Instructor’s Manual with Test Items
to accompany

Applied Behavior Analysis

Second Edition

John O. Cooper ● Timothy E. Heron ● William L. Heward

All, The Ohio State University

Prepared by

Stephanie Peterson, Idaho State University ● Renée K. Van Norman, University of Nevada-Las Vegas ● Lloyd Peterson, Idaho State University ● Shannon Crozier, University of Nevada-Las Vegas ● Jessica E. Frieder, Idaho State University ● Peter Molino, Idaho State University ● Heath Ivers, Idaho State University ● Shawn Quigley, Idaho State University ● Megan Bryson, University of Nevada-Las Vegas ● David Bicard, University of Memphis

Upper Saddle River, New Jersey
Columbus, Ohio
# Table of Contents

Chapter 1: Definition and Characteristics of Applied Behavior Analysis .................................. 6  
Chapter 2: Basic Concepts ........................................................................................................ 10  
Chapter 3: Selecting and Defining Target Behaviors ................................................................. 14  
Chapter 4: Measuring Behavior ................................................................................................. 16  
Chapter 5: Assessing and Improving the Quality of Behavioral Measurement ....................... 19  
Chapter 6: Constructing and Interpreting Graphic Displays of Behavioral Data ...................... 21  
Chapter 7: Analyzing Behavior Change: Basic Assumptions and Strategies ............................... 25  
Chapter 8: Analytic Tactics Using Withdrawal, Reversal, and Alternating Treatment Conditions .... 28  
Chapter 9: Analytic Tactics Using Multiple Baseline and Changing Criteria ............................... 31  
Chapter 10: Planning, Conducting, and Evaluating Research in Applied Behavior Analysis ........ 34  
Chapter 11: Positive Reinforcement .......................................................................................... 37  
Chapter 12: Negative Reinforcement ....................................................................................... 41  
Chapter 13: Schedules of Reinforcement .................................................................................. 43  
Chapter 14: Punishment by Presentation of a Stimulus ............................................................... 46  
Chapter 15: Punishment by Removal of a Stimulus .................................................................... 49  
Chapter 16: Motivating Operations .......................................................................................... 52  
Chapter 17: Stimulus Control .................................................................................................... 55  
Chapter 18: Imitation ................................................................................................................ 58  
Chapter 19: Shaping ................................................................................................................ 60  
Chapter 20: Chaining ................................................................................................................ 63  
Chapter 21: Extinction .............................................................................................................. 66  
Chapter 22: Decreasing Behavior with Differential Reinforcement ............................................ 69  
Chapter 23: Antecedent Interventions ...................................................................................... 72  
Chapter 24: Functional Behavior Assessment .......................................................................... 78  
Chapter 25: Verbal Behavior .................................................................................................... 84  
Chapter 26: Contingency Contracting, Token Economy, and Group Contingencies ................. 87  
Chapter 27: Self-Management ................................................................................................. 90  
Chapter 28: Generalization and Maintenance of Behavior Change ........................................... 95  
Chapter 29: Ethical Considerations for Applied Behavior Analysts ........................................ 100
Test Bank and Answer Keys

Chapter 1 Test Bank ................................................................. 102
Chapter 2 Test Bank ................................................................. 105
Chapter 3 Test Bank ................................................................. 110
Chapter 4 Test Bank ................................................................. 113
Chapter 5 Test Bank ................................................................. 117
Chapter 6 Test Bank ................................................................. 121
Chapter 7 Test Bank ................................................................. 127
Chapter 8 Test Bank ................................................................. 132
Chapter 9 Test Bank ................................................................. 139
Chapter 10 Test Bank .............................................................. 142
Chapter 11 Test Bank .............................................................. 145
Chapter 12 Test Bank .............................................................. 151
Chapter 13 Test Bank .............................................................. 154
Chapter 14 Test Bank .............................................................. 158
Chapter 15 Test Bank .............................................................. 161
Chapter 16 Test Bank .............................................................. 165
Chapter 17 Test Bank .............................................................. 168
Chapter 18 Test Bank .............................................................. 172
Chapter 19 Test Bank .............................................................. 175
Chapter 20 Test Bank .............................................................. 180
Chapter 21 Test Bank .............................................................. 184
Chapter 22 Test Bank .............................................................. 188
Chapter 23 Test Bank .............................................................. 192
Chapter 24 Test Bank .............................................................. 195
Chapter 25 Test Bank .............................................................. 203
Chapter 26 Test Bank .............................................................. 206
Chapter 27 Test Bank .............................................................. 211
Chapter 28 Test Bank .............................................................. 214
Chapter 29 Test Bank .............................................................. 218

ANSWER KEY ................................................................. 221
Preface

