Book Review

Roads Less Traveled: A Review of Lee's *Beyond Behaviorism*

Edward K. Morris
University of Kansas

John B. Watson's (1924) *Behaviorism* was among the first books with "behaviorism" in its title, actually *as* its title; here, Watson described what we know as classical behaviorism. Fifty years later, B. F. Skinner (1974) published *About Behaviorism*, in which he described a more mature philosophy of the science of behavior—radical behaviorism. Now we have a new "behaviorism" book—Vicki Lee's (1988) recent *Beyond Behaviorism*.

Lee's title may aggrrieve behavior analysts for implying that their discipline is inadequate and passé. Psychologists, more generally, will simply note that they long ago went beyond behaviorism. The book's thesis, however, supports quite opposite conclusions: Behavior analysis has gone beyond behaviorism, whereas psychology has not. This argument requires its own internally consistent definition of behaviorism, which is, in Lee's view, "a stimulus-response psychology associated with reductionistic and mechanistic presuppositions about the nature of psychology's subject matter and task" (p. x). Her task is to explain the inadequacies of psychology so conceived and to offer an alternative. This she does in exemplary fashion, with the alternative being no less than radical behaviorism.

The radical behavioral character of Lee's thesis may not be apparent to every

reader, at least initially. Indeed, behavior analysts who have not read about behaviorism beyond Skinner may be perplexed, for three reasons. First, Lee addresses conceptual issues that Skinner does not explore extensively (e.g., classification). Second, where they both address the same issues in a substantive manner (e.g., structure and content), Lee draws her language and concepts more from philosophy and logic (e.g., equifinality), whereas Skinner couches his arguments more in the vernacular, such that we are not always aware that he has addressed the same issues in as profound a manner. And third, Lee approaches these issues from a different direction than does Skinner: She is more concerned with their implications for further conceptual analysis than for basic or applied research, the latter being more Skinner's purview. Although these features may work against the behavior-analytic reader, they remind us that radical behaviorism has a rich and subtle, but often unexplicated, philosophic core, and that it shares this core with other perspectives.

Lee approaches this philosophic core as a generalist in search of a science of psychology, not as a behavior analyst who already knows what that science must be. Lee knows where she is going, of course, but her approach gives the book an openness and freshness that may entice non-behavioral readers down intellectual roads not previously taken.

For behavior-analytic readers, the book leads beyond behaviorism down roads differently marked and less traveled than those usually taken in the explication of radical behaviorism. These roads, though, are sometimes rough, and they take readers across foreign territory. But the journey brings new insights and vistas, and

Lee, V. L. (1988). *Beyond behaviorism*. Hillsdale, NJ: Erlbaum (xi + 208) (\$29.95) (ISBN 0-8058-0115-4). Appreciation is extended to Bryan D. Midgley and James T. Todd for their comments on earlier versions of this manuscript, as well as for their contributions to a seminar based around this book. Also contributing to the latter were Don Baer, Dave Born, Glenn Martin, Jesus Rosales, and Susan Schneider. Reprints may be obtained from the author, Department of Human Development, 2035D Haworth Hall, University of Kansas, Lawrence, KS 66045.

illustrates that the core of radical behaviorism can be arrived at from more than one direction (see Day, 1980; Hayes, Hayes, & Reese, 1988; Morris, 1982). Behavior analysts are not so few as they think; others have arrived at a similar world view, but by different routes. Equifinality is not only true of behavior, but also of the philosophy of the science of behavior.

CONTENT

Beyond Behaviorism may be organized into three sections. In the first six chapters, Lee explores the nature of psychology's subject matter; in the middle two chapters, she interrelates the subject matter with radical behaviorism; and, in the final six chapters, she explores the ramifications of what has come before, and reflects on the future. In what follows, I offer a brief overview of the topics Lee addresses, but cannot do justice to the insightfulness, range, or detail of her material.

The Psychological Subject Matter

Lee begins by describing academic psychology's underlying disunity: Psychologists have reached no consensus as to what constitutes their subject matter. As a consequence, psychology rarely progresses in a cumulative, integrated manner; it is not a science—only a protoscience. Psychology's first task, then, is to decide upon a "consensible" subject matter, a task that must be completed before other issues (e.g., measurement) can be resolved. Both conceptual analysis and experimental analysis are required for a science of psychology.

In Lee's view, the origins of a scientific psychology lie in ordinary psychology, that being the phenomena available to ordinary observers—described and explained in ordinary language. What distinguishes ordinary knowledge from scientific knowledge is, first, that the latter is *extraordinary* knowledge—knowledge beyond ordinary observation, requiring technical terms and concepts of its own. What passes for scientific psychology, though, has largely ignored ordinary psychology, and thus lacks a baseline against

which to measure whether it actually engages extraordinary knowledge or whether it merely uses extraordinary technical terms and concepts to express what we ordinarily know. Lee asks, in this context, whether our lives would be affected one jot or one tittle if academic psychology ceased to exist. Putting that question to behavior analysis might yield an interesting essay.

