On Books

A Conversation with B. F. Skinner: Lapan and Houghton's *Learning and Intelligence*

Edward K. Morris
University of Kansas

The corpus of B. F. Skinner's work is largely published and still in print (see Epstein, 1995), and many unpublished materials are generally accessible in archival collections (see, e.g., Elliott, 1996). His published work will remain a critical resource for the future of a naturalized philosophy of psychology (Michael, 1985), but Skinner himself can no longer contribute to it. As a consequence, the archival collections are today the primary source for any "new" Skinner material (see, e.g., Coleman, 1987). Of course, some further material remains to be collected, organized, and published (e.g., letters to the editor, correspondence, notes), for which the B. F. Skinner Foundation is a repository, but these are not now available. Occasionally, though, some little-known material still appears—little-known for reasons of its nature, publisher, or national origin (see, e.g., Wiklander, 1989). One such case is Maureen T. Lapan and Raymond W. Houghton's (1995) text, *Learning and Intelligence: Conversations with B. F. Skinner and R. H. Wheeler*.¹

Lapan, M. T., & Houghton, R. W. (1995). *Learning and intelligence: Conversations with B. F. Skinner and R. H. Wheeler*. Dublin: Irish Academic Press. North American address: Irish Academic Press, %ISBS, 5804 NE Hassalo Street, Portland, Oregon 97213.

Correspondence may be sent to the author at the Department of Human Development, Dole Human Development Center, University of Kansas, Lawrence, Kansas 66045 (E-mail: ekm@ukans.edu).

¹ I discovered this book at Oxford University's Bodleian Library Bookstore while attending the 1996 meeting of the Experimental Analysis of Behaviour Group in London. I have not seen it

This review of their text serves mainly to relate something of its content regarding Skinner. As for the work overall, I do not wholly recommend it. It adds little to the literature on psychological theory or pedagogy, and it fails to engage any deep conceptual analyses relating radical behaviorism to Wheeler's holistic, organismic, and gestalt psychology (cf. Krechevsky, 1939, pp. 406–407; Verplanck, 1954, p. 307). The text is also at times misleading (e.g., Skinner is described as "atomistic") and factually inaccurate (e.g., negative reinforcement is presented as punishment), and it is replete with production errors (e.g., misspellings). These points notwithstanding, scholars of Skinner's work may still value Lapan and Houghton's "conversation" as a supplementary resource and as another measure of Skinner's influence on psychology and education.

The organization of this review follows that of the text: (a) its introduction and biographical sketches; (b) the Skinner interview, commentary, and references; (c) comparisons and relations between Skinner's and Wheeler's theories; and (d) implications for classroom teachers. Although the verbatim transcript of the tape-recorded interview (reproduced in the text in its entirety) contributes most of the new material, Skinner also spoke with the authors off-mike before and after the interview, providing additional observations.

elsewhere or seen it announced or advertised, although it was reviewed by Mills (1997) for *Contemporary Psychology*. This was a scathing review, with no sympathy for behavior analysis at all (see Mills, 1998).

Introduction and Biographical Sketch

Lapan and Houghton's introduction describes the natural history of their conversation with Skinner, but is unnotable except for a description of Skinner's view on how human history has been influenced by three "authority epochs." These epochs are the "epoch of antiquity," wherein authority resided in magical forces (prior to 4000 B.C.E.); the "epoch of the Middle Ages," wherein authority rested in God and the Church (4000 B.C.E. to 1600 C.E.); and the "epoch of Democracy," wherein "personkind looked to one another for authority" (1600 to the mid 1900s). According to Skinner, these sources of authority remain with us today, but none of them is now ascendant. Skinner's hope for future epochs lay in "the science of human behavior, whereby there might be choice through intelligent action" (p. 13; cf. Skinner, 1953, 1971), that is, through the experimental analysis of behavior, not through authority.

As for the Skinner biography, it contains nothing new for the informed reader but may mislead the uninformed. In particular, the authors' interpretations of Skinner's actions are sometimes underdetermined by the facts (e.g., "Skinner's later life grand plan was to explain everything," p. 21). In this sense, the sketch is closer in style to Weiner's (1996) often-speculative biography of Skinner than to Bjork's (1993) more scholarly account.