Organization of the Manual

On behalf of Pearson Education, we thank you for adopting *Applied Behavior Analysis, 2nd Edition*. This Instructor’s Manual is designed to accompany the textbook. This manual, as is the text, is divided into 29 chapters. Each chapter of the Instructor’s Manual includes the following sections:

- **Chapter Summary**: a brief summary of the key elements of the chapter
- **Chapter Objectives**: the learning objectives of the chapter
- **Focus Questions**: five or six main questions that are addressed in the chapter
- **Key Terms**: a list of the key terms from the chapter
- **Suggested Readings/Activities**: a list of references to journal articles and books relevant to the chapter

Note: There are also PowerPoint slides for each chapter can be found on the Instructor Resource Center for this text. To access these slides and an electronic version of this manual, go to [www.prenhall.com](http://www.prenhall.com) and click on the Instructor Support button and then go to the Download Supplements section. Here you will be able to log in or complete a one-time registration for a user name and password. If you have any questions regarding this process or the materials available online, please contact your local Prentice Hall sales representative.

There are guided notes that accompany these PowerPoint slides as well. Your students can download these guided notes from the companion website at [www.prenhall.com](http://www.prenhall.com).

Test Bank and Answer Keys

A test bank to accompany *Applied Behavior Analysis, 2nd Edition* is also included in this manual. The test bank is divided into the 29 chapter sections, with an answer key provided at the end. This test bank is available in a computerized version as well. The following types of questions are included:

- Multiple-Choice
- Matching (when appropriate)
- True/False
- Short Answer/Essay
Chapter 1: Definition and Characteristics of Applied Behavior Analysis

Chapter Summary

The word science has come to mean many things, but when used properly it refers to a systematic approach for seeking and organizing knowledge about the natural world around us. Science then has really one overall goal: to achieve a thorough understanding of the phenomena under study. In the field of applied behavior analysis, this means socially important behaviors. There are three levels of understanding that yield different types of knowledge within science: description, prediction, and control. Functional relations only exist when well-controlled experiments reveal that a specific change in the dependent variable can reliably be produced by specific manipulations of the independent, and the change was unlikely to be the result of confounding variables.

Science is foremost a set of attitudes that set an overriding set of assumptions and values that guide the work of all scientists. The attitudes include: determinism, empiricism, experimentation, replication, parsimony, and philosophic doubt. Determinism is the attitude upon which science is predicted; the presumption that the universe is a lawful and orderly place in which all phenomena occurs as the result of other events. Determinism provides the framework in the field of behavior analysis that all behavior is the result of specifiable conditions, and once identified, these conditions can be used to some extent to determine the future occurrence of behavior. Other qualities that guide success in science include thoroughness, curiosity, perseverance, diligence, ethics, and honesty.

These principles and attitudes serve as a basis for behavior analysis. Behavior analysis consists of three major branches of study: behaviorism, basic research or the experimental analysis of behavior, and applied behavior analysis or the development of a technology for improving behavior. Behavior analysis can be traced back to John B. Watson with what became known as Watsonian behaviorism or stimulus-response psychology. B.F. Skinner is credited though as being the founder of the experimental analysis of behavior and wrote extensively on the science. This behaviorism differs significantly from prior approaches to the study of behavior, most of which involved mentalism. Mentalism is an approach that assumes behavior is the result of inner causes and hypothetical constructs. Behaviorism aims to explain behavior in terms of measurable and observable events. Skinner’s radical behaviorism incorporates private events into an overall conceptual system of behavior, where as other types of behaviorism do not include private events.

One of the first studies to apply the principles of operant behavior to humans was in 1949 by Fuller. The field of applied behavior analysis grew in the 1950’s and 1960’s as researchers began to apply methods of experimental analysis of behavior to determine if principles of behavior demonstrated in laboratory settings with nonhumans could be replicated with humans in naturalistic settings. Applied behavior analysis as it is now known can be traced to the word of Ayllon and Michael in 1959. The field began to expand and two significant events marked the formal beginning of contemporary applied behavior analysis in 1968: 1) publication of the Journal of Applied Behavior Analysis began, and 2) the publication “Some Current Dimensions of Applied Behavior Analysis by Baer, Wolf, and Risley.
Baer et al. (1968) provided recommendations for applied behavior analysis which later became the field’s defining characteristics. These defining characteristics state that applied behavior analysis should be applied, behavioral, analytic, technological, conceptual, effective, and capable of generalized outcomes. As the field of applied behavior analysis continues to grow and approach a wide variety of problems additional characteristics have been suggested, but the original defining characteristics as proposed by Baer et al. (1968) remain the standard.

