

Misconception and Miseducation: Presentations of Radical Behaviorism in Psychology Textbooks

James T. Todd and Edward K. Morris
University of Kansas

Behavior analysts have recently expressed concern about what appear to be misrepresentations of behaviorism in psychology textbooks. This paper presents an analysis of currently used textbooks in the areas of introductory, social, cognitive, personality, and developmental psychology that confirms this. Topics on which behavior analysis is most often misrepresented relate to the role of animal learning research, environmentalism, the "empty organism," language, and the overall utility of the approach. Because textbooks are often a major medium of interaction between the public and behaviorism, behavior analysts must work to correct these errors and to prevent possible negative consequences of widespread misunderstanding. Several potential solutions to these problems are presented that take into account current publishing practices and the monetary contingencies which support them.

Attacked from within (e.g., Bailey & Bailey, 1980; Herrnstein, 1977; Wasserman, 1981) and from without (Chomsky, 1959; Fodor, 1981), behavior analysts have made efforts to defend their position against misconceptions and unwarranted criticisms for a number of years (e.g., Bijou, 1979; MacCorquodale, 1970; Skinner, 1973, 1974). Recently, concern has arisen over the nature and extent of these misconceptions in educational materials for students. For instance, Holland (Note 1) has suggested that misconceptions about behaviorism may no longer be born of simple misreading or lack of information. They may now be directly taught to students through stan-

dard course materials. Similar concerns about inaccuracies found in psychology textbooks and about the implications of potential miseducation have also been raised in papers presented at recent meetings of the Association for Behavioral Analysis and the American Psychological Association (Brownstein, 1981; Dellalana, Note 2; Knapp, Note 3; Lucas, Note 4; Todd & Morris, Note 5).

This concern about inaccuracies in psychology textbooks may or may not be justified. On the one hand, the concern may stem from a few highly visible errors in a few popular textbooks. On the other hand, the concern may be based on a correct assessment that textbooks often do present a distorted picture of behavior analysis. This issue can be evaluated through a survey of psychology textbooks now being used. In this article, we summarize the results of a study on the accuracy of how behavior analysis is described in contemporary educational materials.

TEXTBOOK SAMPLING AND DATA COLLECTION

Textbook Sampling

In order to obtain a representative sample of what psychology students are reading about behavior analysis, we eval-

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uated recently published textbooks in the areas of introductory, social, cognitive, personality, and developmental psychology. These five content areas are among those most frequently taught in psychology departments (Lux & Daniel, 1978) and hence comprise the core curriculum for most undergraduate psychology majors. Textbooks on self-help and adjustment, experimental and physiological psychology, and those for upper level undergraduate and graduate courses were not included. Courses on these topics are less frequently offered (Lux & Daniel, 1978) and often make no mention of behavior analysis.

For our sample, we selected textbooks that were published between 1978 and 1980 and that were reviewed in *Contemporary Psychology (CP)* during the same years. This selection procedure provided a representative sample of the important and textbooks in current use (Foss, 1981). We were able to obtain and evaluate 40 of the 99 texts reviewed in *CP*. That our sample might be biased in terms of texts critical of behavior analysis seems unlikely. The texts were obtained from the faculty, graduate students, and libraries associated with a university noted for the behavioral orientation of some of its faculty members.

Data Collection

In evaluating these texts, we checked all references to radical behaviorism, behavior analysis, behaviorists, behavioral concepts and terminology, and related topics, and assessed the accuracy of the presentations. Definitions of basic terms and descriptions of basic behavioral concepts were checked against definitions and descriptions in the glossaries of Ferster and Skinner's *Schedules of Reinforcement* (1957) and Catania's *Contemporary Research in Operant Behavior* (1968). Descriptions of behavior analytic views on conceptual issues were checked against the primary sources cited in the textbooks. Finally, citations of articles and books to support discussions about behavior analysis were tabulated, and relevant statements about behavior analysis were transcribed.

SURVEY RESULTS

General Summary

Our results show that presentations of behavior analysis varied across textbooks and subject areas. Introductory and personality texts usually provided the most detailed presentations. Developmental psychology texts were less detailed, while social and cognitive psychology texts presented the least information, sometimes not covering behavior analysis at all.

