior knowledge about psychology or behavior modification on the part of the reader. Those who want to know how to apply behavior modification to their everyday concerns—from solving some of their own personal behavior problems to helping children learn life's necessary skills—will find the text useful. Mainly, however, this book is addressed to two audiences: (a) college and university students taking courses in behavior modification, applied behavior analysis, behavior therapy, the psychology of learning, and related areas and (b) students and practitioners of various helping professions (such as clinical psychology, counseling, education, medicine, nursing, occupational therapy, physiotherapy, psychiatric nursing, psychiatry, social work, speech therapy, and sport psychology) who are concerned directly with enhancing various forms of behavioral development.

From our separate experiences over the past 43 years in teaching members of both groups, we are convinced that both groups learn the principles of behavior and how to apply them most effectively when the applications are explained with reference to the underlying behavior principles on which they are based. For this reason, as our title implies, this book deals equally with both the principles and the tactics (i.e., the rules and guidelines for specific applications) of behavior modification.

Our goals and the manner in which we have attempted to achieve them can be summarized as follows:

1. *To teach the elementary principles and procedures of behavior modification.* Thus, we begin with the basic principles and procedures, illustrate them with numerous examples and applications, and increase the complexity of the material gradually. Study Questions distributed throughout each chapter promote the reader's mastery of the material and ability to generalize to situations not described in the text. These questions can also be used for examination purposes in formal courses.
2. *To teach practical how-to skills, such as observing and recording; recognizing instances of reinforcement, extinction, and punishment and their likely long-term effects; interpreting behavioral episodes in terms of behavioral principles and procedures; and designing, implementing, and evaluating behavioral programs.* To accomplish this, we provide Application Exercises that involve other people and teach the reader about analyzing, interpreting, and developing programs for the behavior of others; self-modification exercises, which encourage the reader to analyze, interpret, and develop programs for his or her own behavior; and guidelines for specific applications.
3. *To provide advanced discussion and references to acquaint readers with some of the empirical and theoretical underpinnings of the field.* This material is presented in the "Notes and Extended Discussion" section at the end of each chapter. These sections can be omitted without harm to the continuity of the text. Separate study questions on the Notes are provided for those instructors who wish to use them and as aids for students who wish to broaden their understanding of behavior modification. Instructors can also use information given in the Extended Discussion sections as springboards for lecture material.
4. *To present the material in such a way that it will serve as an easy-to-use handbook for practitioners concerned with overcoming behavioral deficits and excesses in a wide variety of populations and settings.*

The book is divided into six parts:

Part I (Chapters 1 and 2) introduces the behavioral orientation of the book and describes major areas of application of behavior modification techniques for improving a wide variety of behaviors of individuals in diverse settings.

Part II (Chapters 3–16) covers the basic principles and procedures of behavior modification. Each of the chapters begins with a case history drawn from the fields of child development, developmental disabilities, childhood autism, early education, coaching, or normal everyday adult adjustment. Numerous examples of how each principle operates in everyday life and how it can operate to the disadvantage of those who are ignorant of it are also given.

Part III (Chapters 17–19) provides more sophisticated perspectives on the principles discussed in Part II. Chapters 17 and 18 discuss ways in which to combine and apply the principles. Chapter 19 provides a behavioral view of motivation and includes insights on applying various motivational operations. Each of these three chapters also begins with a case history.

Part IV (Chapters 20–22) presents detailed procedures for assessing, recording, and graphing behavior and for evaluating the effects of behavioral treatments using single-subject research designs. Many instructors prefer to present much of this material quite early in their courses—sometimes at the very beginning. Therefore, we have written these chapters so that they can be read independently of the rest of the book; they do not depend on any of the other material. We recommend that students be required to read these chapters prior to carrying out any major projects for their courses.

Part V (Chapters 23–28) deals with how the basic principles, procedures, and assessment and recording techniques are incorporated into effective programming strategies. In keeping with the rigorously scientific nature of behavior modification, we have placed heavy emphasis on the importance of empirically validating program effectiveness.

