Current Status and Future Directions of Operant Research on Verbal Behavior: Baselines

Terry J. Knapp
University of Nevada, Las Vegas

Seeing the future requires establishing the current baseline – a stable pattern against which to assess change. There was once a sense in which knowing about verbal behavior was knowing about *Verbal Behavior* (Skinner, 1957). The learning objective was to acquire the distinctions that Skinner had introduced in extending his operant analysis from behavior not necessarily mediated by other organisms to behavior that required such mediation; that is, behavior that required a verbal community for its maintenance. Early courses on verbal behavior emphasized Skinner's text and the student's goal of coming to speak and behave in a fashion similar to its author. This was not easy. The functional analysis that Skinner presented was remarkable in its unique challenge to long-held views in western epistemology and to the then (and still) prevailing accounts of language acquisition and use. Even within the operant community, *Verbal Behavior* produced mixed opinions as to its value; it took some time for an *interpretation* to be valued as much as an experimental analysis. When one acquired the vocabulary of *Verbal Behavior*, it resulted in a kind of isolation from the several other traditional analyses, and was not necessarily regarded as a valued activity from such perspectives. Developments have occurred in the last 40 years (including secondary textbooks), but it is Skinner's book that remains the critical entry point for an understanding of an operant analysis of verbal behavior.

It remains a fundamental baseline against which change can be discriminated.

By the late 1970s, "the task [was] to move beyond the study of *Verbal Behavior*, to the study of verbal behavior" (Knapp, 1980, p. 188). In certain respects, this is precisely what happened. Operant psychologists (behavior analysts) began in a number of different ways to study verbal behavior as they had studied nonverbal behavior (there had always been a scattered research program; e.g., see Holtz & Azrin, 1966; Krasner, 1958; McLeish & Martin, 1975), although the efforts lacked the systematic development that characterized the rise of the experimental analysis of nonverbal behavior. The usual measures, rate of response or distribution of responses, did not seem to be especially relevant. Other means were found (often involving trials rather than free responding). By the mid-1980s, Michael could summarize the then recent history and current status of the field of verbal behavior research by concluding, "The area of verbal behavior is the link between principles of nonverbal behavior that we share with other species and our uniquely human social and intellectual accomplishments. Our efforts to understand this area from a behavioral perspective are just beginning, but it seems to me that we have an excellent start and our progress is accelerating" (1984, p. 374). A few years later, Oah and Dickinson (1989) provided the relevant review, and Eshleman (1991) produced the specific quantitative data to support Michael's claim. A cluster of problems emerged, most notably instructional versus contingency control, and later stimulus equivalence.

Address correspondence to Terry Knapp, Department of Psychology, University of Nevada, Las Vegas, Las Vegas, Nevada 89154 (E-mail: Terryk@nevada.edu).

Thus, the current student wanting to review the available research on verbal behavior faces no simple task. There are the 14 volumes of *The Analysis of Verbal Behavior*; there is an exploding literature on stimulus equivalence (Sidman, 1990), related books, and a new handbook of research methods in human operant behavior. No longer is reading a few review papers and *Verbal Behavior* (1957) an adequate introduction to the range of material and methods driven by an operant analysis. Finding a niche in the use of the analysis in *Verbal Behavior* is the central task before us; acquiring its distinctions is now presumptive.

Despite the progress of the last two decades, many problems remain. There is still basic disagreement over the adequacy of the analysis contained in *Verbal Behavior* (1957). This is evident in reading Horne and Lowe (1996) and its related continuing commentary. The papers serve as a remarkable contemporary baseline on the current status of an operant analysis of verbal behavior, and illustrate a form of invented discourse (target article and commentary) that, although it can be found before the establishment of *Behavioral and Brain Sciences*, seems largely stimulated by the success of that journal. How much less useful Horne and Lowe's paper would be as merely an article (or small book, which it surely could have been). Should comprehensive review and theoretical papers ever appear in any form other than one in which comment and reply are invited prior to publication?

More to the point, the commentaries provide evidence that many issues are unresolved; some are deep and fundamental, others much less so. For example, Whitehurst (1996) worries about the behavior-analytic tradition becoming marginalized by its lack of contact with the research data and findings in other fields such as developmental psychology and the study of speech and language disorders. De Rose (1996) is wary of a contrary extension of *Verbal Behavior* (1957). S. Hayes (1996) is concerned about verbal operant behavior degenerating into hypothesis testing. Place (1996) still bemoans the failure of Skinnerians to see the central nature of the sentence in any analysis of verbal behavior and the failure to rec-

ognize the range of distinctions embedded in the few that Skinner sketches in *Verbal Behavior*. L. Hayes (1996) says it is not the sentence as a unit that the analysis lacks but a concept of meaning and reference. Harnad's (1996) concern is deep, because it applies not only to problems he perceives in an operant analysis but to problems in any symbol manipulation analysis, which includes the computational theory of mind recently declared to be the answer (along with evolutionary psychology) to *How the Mind Works* (Pinker, 1997). These are fundamental issues, and they are still with us.