Most textbooks did not discuss radical behaviorism as the philosophy of the science of behavior, which it is stated to be (Skinner, 1974, p. 1). Several personality and introductory textbooks, however, did discuss theoretical issues, but limited their presentations to topics such as mentalism and some of Skinner's metatheoretical views (e.g., determinism) (cf. Skinner, 1971). Any further discussions of the history and philosophy of behavior analysis were typically presented in relation to the research and views of Pavlov, Watson, and Skinner.

The primary focus in the presentations of behavior analysis was on basic behavioral principles, with occasional mention that these principles have been used in "behavior modification." Overall, the five most frequently cited behavioral books and articles were, in order, Skinner's (1953) *Science and Human Behavior* (50% of the texts reviewed), Skinner's (1938) *The Behavior of Organisms* (50%), Skinner's (1957) *Verbal Behavior* (48%), Skinner's (1971) *Beyond Freedom and Dignity* (45%), and Watson and Rayner's (1920) "Conditioned Emotional Reactions" (42%). No other article or text was cited more than 25% of the time. The most commonly cited basic research studies were Ferster and Skinner's (1957) *Schedules of Reinforcement* (20%) and Skinner's (1948) "'Superstition' in the Pigeon" (13%). In sections on applied behavior analysis, token economy research (e.g., Ayllon & Azrin, 1968) and work with autistic children (e.g., Lovaas, 1968) were described in about one of every five texts. Most texts also included a separate discussion of language that frequently cit-

ed Skinner's *Verbal Behavior* (1957) as representative of the behavioral view. In each of these areas—basic and applied research, and language—the references and coverage were dated, thereby failing to reflect advances made in the field over the past 15 years (see *Journal of the Experimental Analysis of Behavior* and *Journal of Applied Behavior Analysis*).

In most introductory texts, basic behavioral terms were defined accurately, and simple behavioral processes were adequately described. Among the few errors which occurred were definitions of negative reinforcement as punishment, of standard interval schedules as response-independent time schedules, and of reinforcement without reference to response rate. Several texts contained descriptions of basic principles that were quite detailed and accurate (e.g., Hall & Lindzey, 1978; Zimbardo, 1979).

Misconceptions

When presentations of behavior analysis went beyond descriptions of basic principles and concepts to more general issues, a number of misconceptions began to appear in a large proportion of the textbooks. Some texts did present a reasonably accurate picture of behavior analysis (e.g., Meyer, 1979; Ryckman, 1978); others, though, were straightforwardly anti-behavioral (e.g., Bavelas, 1978). In general, the preponderance of the textbooks described behavior analysis through a mixture of both accurate and inaccurate statements and conclusions. The most common misconceptions of behavior analysis were (a) that it focuses primarily on the behavior of non-human animals, (b) that it is totally environmentalistic, (c) that it views organisms as "empty" or as "black boxes" (though with occasional reference to intentionality), (d) that it espouses a simple and naive theory of language and language acquisition, and (e) that it is limited in usefulness. In describing these misconceptions below, we have not taken the space to provide substantive rebuttals to these misconceptions; however, we do provide an occasional reference where in-

formed views can be found. Our present audience needs little education in these matters.

Non-human animal behavior. Some textbooks suggested that behavior analysts work only with non-human animals and improperly generalize their findings to human behavior. For example, one developmental psychology textbook contained this claim: "Ironically, this theory is based on research in animal learning—and Skinner uses it to explain a uniquely human ability [language]" (Mussen, Conger, & Kagan, 1979, p. 212). In the same vein, another author made this misobservation: Skinner's "influential book *Beyond Freedom and Dignity* deals directly with the societal applications of rat and pigeon research, in government, religion, and business" (Geiwitz & Mour-sund, 1979, p. 118).

The generality of behavioral principles for human behavior derived from research with non-human species is, of course, an empirical matter. To date, though, the basic processes that have been investigated do show trans-species generality (cf. *Journal of the Experimental Analysis of Behavior*, 1958) and most human behavior can be "interpreted" (Skinner, 1957; cf. MacCorquodale, 1970) according to basic behavioral principles and concepts. New principles, of course, may yet be found (cf. Skinner, 1938, pp. 441–443), but these will not disaffirm those that already show generality.