Part VI (Chapters 29 and 30) expands the reader's perspective of behavior modification. It presents an overview of the history of behavior modification and contains a discussion of the ethical issues in the field. Some instructors might think that these chapters belong near the beginning of the book, and we have written them so that they can be read after Chapter 1. However, we believe that the reader is more prepared to fully appreciate this material after obtaining a clear and thorough knowledge of behavior modification. We placed ethical issues at the end of the text not because we believe that this topic is less important than the others. On the contrary, we stress ethical issues throughout the book, and, thus, the last chapter provides a reiteration and elaboration of our views on this vital subject. We hope that after reading the concluding chapter, the reader will be fully aware that the only justification for behavior modification is its usefulness in serving all humanity in general and its recipients in particular.

CHANGES IN THE NINTH EDITION

First, to help students master the material, we made a pedagogical change: study questions have been placed in three or four small groupings throughout each chapter rather than in one large grouping at the end of each chapter.

Second, in the “Pitfalls” sections of Part II (“Basic Principles and Procedures”) of previous editions, we described how lack of knowledge of a principle or procedure could be problematic. In this edition, we identified five specific types of pitfalls, which we illustrate with examples.

Third, in Part II (“Basic Principles and Procedures”) of previous editions, we began Chapters 3–16 with a case history to illustrate how the various principles operate in everyday life. In this edition, we added lead cases to Chapters 17, 18, and 19.

Fourth, we renamed Part III (Chapters 17, 18, and 19) “Capitalizing on Antecedent Control Procedures.” Those three chapters discuss five different types of antecedent control strategies that can be used for effective behavior modification.

Fifth, we made considerable revisions to the chapter on punishment including an updated discussion on whether punishment should be used.

Sixth, we expanded on the behavioral interpretation of mindfulness in the chapter titled “Cognitive Behavior Therapy, Self-Directed Coping Methods, and ACT” (Chapter 27).

Seventh, we made considerable revisions to Chapter 27 to incorporate recent developments in cognitive behavior therapy and acceptance and commitment therapy.

Eighth, in Chapter 28, we provided an updated overview of behavioral treatments with some of the most common clinical problems of outpatients.

Ninth, we revised Chapter 29, the history chapter, to stand alone because some instructors require their students to read this chapter after Chapter 1.

Tenth, throughout the book, we added examples to better illustrate behavior principles in everyday life, added many new up-to-date references to reflect recent developments in the field, and added a number of new notes to the “Notes and Extended Discussion” sections and deleted old notes when warranted.

Eleventh, we extensively revised and extended the Glossary to help students better understand the technical terms and concepts in the field of behavior modification.

Finally, as the following indicates, all chapters received extensive revision to cover recent developments in this expanding field and to enhance the readability of the text. Some of the specific chapter revisions we made were as follows: In Chapter 1, we expanded the comparison of behavior modification to applied behavior analysis, behavior therapy, and cognitive behavior therapy. In Chapter 2, we clarified the meaning of the terms *developmental disabilities*, *intellectual disabilities*, *mental retardation*, and *autism*. To Chapter 3, we added descriptions of five different types of pitfalls of positive reinforcement, that is, different ways that the principle can work against the unwary. To Chapter 4, we added a new lead case illustrating a token reinforcement program with a college student and clarified the definitions and differences between unconditioned reinforcer, conditioned reinforcer, and backup reinforcer. To Chapter 6, we added a section on progressive ratio schedules of reinforcement. In Chapter 7, we refined the definitions of DRL, DRO, DRI, and DRA. We reorganized several sections in Chapter 8 to make it more reader friendly, explained the distinction between a two-term contingency of reinforcement versus a three-term contingency, and clarified the distinction between rule-governed and contingency-shaped behavior. In Chapter 10, we explained the differences between three different types of pitfalls of shaping and how they can work against the unwary. In Chapter 11, we clarified the differences between fading, shaping, and chaining, and explained two different types of pitfalls of chaining. In Chapter 12, we did considerable rewriting to make it more reader friendly, added a section on examples of “therapeutic” punishment, discussed functional communication training and positive behavior support as alternatives to punishment, and rewrote and updated the discussion of whether punishment should be used. In Chapter 14, we clarified definitions of key terms. To Chapter 16, we added behavioral momentum as a strategy for programming operant response generalization. To Chapter 17, we added a new lead case illustrating an effective intervention with a competitive figure skater. To Chapter 18, we added a new lead case that described a mindfulness-based treatment for aggression. To Chapter 19, we added a new