With that as introduction, Lee takes on the serious task of defining the subject matter, and her style becomes more formal in logic. She argues that science begins by grouping particulars (e.g., stimuli) into classes (e.g., reinforcers and punishers). Being unique and non-recurring, particulars cannot be the basis for *reliable* knowledge—Lee's second criterion for scientific knowledge. Classifying particulars, though, allows us to identify a more general, abstract entity that transcends the particular instances. Classes are something about which we may have reliable, extraordinary knowledge.

The next question becomes: "Classes of what?" Here, Lee dismisses behavior and responses because of their ambiguity—they include too much or too little. Her preferred concepts are act, action, and conduct, for these are the generic referents for ordinary language terms that describe the natural units of the subject matter (e.g., mailing a letter). In passing, Lee perceptively notes that "the behavior of organisms" is misleading as a description of our subject matter. If behavior is nothing more than movement, then we are studying physics or biology. But if behavior is an act, in the sense of being a means-end relationship, then behavior is an emergent property of the interaction between organism and environment. Behavior is not "of" either one of them alone.

In discussing means-end relations, Lee argues that acts are identified by their end results (e.g., the letter mailed). Means-end relations, she notes, are "operants," but to this point she has rarely invoked any behavior-analytic vocabulary. Even here, she addresses "instrumentality" and "effectance," thereby making contact with different, but related literatures. Her related discussion of equifinality in terms

of response classes (e.g., mailing a letter) that achieve their ends through more than one means or particular (i.e., more than one response instance) is especially lucid. This is the sense in which behavior shows purpose, and is the subject matter of operant psychology (Skinner, 1974, p. 6).

Behavior Analysis

Not until the middle of the book does Lee turn explicitly to behavior analysis, where she discusses, in separate chapters, contingencies and radical behaviorism. She defines the former as the means-end relationships central to psychology: "Contingencies together with their cumulative effects on performance constitute the phenomena of psychological (as opposed to physical, biological, or sociological) interest" (p. 63).

Next, Lee discusses behavioral synthesis and analysis, where she points out that behavior analysis has the craft base in ordinary psychology missing from the rest of academic psychology. She continues:

Craft techniques contribute by helping us separate relevant from irrelevant variables and by opening the way to concepts and principles that a science properly seeks. Craft techniques also contribute by obliging us to ground our speculation about the nature of conduct in the everyday reality of the craftsman and, thus unequivocally in conceptualized particulars. (p. 70)

In taking up radical behaviorism, Lee outlines its major professional and conceptual features, the latter being consonant with the perspectives she has developed up to this point. She then addresses distinctions among various behaviorisms, as well as commonalities among traditions sharing radical behaviorism's philosophic core, specifically, views fostered by Dewey, Bentley, Kantor, Mead, and Skinner.

Ramifications

Having argued that behavior analysis has gone beyond behaviorism, and that the proper point of departure for psychology is through radical behaviorism, Lee then examines the ramifications of these points, extending them into still further material.

She begins by addressing distinctions

between organisms and persons, making three important points. First, she distinguishes between bodily movements and acts, and argues that conflating behavior with movements as the subject matter has led to radical behaviorism's misrepresentation as a mechanistic, environmentalistic, black-box psychology of passive organisms. Second, she discusses the various levels at which humans may be described—as physical entities, as biological entities, and as persons—and then clarifies the role physiology plays at these various levels of integration. And third, she argues that psychology's difficulty in distinguishing organisms from persons lies in its reification of acts into "psychological nouns" (e.g., cognition) and in its separation of the "verbs of consciousness" (e.g., remembering) from behavior. Citing Dewey, Malcolm, Ryle, and Wittgenstein, she argues that the basis of such talk ultimately lies in ordinary language descriptions of means-ends relationships.

Lee also addresses another important distinction—that between structure (process) and content, the former being abstract and general, the latter concrete and particular. The "*content* of conduct" is what we have ordinary knowledge about—raising children, socializing, and cogitating. It is what an undergraduate psychology curriculum is organized around—developmental psychology, social psychology, cognitive psychology, and the like. It is broad, particular, context-bound, and ever-changing. When psychology is defined as the science of the content of conduct, however, psychologists have generally despaired over, or denied the possibility of, ever attaining general laws of behavior. As a consequence, psychology today is just a collection of different mini-sciences of the content of conduct. Not even radical behaviorism, though, can account for all the content of conduct. The best we can achieve is interpretation—interpretation based on a natural history of conduct and what we know about the laws of the structure of conduct—that is, a commonsense psychology with behavioral principles as a common base for the various domains.

The "*structure* of conduct" refers to the

classes, properties, and lawful relations or processes that transcend the particulars of the content of conduct—structure is content-free.¹ The experimental analysis of behavior is, in this sense, the science of the structure of conduct. For instance, the science is about reinforcement as a behavioral process, not about particulars that function as reinforcers—it is not a science of M&Ms, “Uh-huhs,” and rewards. Psychology, however, has generally eschewed a science of structure because it largely rejects both laboratory-based experimental analyses of behavior and the logic of individual analysis replication designs, and because it identifies individual human beings and the categories into which they fall (e.g., the schizophrenic, the gifted) as the particulars and classes of its subject matter.²

Lee’s final chapters extend the argument that psychology has a stimulus-response metatheory that is both mechanistic and reductionistic in character. Although the argument might seem difficult to make, to the extent that psychology can be equated with an organocentric, S-O-R, or information-processing metatheory—which it can—then these mechanistic and reductionistic criticisms hold (see Costall & Still, 1987). Ironically, behavior analysis itself is not entirely free from these criticisms; indeed, the criticisms are sometimes seen as virtues. Where this is so, behavior analysis still has to go beyond behaviorism.