Chapter Objectives

1. Describe the basic characteristics and goals of science.
2. Explain behavior in accordance with the philosophical assumptions of behavior analysis.
3. Explain determinism as it relates to behavior analysis.
4. State distinguishing features of mentalistic and environmental explanations of behavior.
5. Describe and explain behavior in behavior analytic terms.
6. State and describe each of the dimensions of applied behavior analysis.

Chapter Focus Questions

1. What is science, its basic characteristics and goals?
2. What is a functional relation?
3. What are the overarching attitudes of science?
4. What is behaviorism and its main branches of study?
5. How did applied behavior analysis get its start, develop over the years, and become known as it is today?
6. What are the different types of behaviorism? How are they similar and different from one another?
7. What are the defining characteristics of applied behavior analysis?

Chapter Key Terms

- applied behavior analysis (ABA)
- behaviorism
- determinism
- empiricism
- experiment
- experimental analysis of behavior (EAB)
- explanatory fiction
- functional relation
- hypothetical construct
- mentalism
- methodological behaviorism
- parsimony
- philosophic doubt
- radical behaviorism
- replication
- science

Chapter Suggested Readings/Activities

One of the guiding articles that provide the basis for the foundation of applied behavior analysis, this study employs the use of techniques based on reinforcement theory in a mental hospital. Psychiatric nurses implement a variety of procedures with patients.

This article serves to provide the original defining seven characteristics in the field of applied behavior analysis that remain the guiding principles of the field today.

This article serves as a follow up to the authors’ original work in 1968 in which the defining characteristics are reviewed and are argued as being functional within the contemporary field of applied behavior analysis. In addition, new tactics within the field are discussed.

This study is one of the first to report the human application of the principles of operant behavior. An individual with disabilities learns to make a physical response through operant conditioning.

This piece highlights the work and life of Montrose Wolf and the origins of the defining characteristics of applied behavior analysis.

This book summarizes nearly ten years of Skinner’s research, spanning his years of graduate school through is three years as a member of the Society of Fellows. Skinner defines his basic unit of behavior, the operant, proposes basic datum, and describes his research agenda.

Skinner extends his works in this novel by applying the principles of behavior analysis to a fictional community. The book illustrates a community that is minimally consuming and polluting, egalitarian in the division of work, communal raising of children, and an educational system that teaches patience and the ability to handle destructive emotions.

This book presents a case for a natural science of human behavior. Skinner examines all human activity from a behaviorist approach, and advocates for the application of scientific method to study human behavior.

Skinner argues that a separate analysis of verbal behavior is necessary because it does not operate on the environment directly. Instead, verbal behavior operates through other people in a verbal community. This book extends the laboratory-based principles of selection by consequences to account for what people say, write, gesture, and think.

This book still serves as a controversial piece in which Skinner make his ultimate statement about humankind and society. He argues that we must reexamine and refine our traditional concepts of freedom and dignity, and that the radical behaviorist approach offers a new understanding and solutions to human problems.

Skinner continues controversial arguments about humankind and society. This novel mimics topics covered in *Beyond Freedom and Dignity* (1969), and again approaches examining human problems from a radical behaviorist stance.

Philosophical issues that surfaced in early articles in *JABA* are reviewed. In addition, the stated purpose of *JABA* is revisited, and the issues of social validity are further explored and illustrations are presented.
Chapter 2: Basic Concepts

Chapter Summary

Behavior analysts study behavior – the activity of living organisms. Although the study of behavior includes single responses, applied behavior analysts are interested in larger sets of *socially significant* behavior referred to as response classes. A response class consists of topographically similar and dissimilar behaviors all of which have the same effect on the environment. The environment consists of a variety of stimulus events.

Stimulus events can be discussed in terms of their physical, temporal, and functional features along with their relationship to behavior. A group of stimuli that share common features among these dimensions make up a stimulus class. Stimulus changes occurring both before (antecedent) and after (consequence) have one or two basic effects on behavior: (a) an immediate but temporary increase or decrease in the frequency of behavior, and/or (b) a delayed but relatively permanent effect in the frequency of the behavior in the future.

Behaviors of interest include both respondent and operant behaviors. Respondent behaviors are elicited by antecedent stimuli. Respondent conditioning occurs through stimulus-stimulus pairing procedures. Respondent behaviors include reflexes, for example, an eye blink to clean the eye and are considered “ready-made” behaviors where no “learning” is required. On the other hand, operant behavior is any behavior whose future frequency is determined by its history of consequences. Operant behaviors are defined by their effects, not by the form of the behavior.

Operant conditioning is an *automatic* process that refers to the selective effects of consequences on behavior. Operant conditioning includes both reinforcement, the effect of which is a behavior increase and punishment, the effect of which is a behavior decrease. The term positive refers to the presentation of a stimulus event. The term negative refers to the removal of a stimulus event.