lead case involving a motivating operation with a junior high school basketball team and a new table to clarify the distinctions between motivating establishing and abolishing operations and between unconditioned and conditioned motivating operations. In Chapter 20, we clarified the distinction between behavioral and psychodiagnostic approaches to assessment. To Chapter 21, we added a new table to summarize and compare different types of recording strategies. In Chapter 22 (which was Chapter 23 in the 8th edition), we clarified the definitions of different single-subject designs and incorporated discussion of internal and external validity into the body of the chapter (those terms were previously discussed in a note). To Chapter 23 (which was Chapter 22 in the 8th edition), we added a figure and text to clarify the distinctions between the six different types of causes of operant problem behaviors. To Chapter 25, to illustrate various aspects of token economies, including research on the generality of behavior developed in token economies, we added considerable information about and discussion of Achievement Place and the Teaching-Family Model. In Chapter 27, we updated and expanded the discussion of cognitive behavior therapy and acceptance and commitment therapy. In Chapter 28, we updated the overview of behavior therapy treatments with some of the most common clinical problems with outpatients. In Chapter 29, we changed the order in which we discussed some of the historical events to make the exposition flow more naturally. In Chapter 30, we made a number of minor stylistic changes to make the chapter more readable.

INSTRUCTOR'S RESOURCE MANUAL WITH TESTS AND PRACTICA

One of our goals is to help students learn to think about behavior modification critically and creatively. Thus, in the Instructor's Resource Manual to accompany this text, we have included operational definitions of higher-order thinking based on Bloom's taxonomy in the cognitive domain and have applied these definitions to the Study Questions in the text. Taking these thinking levels into account, we have provided an answer key to all of the Study Questions (including those on the "Notes and Extended Discussion" sections), indicating how students are expected to answer these questions on tests and exams in order to achieve a high level of thinking about the material. A pool of multiple-choice and/or true/false questions has also been provided on a chapter-by-chapter basis. Finally, included in the Instructor's Resource Manual are 15 in-class practica or minilab exercises that have been developed and field tested. Each exercise is designed to be completed by a group of two or three students during a regularly scheduled class. After students have studied and have been examined on relevant chapters, completion of a practicum helps them learn to talk about and apply behavior modification principles. Feedback from students indicates that the exercises constitute an excellent teaching tool.

POWERPOINT PRESENTATION

The PowerPoint presentation is an exciting interactive tool for use in the classroom. Each chapter pairs key concepts with images from the textbook to reinforce student learning.

ACKNOWLEDGMENTS

Writing the nine editions of this book was made possible by the help of many individuals. We gratefully acknowledge the cooperation and support of the staff at the Manitoba Developmental Centre and Dr. Carl Stephens and the staff at the St. Amant Centre. Much of the material in this

volume was generated while the authors were involved in these institutions; without the support of these staff members, this book would not likely have been written.

Grateful acknowledgment is due to our many students for their constructive feedback on the current and earlier editions. We also thank Jack Michael, Rob Hawkins, Bill Leonhart, and Iver Iversen and his students for their many excellent suggestions for improvements on earlier editions. For this edition, special thanks are due to Kendra Thomson for her cheerful and efficient word processing and to Frances Falzarano for her excellent substantive and stylistic comments.

We are grateful to the following reviewers, whose helpful criticism improved this ninth edition: Ngoc Bui, University of LaVerne; Shirley Albertson Owens, Vanguard University of Southern California; Kirk Lunnen, West Minister College; Page Anderson, Georgia State University; Otto H. MacLin, University of Northern Iowa; Norman Cobb, University of Texas at Arlington; and Thomas Brown, Utica College.