FORM

Quibbles? Yes, more than a few, but I was not always sure whether they were matters of content or form—or matters of reviewer competence. For instance,

¹ Lee does not always go beyond a narrow behaviorism’s epistemology. For instance, the laws of behavior are *not* about a reality separate from the behavior of scientists, waiting to be discovered. But rather, the laws are the verbal behavior of behavior analysts as they describe behavior in an economical and pragmatic manner.

² This helps explain some misunderstandings regarding J. R. Kantor. His interbehavioral psychology focuses more on the content of conduct than on the structure of conduct, whereas the experimental analysis of behavior is about the structure of conduct.

I could follow various lines of argument, but did not always know where they were leading. Or, more specifically, I did not know if the argument for radical behaviorism’s active organism was unconvincing in logic or simply unfinished. For present purposes, I include these as quibbles over form: Many points would have benefitted from elaboration so that readers could follow the flow and transition of the arguments and so that readers could say the same things as Lee for closer to the same reasons, not because they could simply repeat her points verbatim.

In reading the book, I was often left thinking, “Of course, Lee is right. How insightful.” She made assertions or outlined arguments that were already strong in my repertoire and that seemed intuitively correct. The strength of those arguments was not previously high enough for me to emit them, but became so afterwards. Perhaps that is why I always looked forward to reading further. However, even though I could state those assertions and arguments after having read them, I did not always know why they seemed just intuitively correct, and not logically so. I lacked the supporting material for stating Lee’s points for the same reasons she stated them. Why this might be so, I cannot say. Perhaps I was an insufficient audience or perhaps the writing was under insufficient audience control—prefatory appreciation is extended only to W. K. Honig. In any event, I wonder how convincing those assertions and arguments would be to nonbehavioral readers for whom similar behavior would be at low strength in their repertoires.

On a minor matter, Lee warned us that her references might appear to be a dated, odd, and sundry lot. She was both right and wrong. She was right in that her citations sometimes suggested an appeal to authority, with readers also not understanding why a particular author or work was authoritative. But she was wrong in apologizing because, as she noted, her references simply reflect the dearth of current and familiar literatures.³ They re-

³ In this vein, Pronko and Herman (1982) was an oversight, given the overall line of argument.

flect the long struggle faced by a minority of psychologists—not all of them nominally radical behaviorists.

CONCLUSION

Beyond Behaviorism is spirited and well informed; it will enliven and organize our thinking and our teaching. As Skinner (1979, p. 282) might put the matter, the book orders confusing data, uncovers uniformities, and resolves puzzlement. For instance, Lee puts order to confusing concepts such as “the organism as a whole,” she uncovers distinctions between organism and person, and she resolves puzzlement over behavior as a biological and as a psychological subject matter. She asks herself questions we have asked of ourselves but were afraid to ask of others for fear of appearing uninformed.

In her preface, Lee tells us that her book is a work in progress—a provisional report. She is both right and wrong again. First, although some of her material needs fleshing out, she is wrong for being overly modest about her important contribution to the behavior-analytic literature. Second, she is right in reminding us of the provisional nature of the conceptual analysis of behavior because the behavior of behavior analysts is behavior itself. Behavior—conceptual or otherwise—is always provisional, always in progress, always “becoming.” Science, as behavioral process and product, is a never-ceasing stream of activity.

Radical behaviorism, however, like other philosophies of psychology, is sometimes reified, made into a static, unchanging thing. When this occurs, creative conceptual analysis is extinguished and its products grow stereotypic and intransigent. With that, the philosophy becomes less able to draw strength from or assimilate related perspectives or accommodate what might be valid criticisms of its own program. As a consequence, the survival of radical behaviorism is placed in jeopardy. A philosophy of the science of behavior that is both rule-governed and contingency-shaped through ongoing conceptual analysis would seem more likely to survive, and hence closer to the

truth—pragmatically speaking. This argument is not an argument for the confused eclecticism that so often emerges in efforts to go beyond behaviorism—the lack of cohesive concepts and organization is just as fatal as intransigence. The point is simply that radical behaviorism’s survival will depend on ongoing and informed analysis, synthesis, exchange, and integration of conceptual material.

Lee has contributed to the survival of radical behaviorism by taking us beyond behaviorism down roads less traveled. She has provided us with another way of explicating radical behaviorism’s philosophical core (see also Morris, 1988) and has cast into clearer relief some relationships between radical behaviorism and perspectives having much the same core. And, by engaging her book, we ourselves contribute to the survival of radical behaviorism through the new and diverse relationships the book strengthens and establishes in our own repertoires. For these reasons and more, *Beyond Behaviorism* is highly recommended.

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