Positive reinforcement occurs when a behavior is followed by the presentation of a stimulus event and the future frequency of the behavior *increases* under similar environmental conditions. Negative reinforcement occurs when a behavior is followed by the removal of a stimulus event and the future frequency of the behavior *increases* under similar environmental conditions.

Positive punishment occurs when a behavior is followed by the presentation of a stimulus event and the future frequency of the behavior *decreases* under similar environmental conditions. Negative punishment occurs when a behavior is followed by the removal of a stimulus event and the future frequency of the behavior *decreases* under similar environmental conditions.

Consequences – either positive or negative – only affect future behavior. Consequences select response classes, not individual responses. Reinforcing or punishing consequences are most effective when they are immediate. Consequences select any behavior that precedes them whether or not a behavior change tactic is being practiced. Behavior change tactics are the methods derived from one or more basic principles of behavior and utilized by applied behavior
analysts. A principle of behavior is a description of the functional relation(s) between behavior and one or more of its controlling variables that has generality across organisms, species, settings, and behaviors.

The study of human operant behavior is complex and includes the analysis of lengthy response chains, verbal behavior, motivating operations, and histories of reinforcement.

Chapter Objectives

1. Define behavior, response, and response class.
2. State examples of behavior, response, and response class.
3. Define stimulus and stimulus class.
4. Define and state examples of positive reinforcement.
5. Define and state examples of negative reinforcement.
6. Define and provide examples of conditioned and unconditioned reinforcement.
7. Define and state examples of positive punishment.
8. Define and state examples of negative punishment.
9. Define and provide examples of stimulus control.
10. Define and provide examples of establishing operations.
11. Describe a behavioral contingency.
12. Describe the respondent conditioning paradigm.
13. Provide an example of the respondent conditioning paradigm.
14. Describe the operant conditioning paradigm.
15. Provide an example of the operant conditioning paradigm.

Focus Questions

1. Why is it important to distinguish between the terms behavior, response, and response class?
2. What does it mean to say behavior has a function?
3. What effects do reinforcement and punishment have on subsequent behavior?
4. Compare and contrast operant and respondent conditioning.
5. What is a behavior principle and how is it similar or different than a behavior change tactic?
6. What is the three-term contingency and why is it described as the “basic unit of analysis in the analysis of operant behavior”?
7. How does applied behavior analysis deal with complex behavior such as verbal behavior?

Chapter Key Terms

antecedent
automaticity
aversive stimulus
behavior
behavior change tactic
conditioned punisher

operant conditioning
phylogeny
positive reinforcement
principle of behavior
punisher
punishment
conditioned reflex  reflex
conditioned reinforcer  reinforcement
conditioned stimulus  reinforcer
consequence  repertoire
contingency  respondent behavior
contingent  respondent conditioning
deprivation  respondent extinction
discriminated operant  response
discriminative stimulus (sd)  response class
environment  satiation
establishing operation  selection by consequences
extinction  stimulus
habituation  stimulus class
higher order conditioning  stimulus control
history of reinforcement  stimulus-stimulus pairing
motivating operation  three-term contingency
negative reinforcement  unconditioned punisher
neutral stimulus  unconditioned reinforcer
ontogeny  unconditioned stimulus
operant behavior

Chapter Suggested Readings

This conceptual article discusses the “confusion” surrounding the distinction between positive and negative reinforcement. The article presents an outline of the initial argument presented in Michael’s 1975 paper.

This book offers readers an in-depth discussion on the role of reinforcement in everyday activities – from education to illness. This book also addresses several of the “myths and misconceptions” about reinforcement.

Michael, J. (1975). Positive and negative reinforcement: A distinction that is no longer necessary; or a better way to talk about bad things. Behaviorism, 3, 33- 44.
This conceptual article presents a discussion about the distinction between positive and negative reinforcement. This article presents two main issues: (a) the confusion surrounding negative reinforcement and punishment and (b) changing stimulus conditions versus a presentation-removal distinction.

This book presents a comprehensive outline of the basic principles of behavior. The book includes a detailed presentation of topics such as: stimulus; response; reflexes; conditioning; experimental arrangements; motivating operations; and verbal behavior.


This trade paperback presents “real world” descriptions of the effects of positive reinforcement across species (e.g., dogs, dolphins, and humans). A detailed description of how to set up training environments for just about any behavior is included. This book includes methods for changing undesirable behavior and shaping desirable behavior.


If you are wondering what Skinner had to say in his many published works about topics such as self-control, thinking, and purpose - this text presents citations to Skinner’s works on these topics and more. Wyatt compiled over 145 pages of Skinner references in an A – Z format covering everything from aggression to Zoosemiotics.