Environmentalism. Behavior analysts were often accused of being environmentalists in the sense that they ignore or deny phylogenetic contributions to behavior. John B. Watson is sometimes credited as the originator of environmentalism in America. Moreover, his famous baby statement—that he could create any sort of person from a normal healthy infant given the complete control of the child's environment (Watson, 1930, p. 104)—is often quoted out of context to support this argument. In one text, it was stated that Watson "believed that human beings were illimitably trainable" (Papalia & Olds, 1979, p. 9). Another author said that behavior analysis "excludes behavior attributable to

genetic or maturational factors" (Fein, 1978, p. 6). Although a few of the texts described behavior analysis without reference to innate factors, most of the textbooks did characterize behavior analysis as the most environmentalistic of the theoretical approaches they covered.

These views, however, are generally misinformed. For instance, it is a mistake to say that Watson was a total environmentalist. Skinner (1969, p. 172) reminds us that Watson's baby statement appears in a discussion about how organisms are equipped at birth. He also tells us that Watson has been credited as one of the early ethologists in the modern sense of the term (Skinner, 1969, p. 172). In addition, Skinner himself has consistently acknowledged the role of biological variables in the analysis of behavior (Skinner, 1953, 1966, 1977, 1981), and behavior analysts have spent considerable time and effort investigating the effects of drugs, toxins, and species differences on behavioral processes (see Schwartz, 1974; Thompson & Boren, 1977).

The empty organism. A number of textbooks claimed that behavior analysts ignore everything that goes on within the skin of the organism, usually by stating that behaviorists assume the organism to be empty or a "black box." For instance, one text stated that "In a sense, Skinnerian psychology deals with an 'empty organism'" (Liebert & Spiegler, 1978, p. 470). A particularly vivid example of this misconception was presented in one illustration. John B. Watson was shown with a line-drawing of a black box—labelled "Black-box"—inside his head. One arrow, labelled "stimuli," entered the box through one side of Watson's head; another arrow, labelled "responses," left the box through his chin (Bourne & Ekstrand, 1979, p. 23).

Interestingly, despite this "black box" claim, many of the textbooks described behavioral principles as though they included a degree of intentionality or free will. For instance, one author stated that "the operant is a voluntary action" (Fein, 1978, p. 7), while another noted that "as children grow older they may choose to

exhibit certain behaviors" (Lefton, 1979, p. 406). In one book, the comment was made that "operant conditioning involves actions which are under the organism's control" (Papalia & Olds, 1979, p. 158). This point was mentioned by another author who stated that "the emphasis in this form of behavior is on intention and achievement" (Bourne & Ekstrand, 1979, p. 131). In addition, some textbooks did not separate mentalistic concepts from behavioral ones. For example, one author said that "a behaviorist would explain operant conditioning in terms of the behavior and the reward occurring in rapid enough succession so that the immediate memory of the behavior overlaps with the reinforcement" and, "in non-cognitive terms, the association between the act and the result becomes more firmly established the more trials that are reinforced" (Freedman, 1978, p. 75).

These views about the empty organism stem from a misunderstanding of the behaviorist's view of the role of physiology in a science of behavior (Skinner, 1969, 1974) and from a misunderstanding of Skinner's operational account of subjective terms (Skinner, 1945; cf. Moore, 1975, 1981) which does not exclude private events from the realm of science (cf. Moore, 1980). The descriptions of operant behavior as "intentional" and as a form of 19th century associationism stem from misinformed views of non-reflex behavior as "voluntary" (Skinner, 1971) and from a failure to distinguish radical behaviorism from the mentalism inherent in early associationism and empiricism (see Day, 1976, 1980).

Language. In discussions of behavior analytic views on language, several misconceptions appeared consistently across textbooks in each of the five subject areas. Interestingly, most of these presentations varied little in style, length, and content, and were often formulated in terms of the supposed points of contention between Skinner (1957) and Chomsky (1959). The textbooks' presentation of the behaviorist approach to language acquisition is that it is a simplistic, explicit imitation-reinforcement process, and that

language is uninfluenced by genetic factors. For example, in one text, the author described the behavioral concept of language development as follows: “[Children] imitate the linguistic behavior of the adults around them and, if they do so correctly, the adults will reinforce them positively by praising them and telling them that what they have said is ‘right’” (Zimbardo, 1979, p. 112). This view is often contrasted with Chomsky’s position, presented as a nativist view of language acquisition, thereby placing Skinner and Chomsky in a nature-nurture debate over language acquisition in which Chomsky’s views are generally held to be more accurate.