The Interview, Commentary, and References

The interview with Skinner was conducted in the spring of 1959 in his office at Harvard University, at which time Lapan and Houghton were graduate students at the University of Connecticut. Given their training in learning theory and educational psychology, their interview focused on topics of pedagogical interest: personhood, intelligence and individual differences, the learning process, memory and forgetting, and the evaluation of learning.

Among Skinner's observations were these:

1. On personhood: "Each of us is, I am sure, entirely unique [but] that does not mean that we have spontaneous capacities. . . . We *have* [italics added] to behave in a way that is determined by our genetic and personal history" (pp. 34–35).

2. On intelligence and individual differences: "I am sure that we are all born with very different endowments. Some are capable of very high development and some are probably not. The only difference that turns up in work and teaching seems to be a difference in the speed with which people can acquire new behavior and how well they hold it" (p. 42).

3. On the learning processes, (a) Skinner observed that his "notion of reflex reserve . . . fully justifies my opinion about theory" (p. 44; i.e., his poor opinion about some kinds of theories; see Skinner, 1950); (b) he spoke about how schedules of reinforcement generate "what you would call interest or zeal or enthusiasm" (p. 45); and (c) he dismissed the necessity of "extrinsic reward systems" except in the direst of circumstances, for "There isn't any normal child who isn't reinforced by success" (p. 54).

4. On memory and forgetting: (a) "I have no doubt that when I teach a child something today and discover that he knows it tomorrow, that something survived overnight inside the child. Now, I don't think for a moment that what survived was a mental memory. That I think is an outmoded concept we can do without, but what did survive is a changed child, a changed organism" (p. 38); (b) "As soon as the neurologist and the physiologist and the psychophysiological . . . give us some way of observing what is going on at the time, we will want to know about it. I will be very happy to have all of that information" (pp. 38–39); and (c) "What I have always objected to is what I call the conceptual nervous system" (p. 39).

5. On the evaluation of learning:

"Well, I think that if grades simply indicate what a student has accomplished, that they will be useful to educators in planning further work or employers, and so on, but if they are used simply to hold a sword of Damocles over the head of students, what they are used for then, I'm entirely against them" (p. 58).

On some additional topics, Skinner critiqued holistic theories of learning: "I don't see anything in field theory" (p. 62). As for control: "I am just as afraid of the science of behavior as I am about the science of atomic physics . . . because they might fall into the hands of the wrong people. . . . That's one of the reasons I go around shouting about the dangers of behavioral control" (p. 64). And, as for his strategy for applying his science of behavior to education: "The reason I am interested in applying it first to education is that people can't really complain very much about your being a despot or a tyrant" (p. 65), as they might if it were applied in industry and government.

Commentary and references. In the context of their interview, Lapan and Houghton insert numerous commentaries and useful citations, so many in fact that this material comprises three quarters of their 35-page interview. The citations direct the reader to more than a dozen of Skinner's books, most of them published after the interview, and provide specific chapters and page numbers to support or illustrate the points Skinner made (see also Appendix A for the authors' notes). This material is an excellent resource for first-time readers of Skinner and for those who wish to follow up on the text, for instance, on Skinner's objections to field theory (Lapan & Houghton, 1995, p. 61; see Skinner, 1938, pp. 435-436).

As mentioned above, Lapan and Houghton's commentary also includes Skinner's off-mike observations, both in quotation and summary, often in the context of their own views (often with additional citations; e.g., to Dewey, Mead, Jaynes). Among Skinner's quoted remarks was, "Anyone who denies

the possibilities of behavior control is a fool" (p. 64). And, as reported in the authors' own words,

Skinner warned the interviewers, who themselves had been deeply concerned with the educational problems of disaffected youth, not to get involved with complicated counseling and therapeutic approaches to dealing with them. Skinner urged the interviewers to ignore past histories and to get on with effecting specific behavioral change through the science of behavior. (p. 53)

As for the authors' views on Skinner, they stated, (a) "It seems that with his apparent denial of 'will,' Skinner's only explanation for capricious (idiosyncratic) behavior is that such behavior has been latent in the totality of the organism's contingency conditions" (p. 35); (b) "Skinner no doubt believed that schools were not places where students could be taught and learn, but, rather, ineffectual social inventions where what teachers knew best was *selection* in a process of educational Darwinism" (p. 43); and (c), in assessing Skinner's views on aversive control, "The interviewers agree. Skinner is *not* simply being a soft altruistic fop. He knows that threat and punishment are outmoded concepts if one is seeking positive behavior change" (p. 58).

