On Books

A Review of *Elementary Principles of Behavior* by
Richard W. Malott, Donald L. Whaley, and Maria Malott

Donald K. Pumroy
University of Maryland

Pow!! Zap!! Kerboom!! There is no doubt about it, this book is different from other textbooks.

But before looking at the differences, let us look at a conventional textbook. If you are going to write a conventional book, you might review other books out there and try to make your book like them. We all know that most, if not all, of the books on the market now have text material that is presented as a lecture. It flows from one topic to the next, there are headings, pictures, figures, and graphs. Books such as this have been published for some time and are popular, so, one might think, this must be the way to write a book. If you make your book like other books the important people should say, "Now this is a good (or at least adequate) book." The important people are publishers (because they have to accept the book for publication), professors (because they have to order the book for their classes), and the students (because, although what they think is usually not viewed as very important, they frequently do complete course evaluations that sometimes ask about the appropriateness of the class text; the use of an inappropriate text may impede promotion or tenure for the professor).

But from a behavioral perspective, what should we look for in a textbook? What effect do we want on the students? Such a book should teach something. That something should be information that is accurate and complete. It needs to be readable, exciting, and stimulating so that students should not perceive reading it

as aversive. Although students can be encouraged (forced?) to read a book by having tests covering its material and having their grade based on the test, it does help if the book is readable. The examples that illustrate the material should be varied to maintain interest and help in learning a concept.

The authors of *Elementary Principles of Behavior* have been sensitive to these factors, probably more so than other authors. Certainly the material is accurate. Dick Malott, the first author, is a leader in the field of behavior analysis, and his writings raise questions others haven't thought of, pushing and needling psychologists to scrutinize terms and concepts in depth. The problem of readability is an area to which the authors have given much attention. Each chapter is divided into many different, short sections. This should make it easier for students to maintain attention and to facilitate learning. There are case studies, always exciting reading for students, that are based on published studies and are analyzed behaviorally. Material is presented as it is in conventional texts, but concepts are usually discussed in a brief paragraph or two. The interactions of a group of students in a behavior analysis class are presented in script form (as in a play). The members of the class and the instructor discuss and argue about behavior analysis. In this way the usual criticisms of behavior analysis are discussed and answered. There are key concepts separated into attention-getting boxes along with their definitions. And after most of the sections, there are questions students are to answer before they proceed. Each chapter has two sections: the "fundamental" section, which covers the

Comments regarding this review and requests for reprints should be addressed to Donald K. Pumroy, 4006 Oliver Street, Hyattsville, MD 20782.

concepts for that chapter, and an “enrichment” section, which presents material in more detail, usually covering more laboratory studies. There are other features of the book that bear mentioning because they are different from other texts in the field. The authors self-disclose throughout the book so the reader has more of an understanding of the authors (and perhaps feels closer to them) than is usually the case. Simple graphs tell the story of the text in a different way. There are teasers, an exciting problem is raised, and then, in the fashion of the old Saturday serial, the reader is told that the problem and/or the solution will be revisited in a future chapter. The importance of analyzing what takes place before the behavior, what is the behavior of concern, and what happens after the behavior occurs is presented in figures in which each step is in a box. This adds to the clarity of the material presented and also serves as an alternative way of viewing the analysis of a specific problem. Highly readable stories and folk tales are included to explain behavioral terms more clearly. The story of the slave miner and the woman in the window provides a good example of intermittent reinforcement. Lastly, there is a good bit of humor, some subtle and some not so subtle. Much of the humor is focused on students’ foibles or “putting down professors,” two topics that should be appreciated by students.

What is the content of the book? In a sense, all introductory books on behavior analysis are similar; probably there is more similarity among books on behavior analysis than other books in psychology. There is a set pattern that has been established for some time and is routinely followed. The usual sequence is: how to look at problems behaviorally, how to define and record behavior, how to increase the frequency of behavior, how to decrease the frequency of behavior, the effect of antecedent conditions, how to instill new behavior, how to maintain behavior, respondent behavior (maybe), how to integrate these behavioral principles and apply them to a variety of human problems. There may be a chapter on ethics or research methodology.

This book is similar to other behavioral books in that each area is covered, but the order is somewhat different. The authors are very concerned about behavioral definitions and concepts, and this text probably looks at concepts with a more critical eye than is usually found. For example, the coverage on forgetting in chapter 6 is an area not usually covered. As many of the readers know, Dick Malott frequently writes articles that focus on more rigorous and precise definitions of behavioral concepts. This close scrutiny of terms is evident in this text as well.