In contrast to these misconceptions, however, informed reading of *Verbal Behavior* does not lead to the conclusion that behavior analysis is simplistic in these matters (cf. Segal, 1975, 1977). Furthermore, most of Chomsky’s review is not relevant to Skinner’s analysis of verbal behavior (cf. MacCorquodale, 1970; Richelle, 1975).

Usefulness. Finally, texts that contained reasonably detailed presentations of behavior analysis sometimes gave the impression that the approach is limited in generality and usefulness. One introductory text concluded that “actually little complex behavior can be controlled by conditioning methods” (London, 1978, p. 158). A personality text summed up the status of behaviorism by asking: “Where does all this leave the empirical status of Skinner’s theory? As we have seen, the original theory is for the most part so encumbered with logical problems as to preclude meaningful empirical testing” (Bavelas, 1978, p. 195).

Such views, of course, reflect a profound misunderstanding of the course of scientific development (Skinner, 1950, 1956), of radical behavioral philosophy (Day, 1980; Skinner, 1974), and of ongoing developments in basic (cf. Epstein, Lanza, & Skinner, 1981; McKearney & Barrett, 1977; Sidman & Tailby, 1982) and applied research (cf. Katz & Zlutnick, 1975; Nietzel, Winett, MacDonald, & Davidson, 1977; Wolf, 1978).

IMPLICATIONS AND SOLUTIONS

This small but representative sample of statements shows that many clearly erroneous statements are made about behavior analysis in current psychology textbooks. This being the case, behavior analysts are correct in their concern over current misconceptions. Such concern suggests several implications in regard to miseducation that require corrective action.

Implications

The implications of erroneous textbook presentations are important on several levels. First, students are buying and being taught from materials that are of questionable accuracy. In addition to the present survey, a number of other studies have shown that Watson and Rayner’s “Conditioned Emotional Reactions” (1920) is frequently misrepresented in psychology textbooks (Cornwell & Hobbs, 1976; Harris, 1979; Prytula, Oster, & Davis, 1977). Errors in presentations of this study range from the misspelling of Rosalie Rayner’s name (usually as “Raynor”) to combining Watson and Rayner’s study with a later one by Mary Cover Jones, “A Laboratory Study of Fear: The Case of Peter” (1924), thereby creating one study in which a child’s fear is both conditioned and extinguished, with no citation of the Jones study. Psychology textbooks have also been found to provide inaccurate coverage on topics other than behaviorism. For instance, psychology texts often contain outdated and inaccurate information about Down’s syndrome (Abroms & Bennett, 1980), “Jensenism” (Miller, 1980), and Freudian psychology (Buys, 1976). This evidence of errors in the presentations of a wide variety of topics, as well as in presentations of behavior analysis, indicates that students and instructors may be wasting valuable time and money on inaccurate educational materials.

A more important implication of the errors and misconceptions in psychology textbooks involves the relationship between behavior analysts and policy- and decision-making in government, indus-

try, and social action groups. To the extent that public policy is shaped by individuals whose exposure to behaviorism is through textbooks such as those reviewed in this study, and through educators who assign those textbooks, then these policies and decisions are not likely to reflect the important conceptual and applied contributions that a natural science of behavior can offer. Let us provide an illustration of problems that can arise with respect to such issues. In a recent article published in *Psychology Today*, Hogan and Schroeder (1981) assessed the accuracy of the Reagan administration's view of the social sciences. They said that the administration sees psychology as "left-wing political rhetoric with no legitimate claim on the public pocket-book" (p. 8). On the assumption that "introductory textbooks provide a good barometer of the state of the art in psychology" (p. 8), Hogan and Schroeder (1981) reviewed six texts from which they concluded that psychology is indeed pervaded by "deep-seated" liberal, behaviorist, situationist attitudes, and that the administration is essentially correct in its views about psychology. Our present study, however, along with others, has shown that the assumption that psychology textbooks are a "good barometer" of the field is misleading. Their article, however, published in the leading popular psychology magazine, supports the erroneous view that an accurate assessment of psychology can be made from an examination of psychology texts, and that responsible public policy can be made from a view of psychology derived therefrom.