Finally, an interweaving of Skinner's remarks and the authors' views yielded two interesting samples: (a) "An interviewer said to Skinner, 'I think I have a definition of mind that you could accept. Mind is the sum total of all the macro and micro stimulus-response phenomena in an organism's experience.' He said, 'Maybe'" (p. 40). (b) The authors commented on Skinner's remark that normal children are reinforced by success with the following: "Skinner here reiterated his faith in the powerful intrinsic reinforcement, 'getting it right'" (p. 55).

Comparison of Views, Relations of Theories

The chapters comparing and relating Skinner and Wheeler generally reiterate what was reported in the respective interviews. Actually, more compari-

sons were made in the authors' commentary on Wheeler's interview than on Skinner's; for instance, "Skinner and Wheeler . . . are committed to the nurture side of the nature-nurture question" (p. 103), even though this misrepresents Skinner's "middle ground" on this point (Skinner, 1977, p. 1007; see Midgley & Morris, 1998). The material relating the two theories is, at best, a beginning, not the end, of an analysis. It describes, for example, Skinner's antipathy for field theory as basically a distaste for vitalism. It contrasts Skinner's concern with "authority and control" with Wheeler's concern with "understanding" that lacks epistemological depth. And, it notes assumptions and attitudes that barely distinguish their work from that of other scholars (e.g., the evolutionary continuum, optimism about change and growth).

Implications for Classroom Teachers

Lapan and Houghton correctly identify some implications of Skinner's views and theories for classroom instruction. In particular, teachers should be knowledgeable about reinforcement; classrooms should employ teaching machines; "naturally reinforced options" should be emphasized over aversive control; and educational decision making should be data based. As for Skinner's take on Wheeler's theory that "learning is . . . the unfolding of inevitable growth," Lapan and Houghton opine that "Skinner would probably say, as they all used to say in Susquehanna, Pennsylvania, 'Hogwash!'"²

Conclusion

As valuable as any addition to the corpus of Skinner's work might be, *Learning and Intelligence* is clearly more supplemental than canonical.

Skinner said nothing about learning or intelligence in his interview that is not otherwise found among his extant publications (Morris, in press). Moreover, Lapan and Houghton's questions concerning the topics of pedagogical interest (e.g., about personhood, the learning processes) did not yield much by way of focused conversation. Still, some of Skinner's views come into sharper relief here than they sometimes do in the deep prose of his texts (e.g., Skinner, 1953, 1968, 1974). For instance, in response to the authors' query about the implications of E. R. Guthrie's work for field theorists, one would be hard-pressed to find so blunt, albeit uncharacteristic, an answer from Skinner as, "Well, I don't know and I wouldn't care" (p. 62).

As a contribution to the historical record, *Learning and Intelligence* may be of more value. The interview was conducted in 1959, when Skinner was "famous already but not as famous as he was to become" (p. 11). At the time, he was deeply immersed in teaching machines (Skinner, 1958; see Benjamin, 1988) and programmed instruction (e.g., Holland & Skinner, 1961; see Vargas & Vargas, 1992), which were largely inimical to the kind of progressive education to which Wheeler (1940) had an affinity. These conceptual contrasts might be worth pursuing to understand better the effects of behavior analysis on mainstream education and pedagogy. Also, the 1959 interview was conducted almost a decade before Skinner published *The Technology of Teaching* (Skinner, 1968), wherein he summarized and extended his views. Differences between what Skinner said in 1959 and what he wrote in 1968 might reveal the course through which his views emerged or evolved (e.g., on intrinsic reinforcement).

For several reasons, then, today's scholars of Skinner might want to peruse *Learning and Intelligence* with some care. Afterwards, this text deserves a space on their bookshelves.

² J. R. Kantor (1922) initially called his inter-behavioral psychology "organismic," but dropped the term later when it became associated with Wheeler's (1940) psychology.

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