

Verbal Behavior: The Other Reviews

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The extensive attention devoted to Noam Chomsky's review of *Verbal Behavior* by B.F. Skinner has resulted in a neglect of more than a dozen other reviews of the work. These are surveyed and found to be positive and congenial in tone, with many of the reviewers advancing his/her own analysis of speech and language. The dominant criticism of the book was its disregard of central or implicit processes and its lack of experimental data. An examination of the receptive history of *Verbal Behavior* offers a more balanced historical account than those which rely excessively on Chomsky's commentary

Verbal Behavior (1957) is B.F. Skinner's most distinctive work. There is reason to believe it is the book that he most valued, and many people regard it as the most original of his contributions. Open to various readings, and carrying with it a history of criticism, it continues to attract new readers. Its composition history is complex. The outline and early notes for *Verbal Behavior* originated in the mid-1930's, though the book itself did not appear for another 23 years, in 1957. Between these years, aspects of the functional analysis contained in the book were presented in public lectures by Skinner, and in secondary accounts based upon his talks.

When reactions to *Verbal Behavior* are discussed, disproportionate attention is given to the critical review by Noam Chomsky (1959). For example, one commentator suggested that only a few reviews of the work appeared, and that none of these were in psychology journals (Anderson, 1990). There were, however, more than a dozen reviews of *Verbal Behavior* in journals ranging in content from speech pathology to psychoanalysis, as well as reviews in the mainstream journals of American and British psychology. The lack of attention to the other reviews of *Verbal Behavior* is

also evident in Skinner's own work. In *A Matter of Consequences* (1983), he mentioned only one review, other than that by Chomsky.

The continuing impact of Chomsky's review is apparent in data gathered from the *Science, Social Science, and Arts and Humanities Citation Indexes* for the period 1972 through 1990 (see Figure 1). During this nearly two decade period the review of *Verbal Behavior* by Chomsky was cited once for each two citations of *Verbal Behavior* itself. A very unusual relationship between a book and a review, perhaps a unique one in the history of the social sciences. Thomas Leahey, a historian of psychology, believes that "Chomsky's review is perhaps the single most influential psychological paper published since Watson's Behaviorist manifesto of 1913" (1987, p. 347). The various attempts to lessen the impact of the Chomsky review (e.g., MacCorquodale, 1970) have, for the most part, not succeeded in displacing the timeliness or relevance of Chomsky's comments.

The other reviews of *Verbal Behavior* died the quiet death associated with many academic works. An attempt at resuscitation is motivated by two considerations; first, to describe the contemporary reception of *Verbal Behavior* by the established psychology community and other disci-

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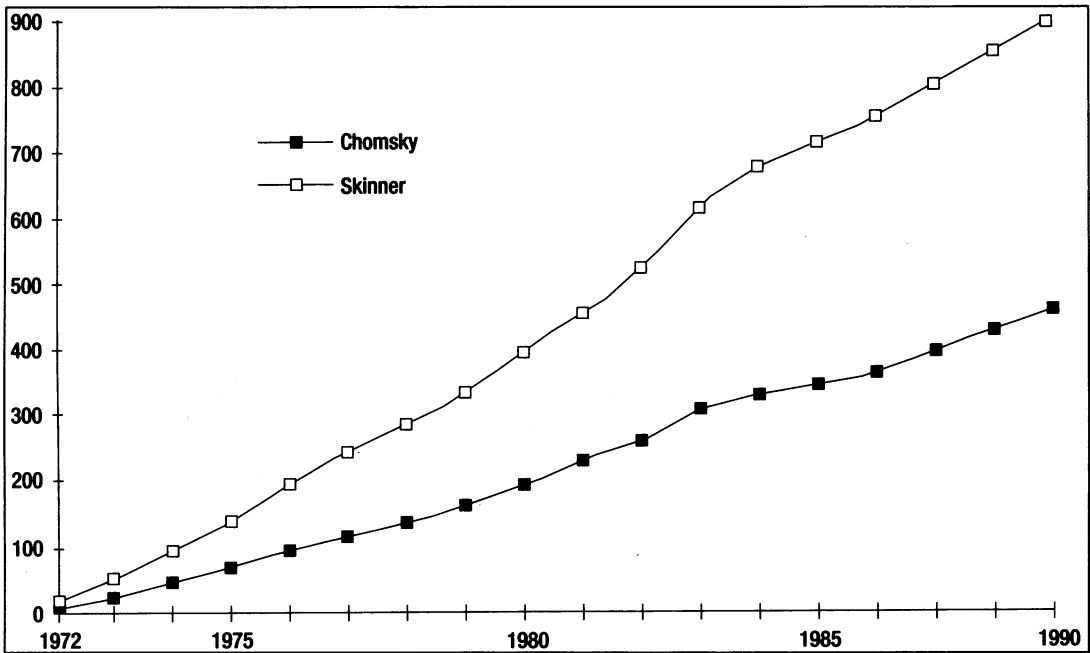