Some points that stand out:

1. In the preface, the authors discuss what will follow and state that they have tried to prepare a text that is “readable, clear, interesting, and entertaining” but is also rigorous. They have. Those who have helped them are mentioned and thanked. There are supplemental materials geared toward helping the student learn: an instructor’s manual, computer software for students’ activities, flash cards, computer-based flash cards, advanced enrichment sections, and a newsletter for instructors who adopt the book.

2. The preface is followed by a section about Don Whaley, one of the authors of the first edition. This section is revealing and warm; you don’t often see obits like this one.

3. Chapter 1 begins with the case of Bobbie, who states that he is “a woman trapped in a man’s body.” The case is presented in clinical fashion. Isn’t that a grabber? Doesn’t that leave you saying not only, “What an interesting case!” but also “What can a behaviorist do to help?” “Read on” is the answer, because this case is brought back into the text several times to illustrate the treatment techniques and to clarify behavioral terms. Chapter 1 goes on to define and discuss behavior, reinforcers, and baseline. The enrichment section presents the behavioral approach and compares and contrasts it with other approaches.

4. Subsequent chapters cover positive and negative reinforcement and how to increase and decrease the frequency of behavior. Other chapters cover the reduction in the frequency of behavior; the

word “penalty” is used to cover the various techniques such as response cost and time-out.

5. At the end of chapter 3, the authors discuss the layperson’s common (but erroneous) thinking that pressures build in an individual and then spurt out in a burst of anger or aggression, a view that goes back to Freud. This concept most clearly separates those who watch Oprah from those who are behaviorally oriented. The authors refer to this as the toothpaste theory of abnormal behavior—a graphic, clear analogy.

6. The authors distinguish between two kinds of studies. One kind of research seeks to clearly determine the one environmental variable that brings about a change in behavior. Such research is usually conducted in a laboratory and is referred to as basic research. On the other hand, when dealing with human problems, one is less concerned with finding the precise variable and more concerned with changing the behavior as quickly as possible. Consequently, to bring about such a change, clinicians may introduce a variety of environmental changes at the same time, hoping for a quick change in the targeted behavior. If the targeted behavior does change, the clinician will probably not know exactly which environmental change was effective. This distinction between basic research and clinical application is discussed, and both are considered to be valuable.

7. In chapter 2 the authors discuss the subject matter of behavior analysis. For many behavior analysts, the focus of study is behavior (read observable behavior). Malott, Whaley, and Malott have expanded that definition to cover “thinking, dreaming, and having images.” Consistent with their definition in the section on escape learning, they state that a person may seek ways to escape from thoughts and feelings of anxiety. These thoughts and feelings of anxiety are the aversive conditions from which the person is trying to escape rather than the stimuli that create the anxiety. Do we focus on the environmental stimuli or do we focus on that which is internal and unobservable to others? A difficult question. More later.

8. In chapter 7 on differential reinforcement and punishment, there is a detailed presentation on topography, latency, and duration of behavior. This is an excellent coverage and one not found in many basic behavior analysis textbooks.

9. In chapter 9 the authors discuss unlearned reinforcers and aversive conditions. They make a distinction between reinforcers that automatically follow behavior (natural, intrinsic) and those that are added (contrived, extrinsic). The concepts of satiation and deprivation are also discussed.

10. Chapter 10 discusses “special establishing operations,” material that is somewhat unique. This chapter presents special situations or environments that influence behavior. Such situations are previous schedules, adjunctive behavior, aggression, addiction, and imprinting.

11. Discrimination and generalization are covered in chapters 12 and 13. This is an area that can be complex and difficult to understand. The coverage is in more detail and depth than in other texts and is very clear.

12. Toward the end of the book, chapters 22 through 24 cover a difficult problem for behavior analysts, one not usually covered in introductory texts. The problem is how to explain behavior that does not seem to have an immediate reinforcer but instead seems to be controlled by distant events. Nonbehavioral psychologists refer to this problem as delayed gratification, and for them it isn’t a problem. But for behavior analysts it is. If people are controlled by positive reinforcement (or punishment), doesn’t that reinforcement (or punishment) have to be given immediately after the behavior is performed to be effective? But there are many types of behavior that do not appear to be controlled by immediate reinforcement or punishment. What is the reinforcer for going to work when the reinforcer (paycheck) comes at the end of 2 weeks? Or working for grades that are given at the end of the semester? The text discusses how we are controlled by rules (thoughts, if you will) that have been explained to us and we believe to be true (e.g., if you study hard, then you will get an “A” at the end of the semester).

In an attempt to explain such complex behavior, the authors divide contingencies into two types. One is direct-acting, in which the consequences immediately follow the behavior, and the other is not direct-acting, which is rule governed. The authors go on to explore the circumstances under which rules are effective and ineffective in changing behavior. This material is viewed by many as a very important new area in behavior analysis, and it is very clearly presented.