Solutions

If the public and government regard the contents of psychology textbooks as a suitable and accurate basis for making policy (and funding) decisions about psychology in general, and behavior analysis in particular, then behavior analysts ought to take action to improve the presentations of their position. Without corrective action, current publishing practices, in conjunction with textbook buying

habits, will continue to insure the perpetuation of existing errors and will fail to prevent the occurrence of additional errors in the future.

Currently, psychology instructors probably deal with errors in textbooks by rejecting texts that contain errors in favor of texts that contain accurate presentations (Brownstein, 1981). This academic version of natural selection is unlikely, however, to result in the evolution of more accurate textbooks. Many textbook publishers produce several different texts in a number of different subject areas, and not uncommonly several texts in the same area. The result is that such a wide array of textbooks is available that any instructor can find a text that is reasonably accurate in his or her area of interest. Thus, despite differential selection by instructors, enough academic niches exist to support texts containing misconceptions about behavior analysis and other topics.

A more effective approach to the problem of errors in textbooks probably is to write to the authors of textbooks (Brownstein, 1981) and to their publishers, explaining why certain passages are in error and offering suggestions for improvement. This approach may be especially effective in cases where an author's misunderstanding of basic behavioral assumptions results in numerous errors throughout a presentation. Such a tactic may also be effective if a textbook's author has been a victim of inaccurate secondary sources about behaviorism. This approach will be less effective, however, if authors or publishers are unfriendly to or unconcerned about behaviorism. Also, if the text is a managed text—that is, written in whole or in part by a publishers' professional writers—then changes may be more difficult to achieve because the individuals involved are many in number and somewhat anonymous. Nonetheless, instructors whose actions may result in a sales loss of hundreds or thousands of textbooks will speak with a loud voice. They, especially, should be encouraged to take action. Lastly, of course, behavior analysts can write to authors and publishers who do provide fair

and accurate coverage of behaviorism, applauding their perspicacity and providing them with additional materials and insights.

While efforts to alter textbook presentations of behavior analysis may not lead to widespread changes, it is important to attempt to make some improvements. Errors about behaviorism must be corrected to avoid the waste of valuable time and money spent by students and universities and to prevent the possibility of irresponsible legislation and public policy decisions based on misunderstandings.

REFERENCE NOTES

1. Holland, J. G. Personal communication about his audience comments made after a paper presented by Knapp (Note 6).
2. DellaLana, C. M. A source of abuse: Misrepresentation of behaviorism in teacher training. Paper presented at the annual meeting of the Association for Behavior Analysis, Milwaukee, May, 1982.
3. Knapp, T. *Skinner and secondary sources*. Paper presented at the meeting of the Association for Behavior Analysis, Milwaukee, May, 1981.
4. Lucas, A. Do interval schedules occur in "everyday life"? Paper presented at the annual meeting of the Association for Behavior Analysis, Milwaukee, May, 1982.
5. Todd, J. T., & Morris, E. K. *The conception of misconception: Misrepresentation of radical behaviorism in psychology textbooks*. Paper presented at the meeting of the Association for Behavior Analysis, Milwaukee, May, 1981.
6. Knapp, T. *History, biography, and behaviorism*. Paper presented at the meeting of the Association for Behavior Analysis, Detroit, May, 1980.