Fig. 1. Cumulative number of citations of B. F. Skinner's book *Verbal Behavior* and Noam Chomsky's review of the book based on the *Science Citation Index*, *Social Science Citation Index*, *Arts and Humanities Citation Index*, 1972 to 1990.

plines, and secondly, to understand something of the general stance that is taken by critics in regards to a book of novel content. Are the criticisms developed internal to the text itself, or are they rather constructed from the critics own theoretical formulation? An examination of the receptive history of *Verbal Behavior* will provide a context for clarifying how the book was, and is, understood, as well as offering a more balanced historical account than those which rely excessively on Chomsky's commentary.

Before examining the reviews themselves two brief reminders are in order. As noted, the ideas contained in *Verbal Behavior* did not come fresh to the reviewers. The functional analysis of verbal behavior it presented had been previewed on a number of occasions. The William James Lectures of 1947 at Harvard University (Skinner, 1947b), the summer course in the same year at Columbia University (Skinner, 1947a) and the chapter on "Social Behavior" in Keller and Schoenfeld's *Principles of Psychology* (1950) all provided a general sketch of the later book. The papers on verbal behavior Skinner had published, beginning with

the verbal summator study of 1936, also suggested the outlines of a functional analysis. Secondly, something must be said about the state of mainstream psychology in the late 1950's. The so called 'cognitive revolution' was still almost a decade away; the humanistic psychologists had yet to organize. Academic psychology was largely comprised of various forms of behaviorism. Spence and Tolman were still living. The newest perspective in the academic psychology of mid-1950's was that of Broadbent, whose *Perception and Communication* had appeared in 1953. In that same year Osgood's (1953) mediational behaviorism had received extended treatment in his massive *Method and Theory in Experimental Psychology*. The invention of psycholinguistics was underway at Harvard (see the preface to Brown, 1958).

The Reviews in Mainstream Psychology journals

In 1957 *Contemporary Psychology*, the major journal for book reviews in psychology, was only one year old—having been established under the impetus of E. G. Boring the previous year. Boring assigned two reviewers to *Verbal Behavior*.

Both of them were widely known for their contributions to the emerging field of psychology of language. Their reviews appeared sequentially in the August issue of 1958.

The first reviewer was Charles E. Osgood, then Professor of Psychology at the University of Illinois.¹ Osgood is not short on praise for *Verbal Behavior*. It is described as "remarkably wise and insightful" (p. 209), a "must" read for those in the psychology of language (p. 212), and "certainly one of the two or three most significant contributions to this field in our time..." (p. 212). *Verbal Behavior* is admittedly a difficult book, one "to be studied rather than scanned" (p. 209), and one for which the reviewer admits that Part IV, The Manipulation of Verbal Behavior, especially the autoclitic, "remained obscure...even after careful study" (p. 211).

Osgood's praise is a prelude to a major criticism: the inability of a single stage account to handle known phenomena. "...the overt R required for an objective, single-stage account just simply may not occur in situations where, on other grounds, we must assume the listener has 'understood' directions or the reader has silently 'comprehended' the text or the problem-solver has 'thought out' a solution" (p. 211). It will not do to speak of reinforcement of a covert response for "to say it [a response] occurs 'covertly' cancels the pristine objectivity of the system and eliminates any real distinction between single-stage and two-stage models" (p. 212).

The problem for Osgood is "the suffi-

ciency of Skinner's conception, not its correctness as far as it goes" (p. 210). Osgood is continually seeking examples from *Verbal Behavior* that cannot be "explained without a mediational account," and passages where Skinner is implicitly committing himself to such accounts.² There is nothing, according to Osgood, which would prevent a "merging" of Skinner's one-stage model with "representational (symbolic) mediation processes" (p. 212), while still maintaining a "rigorous and behavioristic" stance (p. 212).