Another baseline is formed by the past issues of *The Analysis of Verbal Behavior*. This journal has proved a much-needed outlet for a broader range of methodologies and issues than could be explored in the more constrained pages of the *Journal of the Experimental Analysis of Behavior* and the *Journal of Applied Behavior Analysis*. *Verbal Behavior* (1957) entered American psychological and philosophical discourse as an alien and rebel. *The Analysis of Verbal Behavior* needs to preserve a place where extensions of *Verbal Behavior* can appear; there is value in a platform for speakers where the audience is less inclined to methodological conformity. Many topics remain for exploration, as Sundberg (1991) has illustrated. For example, the ease with which large texts can now be manipulated by the computer has yet to be integrated with an operant analysis.

A final baseline is *Verbal Behavior* (1957) itself, not in the earlier sense of acquiring its distinctions and vocabulary, but in the range of material it treats. There are still many fields in which an operant analysis has yet to make contact, even though the content of *Verbal Behavior* is suggestive, or demonstrative, of its applicability. Literary analysis is one area where the interpretative mode of *Verbal Behavior* may have a future. Recent work by some literary analysts (Vendler, 1997) has returned to an interest in the use of words and their sounds, as opposed to deconstructing the meaning of the text. Verbal communities are another largely unexplored controlling variable of verbal behavior; that is, descriptions of prevailing contingencies for acceptable talk. What verbal community has established the

contingencies that maintain politically correct speech, and by what means? With what success? Have countercontrols emerged? Is humor one of them? Why? Persons interested in these answers may be the future audiences for an operant analysis of verbal behavior. We tend to think so easily and narrowly of students and professionals in psychology, education, and related fields as the most likely source of audiences. Linguistics, language, and literary criticism come with more difficulty, although they do not in the references within *Verbal Behavior*.

Near the top of the syllabus to my History of Psychology course is a quotation from Jean Gebser: "Etwas neues kann Man nur finden, wenn Man das Alte kennt." It is an admonishment that is well supported by behavior-analytic principles. To find the new, one must know the old. Changes can be discriminated only in relation to a stable baseline. The movement beyond *Verbal Behavior* is the future of an operant approach to verbal behavior, but it can only be recognized against the baseline that Skinner so eloquently and lastingly provided.

REFERENCES

- De Rose, J. C. (1996). Naming, meaning, and verbal operants. *Journal of the Experimental Analysis of Behavior*, 65, 274-276.
- Eshleman, J. W. (1991). Quantified trends in the history of verbal behavior research. *The Analysis of Verbal Behavior*, 9, 61-80.
- Harnad, S. (1996). Experimental analysis of naming behavior cannot explain naming capacity. *Journal of the Experimental Analysis of Behavior*, 65, 262-264.
- Hayes, L. (1996). Listening with understanding and speaking with meaning. *Journal of the Experimental Analysis of Behavior*, 65, 282-283.
- Hayes, S. (1996). Developing a theory of derived stimulus relations. *Journal of the Experimental Analysis of Behavior*, 65, 309-311.
- Holtz, W. C., & Azrin, N. H. (1966). Conditioning human verbal behavior. In W. K. Honig (Ed.), *Operant behavior* (pp. 790-826). New York: Appleton-Century-Crofts.
- Horne, P. J., & Lowe, C. F. (1996). On the origins of naming and other symbolic behavior. *Journal of the Experimental Analysis of Behavior*, 65, 185-241.
- Knapp, T. J. (1980). Beyond *Verbal Behavior*. *Behaviorism*, 8, 187-194.
- Krasner, L. (1958). Studies of the conditioning of verbal behavior. *Psychological Bulletin*, 55, 148-170.
- McLeish, J., & Martin, J. (1975). Verbal behavior: Review and experimental analysis. *Journal of General Psychology*, 93, 3-66.
- Michael, J. (1984). Verbal behavior. *Journal of the Experimental Analysis of Behavior*, 42, 363-376.
- Oah, S., & Dickinson, A. M. (1989). A review of empirical studies of verbal behavior. *The Analysis of Verbal Behavior*, 7, 53-68.
- Pinker, S. (1997). *How the mind works*. New York: Norton.
- Place, U. T. (1996). Names as constituents of sentences: An omission. *Journal of the Experimental Analysis of Behavior*, 65, 302-304.
- Sidman, M. (1990). *Equivalence relations and behavior: A research story*. Boston: Authors Cooperative.
- Skinner, B. F. (1957). *Verbal behavior*. New York: Appleton-Century-Crofts.
- Sundberg, M. L. (1991). 301 research topics from Skinner's book *Verbal Behavior*. *The Analysis of Verbal Behavior*, 9, 81-96.
- Vendler, H. (1997). *The art of Shakespeare's sonnets*. Cambridge, MA: Harvard University Press.
- Whitehurst, G. J. (1996). On the origins of misguided theories of naming and other symbolic behavior. *Journal of the Experimental Analysis of Behavior*, 65, 255-259.