REFERENCES

- Abroms, K. I., & Bennett, J. W. Current genetic and demographic findings in Down's Syndrome: How are they presented in college textbooks on exceptionality? *Mental Retardation*, 1980, 18, 101-107.
- Ayllon, T., & Azrin, N. *The token economy: A motivational system for therapy and rehabilitation*. Englewood Cliffs, N.J.: Prentice-Hall, 1968.
- Bailey, R. E., & Bailey, M. B. A view from outside the Skinner box. *American Psychologist*, 1980, 35, 942-946.
- Bavelas, J. B. *Personality: Current theory and research*. Monterey, Calif.: Brooks/Cole, 1978.
- Bijou, S. W. Some clarifications on the meaning of a behavior analysis of child development. *Psychological Record*, 1979, 29, 3-13.
- Bourne, L. E., Jr., & Ekstrand, B. R. *Psychology: Its principles and meanings* (3rd ed.). New York: Holt, Rinehart, & Winston, 1979.
- Brownstein, A. J. Letter to the editor. *Division 25 Recorder*, 1981, 16(3), 6.
- Buys, C. J. Freud in introductory psychology texts. *Teaching of Psychology*, 1976, 3, 160-167.
- Catania, A. C. (Ed.). *Contemporary research in operant behavior*. Glenview, Ill.: Scott, Foresman and Company, 1968.
- Chomsky, N. Review of Skinner's verbal behavior. *Language*, 1959, 35, 26-58.
- Cornwell, D., & Hobbs, S. The strange saga of Little Albert. *New Society*, 1976, March 18, 602-604.
- Day, W. F. Contemporary behaviorism and the concept of intention. In W. J. Arnold (Ed.), *Nebraska Symposium on Motivation* (Vol. 25). Lincoln: University of Nebraska Press, 1976.
- Day, W. F. The historical antecedents of contemporary behaviorism. In R. W. Rieber & K. Salzinger (Eds.), *Psychology: Theoretical-historical perspectives*. New York: Academic Press, 1980.
- Epstein, R., Lanza, R. P., & Skinner, B. F. Symbolic communication between two pigeons (*Columba livia domestica*). *Science*, 1980, 207, 543-545.
- Fein, G. G. *Child development*. Englewood Cliffs, N.J.: Prentice-Hall, 1978.
- Ferster, C. B., & Skinner, B. F. *Schedules of reinforcement*. New York: Appleton-Century-Crofts, 1957.
- Fodor, J. A. The mind-body problem. *Scientific American*, 1981, 244, 114-123.
- Foss, D. J. CP speaks. *Contemporary Psychology*, 1981, 26, 3-4.
- Freedman, J. L. *Introductory psychology*. Reading, Mass.: Addison-Wesley, 1978.
- Geiwitz, J., & Moursund, J. *Approaches to personality: An introduction to people*. Monterey, Calif.: Brooks/Cole, 1979.
- Hall, C. S., & Lindzey, G. *Theories of personality* (3rd ed.). New York: John Wiley and Sons, 1978.
- Harris, B. Whatever happened to Little Albert? *American Psychologist*, 1979, 34, 151-160.
- Herrnstein, R. J. The evolution of behaviorism. *American Psychologist*, 1977, 32, 593-603.
- Hogan, R., & Schroeder, D. Seven biases in psychology. *Psychology Today*, 1981, 15(7), 8-14.
- Honig and J. E. R. Staddon (Eds.), *Handbook of Operant Behavior*. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
- Jones, M. C. A laboratory study of fear: The case of Peter. *Pedagogical Seminary*, 1924, 31, 308-315.
- Katz, R. C., & Zlutnick, S. *Behavior therapy and health care: Principles and application*. New York: Pergamon Press, 1975.
- Lefton, L. A. *Psychology*. Rockleigh, N.J.: Allyn and Bacon, 1979.
- Liebert, R. M., & Spiegler, M. D. *Personality: Strategies and issues*. Homewood, Ill.: Dorsey Press, 1978.
- London, P. *Beginning psychology* (rev. ed.). Homewood, Ill.: Dorsey Press, 1978.
- Lovaas, O. I. Learning theory approach to the treatment of childhood schizophrenia. In Cali-