13. This reviewer has always perceived the discussion of psychological research to be difficult. One can focus on the problem to be resolved or on the research techniques to be used to solve the problem. In some texts the research techniques not only loom larger than the problem to be investigated but at times it appears that the research techniques are separate from the problem. This is less of a problem for Malott, Whaley, and Malott, because they introduce research in a gradual manner. Perhaps with a behavioral orientation the task is made easier, because the question investigated is usually a clear one: Does the intervention bring about a change in behavior? It is not until the last chapter (chap. 29) that research as research is discussed. By this time the reader should be somewhat familiar with the purpose of research as well as having been exposed to much of the terminology. The discussion of research goes from the simple to the more complex. It begins with the case study and moves on to data collection and studies with baselines, then to reversal design studies, and on to multiple baselines for subjects and behaviors. The more traditional research of comparing groups, instead of single cases, is discussed along with the problem of merging data on individuals. It is a very clear and logical presentation of research from a behavioral perspective.

14. Chapter 26 discusses moral and legal control of behavior. Legal control means that there are consequences society will impose if one is caught behaving in a way society says is inappropriate. If one runs a red light, he or she gets a ticket. Moral control is when one is taught that

a behavior is wrong and performing that behavior causes anxiety (guilt) so the person does not perform that behavior even if he or she would not get caught. In this chapter, the authors discuss how the knowledge of behavior analysis could lead to a better world.

Conclusion

It should be clear that I am most impressed with this book; I always will be a fan of a book that uses the term "wise-acre." However, there are a few points that cause me some discomfort. The first is what should a behavior analyst do about thoughts? The problem, of course, is that thoughts are not observable. So what do behavior analysts do? There are several alternatives. One could take the position that "I know thoughts are there, but as a behavior analyst I feel that many psychological problems can be resolved using operant techniques and I will leave those problems that are not solvable by operant techniques to others." It seems that those labeled as methodological behaviorists take this position. Or one could say that thoughts are "covert behavior" (I always felt this was an oxymoron) and deal with thought problems as one would with behavior problems. Those labeled radical behaviorists take this position. Cautela (1970) takes this approach and discusses thoughts as behavior. He then applies the same behavioral principles to thoughts and presents techniques for increasing or decreasing the frequency of a thought. Studying thoughts was also a problem for Homme (1965). He called the thoughts "coverants" (a contraction of covert operants) and then proceeded to deal with thoughts by pairing them with behavior. If a thought (or coverant) was paired with a behavior, one could study the frequency of a coverant by observing the behavior to which it was chained. Thoughts, or imaging scenes, are frequently involved in the behavioral treatment (relaxation and desensitization) of anxiety and fear. The authors of *Elementary Principles of Behavior* see thoughts as an appropriate area of study. They refer to thoughts as "covert behav-

ior." Unfortunately, there is not a detailed exploration of this problem. At several points in the text thoughts are essential, especially in the section on rule-governed behavior.

The second problem is the presentation of emotional or respondent learning. The importance of respondent learning lies primarily in the conditions of anxiety and fear. Anxiety and fear then are intertwined with operant learning, especially with escape learning but more importantly with avoidance learning. I did not feel that the authors emphasized this interaction between operant and respondent learning. The interaction is most clear in Watson and Rayner's case of Little Albert. After Albert had been conditioned, the presentation of the rat caused him to cry (evidence of respondent learning) and to try to crawl away from the rat (operant learning). Being sensitive to this interaction permits an explanation of behavior to involve both respondent and operant behavior, and the treatment then can be focused on either. In the case of "the goil with doity mouth," the emphasis was on operant behavior. She tended to talk dirty when interacting with her family became stressful. The treatment focus was on changing the be-

havior of her family (the stimulus for her anxiety that led to her foul mouth). The treatment could have focused on the respondent behavior (anxiety) with relaxation and desensitization. In this way, improvement lies with her effort and does not require others to behave in a different way. Another case was presented in which a child was fearful of the dentist. The treatment was again operant in a situation in which respondent treatment should have at least been mentioned.

In sum, this is an outstanding book and the authors should be very proud of what they have produced. Psychology professors and students should read this book, but so should anyone interested in people. I feel, as I believe the authors do, that the responsibility of behavior analysts is to help people understand the behavioral approach. This book is an important step in that direction.

REFERENCES

- Cautela, J. R. (1970). Covert reinforcement. *Behavior Therapy*, 1, 33-50.
- Homme, L. E. (1965). Perspectives of psychology: XXIV. Control of coverant, the operant of the mind. *The Psychological Record*, 15, 501-511.
- Malott, R. W., Whaley, D. L., & Malott, M. (1993). *Elementary principles of behavior* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.