Finally, we express our appreciation to the very capable editorial and production team at Prentice Hall/Pearson Education. In particular, we want to thank (*to be added*).

A research grant from the Canadian Institutes of Health Research (Grant No. MOP-6353) to G. L. Martin facilitated the completion of this book.

TO THE STUDENT

This book is designed to help you learn to talk about and apply behavior modification effectively. You need no prior knowledge about behavior modification to read and understand this text from beginning to end. We are confident that students at all levels—from beginners to advanced—will find the text informative and useful.

Behavior modification is a broad and complex field with many ramifications. Realizing that some students will require or want a deeper knowledge of behavior modification than others, we have separated the more elementary material from the material that demands more thought and study. The former material is presented in the main body of the text. The latter material is presented at the end of each chapter in the section called “Notes and Extended Discussion” (N and ED). The numbers in the margin of the main text refer you to the corresponding numbered passages in the N and ED sections. How you use these sections is up to you and your instructor. You can ignore them altogether and still obtain a good working knowledge of the principles and tactics of behavior modification because the main text does not depend on the material in the N and ED sections. We believe, however, that many students will find these sections very informative and that many instructors will find the material useful in stimulating class discussion and imparting additional background information.

Another major way in which we have attempted to help you learn the material is by providing guidelines on the use of all the behavior modification methods discussed in the text. These guidelines should prove useful as summaries of the material as well as in helping you to actually apply the methods described in the text.

Most chapters also present numerous Study Questions and Application Exercises (including “self-modification” exercises). The study questions are intended to help you check your knowledge of the material when preparing for quizzes and exams. The Application Exercises and the self-modification exercises in them are intended to help you develop the practical skills you will need to complete behavior modification projects effectively.

To help make your study productive and enjoyable, we progress from the simpler and more intrinsically interesting material to the more difficult and complex material. This is also true of the writing style. But a word of caution: *Do not be misled by the seeming simplicity of the earlier*

chapters. Students who conclude that they are skilled behavior modifiers after they have learned a few simple behavior modification principles unfortunately end up proving the old maxim that “a little knowledge is a dangerous thing.” If we personally had to pick the most important chapter in this book in terms of the knowledge and skills that define a competent behavior modifier, it would probably be Chapter 24. We therefore strongly suggest that you reserve judgment about your abilities as a behavior modifier until you have mastered Chapter 24 and all the preliminary material on which it is based.

We would also point out that—as emphasized in Chapter 30—organizations that regulate behavior modification have appeared and gained in stature and influence in the past few years. If you are considering applying behavior modification on any level, we strongly recommend that you check with the Behavior Analyst Certification Board (www.bacb.com) to determine how you may obtain the necessary qualifications.

With those words of caution, we wish you much success and enjoyment as you pursue your studies in this exciting and rapidly expanding field.

G.L.M.
J.J.P.

TO INDIVIDUALS USING THIS BOOK TO STUDY FOR THE BEHAVIOR ANALYSIS CERTIFICATION BOARD® EXAMINATIONS

For individuals using this book to study for the Board Certified Behavior Analyst® (BCBA®) or the Board Certified Assistant Behavior Analyst® (BCaBA®) exam, the following are the chapters in this book where the content for the task list may be found:

Exam Content Areas from the Task List*	Relevant Chapters
1. Ethical Considerations	30
2. Definition And Characteristics	1, 27, 29
3. Principles, Processes And Concepts	3–16
4. Behavioral Assessment	20–21, 23
5. Experimental Evaluation Of Interventions	22
6. Measurement Of Behavior	1, 7, 20–22
7. Displaying And Interpreting Behavioral Data	1, 20–21
8. Selecting Intervention Outcomes And Strategies	24, 26, 30
9. Behavior Change Procedure	17–19, 25–28
10. Systems Support	2, 16, 25–28

* The full BCBA and BCaBA Behavior Analyst Task List (Third Edition) can be found at www.bacb.com/consum_frame.html

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