- ifornia Mental Health Research Symposium, No. 2. *Behavior and theory and therapy*. Sacramento, Calif.: Department of Mental Hygiene, 1968.
- Lux, D. F., & Daniel, R. S. Which courses are most frequently listed by psychology departments? *Teaching of Psychology*, 1978, 5, 13-16.
- MacCorquodale, K. On Chomsky's review of Skinner's *Verbal behavior*. *Journal of the Experimental Analysis of Behavior*, 1970, 13, 83-99.
- McKearney, J. W., & Barrett, J. E. Schedule-controlled behavior and the effects of drugs. In D. E. Blackman & D. J. Sanger (Eds.), *Contemporary research in behavioral pharmacology*. New York: Plenum Press, 1975.
- Meyer, M. E. (Ed.). *Foundations of contemporary psychology*. New York: Oxford University Press, 1979.
- Miller, D. R. An analysis of the treatment of "Jensenism" in introductory psychology textbooks. *Teaching of Psychology*, 1980, 7, 137-139.
- Moore, J. On the principle of operationism in a science of behavior. *Behaviorism*, 1975, 3, 120-138.
- Moore, J. On behaviorism and private events. *Psychological Record*, 1980, 30, 459-475.
- Moore, J. On mentalism, methodological behaviorism, and radical behaviorism. *Behaviorism*, 1981, 9, 55-77.
- Mussen, P. H., Conger, J. J., & Kagan, J. *Child development and personality*. New York: Harper & Row, 1979.
- Nietzel, M. T., Winett, R. A., MacDonald, M. L., & Davidson, W. S. *Behavioral approaches to community psychology*. New York: Pergamon Press, 1977.
- Papalia, D. E., & Olds, S. W. *A child's world: Infancy through adolescence* (2nd ed.). New York: McGraw-Hill, 1979.
- Prytula, R. E., Oster, G. D., & Davis, S. F. The "rat-rabbit" problem: What did John B. Watson really do? *Teaching of Psychology*, 1977, 4, 44-46.
- Richelle, M. Formal analysis and functional analysis of verbal behavior: Notes on the debate between Chomsky and Skinner. *Behaviorism*, 1975, 4, 209-221.
- Ryckman, R. M. *Theories of personality*. New York: D. Van Nostrand, 1978.
- Schwartz, B. On going back to nature: A review of Seligman and Hager's *Biological boundaries of learning*. *Journal of the Experimental Analysis of Behavior*, 1974, 21, 183-198.
- Segal, E. F. Psycholinguistics discovers the operant: A review of Roger Brown's *A first language: The early stages*. *Journal of the Experimental Analysis of Behavior*, 1975, 23, 149-158.
- Segal, E. Toward a coherent psychology of language. In W. K. Honig & J. E. R. Staddon (Eds.), *Handbook of operant behavior*. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
- Sidman, M., & Tailby, W. Conditional discrimination vs matching to sample: An expansion of the testing paradigm. *Journal of the Experimental Analysis of Behavior*, 1982, 37, 5-22.
- Skinner, B. F. *The behavior of organisms: An experimental analysis*. Englewood Cliffs, N.J.: Prentice-Hall, 1938.
- Skinner, B. F. The operational analysis of psychological terms. *Psychological Review*, 1945, 52, 270-277.
- Skinner, B. F. "Superstition" in the pigeon. *Journal of Experimental Psychology*, 1948, 38, 168-172.
- Skinner, B. F. Are theories of learning necessary? *Psychological Review*, 1950, 57, 193-216.
- Skinner, B. F. *Science and human behavior*. New York: MacMillan, 1953.
- Skinner, B. F. A case history in scientific method. *American Psychologist*, 1956, 11, 221-223.
- Skinner, B. F. *Verbal behavior*. New York: Appleton-Century-Crofts, 1957.
- Skinner, B. F. The phylogeny and ontogeny of behavior. *Science*, 1966, 153, 1205-1213.
- Skinner, B. F. *Contingencies of reinforcement: A theoretical analysis*. New York: Appleton-Century-Crofts, 1969.
- Skinner, B. F. *Beyond freedom and dignity*. New York: Alfred A. Knopf, 1971.
- Skinner, B. F. Answers for my critics. In H. Wheeler (Ed.), *Beyond the punitive society*. San Francisco: Freeman, 1973.
- Skinner, B. F. *About behaviorism*. New York: Alfred A. Knopf, 1974.
- Skinner, B. F. Why I am not a cognitive psychologist. *Behaviorism*, 1977, 5, 1-10.
- Skinner, B. F. Selection by consequences. *Science*, 1981, 213, 501-504.
- Wasserman, E. A. Comparative psychology returns: A review of Hulse, Fowler, and Honig's *Cognitive processes in animal behavior*. *Journal of the Experimental Analysis of Behavior*, 1981, 35, 243-257.
- Watson, J. B. *Behaviorism*. New York: Norton, 1930.
- Watson, J. B., & Rayner, R. Conditioned emotional reactions. *Journal of Experimental Child Psychology*, 1920, 3, 1-14.
- Wolf, M. M. Social validity: The case for subjective measurement. *Journal of Applied Behavior Analysis*, 1978, 11, 203-214.
- Zimbardo, P. G. *Psychology and life* (10th ed.). Glenview, Ill.: Scott, Foresman and Company, 1979.