Thus, Osgood finds Skinner's *Verbal Behavior* making many valuable contributions, and he regards it as a "must" read for anyone interested in "language behavior." However, it is not a "sufficient" account because, while seemingly acknowledging implicit or nonverbal processes, it does not explicate them, nor does it, being a single-stage theory, have the requisite concepts to do so. Osgood concludes, "Having agreed that there are implicit, nonverbal processes in behavior, Skinner does not go on to explicate their nature and function. This is the major insufficiency of *Verbal Behavior*, but it would require another book and probably one that Skinner himself would not write" (p. 212).

The second reviewer selected by Boring was a philosopher of reputation, Charles Morris, who "for a long time advocated a behavioral 'nonmechanistic' approach," which differed from that of Skinner by being cast in a "more general theory of signs" (p. 213). The theory of signs originated in the 19th century with the pragmatist Charles Peirce, and was continued by Morris, among others, with his *Signs*,

¹Osgood's works are worth inspecting for their citation of Skinner's views, and for an examination of the range of verbal behavior then being examined by mainstream academic psychology. *Method and Theory in Experimental Psychology* contains a chapter titled Language Behavior (Chapter 16, pp. 680 - 727). Skinner's general formulation as available in the William James Lectures or the Hefferline Notes is not discussed. Skinner's *verbal summator* paper (Skinner, 1936) is described as an "ingenious method" for examining the "hierarchical structure of associations" (Osgood, p. 722). Skinner's study of associations is also cited (Skinner, 1937). Imitation and labeling are discussed, the latter as a "straightforward learning phenomenon" (Osgood, p. 688).

²The arguments which Osgood advances for the necessity of mediational variables may be found in Osgood, 1953, pp. 392-412, especially p. 410 where he concludes "We have shown that representational mediation processes of some kind must be postulated to account for the experimental and observational data available—there are many learning phenomena that cannot be incorporated on a single-stage S-R basis. For the historical context of mediational theory see the second or earlier editions of Leahey, (1987), pp. 389-393. A direct comparison between Skinner's functional analysis and Osgood's mediational theory can be found in Terwilliger (1968).

Language, and Behavior, a 1946 work with a "behavioral" orientation.³

Morris' review is distinguished by the clarity and conciseness of its summary of *Verbal Behavior*. Morris focused on the broad effort of Skinner, to eschew mentalistic concepts, rather than on any technical aspects of the functional analysis. He found nothing "methodological objectionable" (p. 213) about treating verbal behavior as a dependent variable and classify classes of verbal responses based upon their relationship to an independent variable. The main problem Morris had with Skinner's analysis of verbal behavior was the "informal use" of "sign terminology" (e.g., specifies, identifies, describes) without formal explication. It is as though "Skinner still eats surreptitiously of the cake he has professedly thrown away" (p. 214).

Morris wondered if Skinner's analysis was adequate (in Skinner's own terms of "appropriate" to all special fields), or whether "it needs to be supplemented by (or incorporated within) a more general framework . . . such as the theory of signs" (p. 213). Obviously for Morris the answer was yes. Skinner's account suited his purpose of analyzing the variables controlling the verbal behavior of the individual speaker, but "there are other legitimate interests in verbal behavior" e.g., linguistic, esthetic, logical, social (p. 214). As does a

³Charles Morris had been a student of George H. Mead, and was one of three former students who edited the notes of Mead into *Mind, Self, and Society* (1934). A curious mixing of association theory, Morris's formulation, and Skinner's functional analysis may be found in Miller (1951). See the chapter on "The Role of Learning" wherein the William James Lectures are used to answer the question "How can we specify all the conditions leading to the commission of a verbal act?" (p. 160). Elsewhere in the book use is made of each of Skinner's other writings (through 1941) on verbal behavior. In contrast, Roger Brown's *Words and Things*, which appeared in 1958, cited none of Skinner's verbal behavior papers, only *The Behavior of Organisms* (Skinner, 1938). Brown likens his view on meaning as behavior disposition to those of Charles Stevenson, the philosopher and Charles Morris (incorrectly listed in the references as Noriss), see p. 102. These theories are contrasted with "reaction" or "conditioning theories," of which Skinner would undoubtedly be regarded as another variety. For the relation between Osgood's mediational view and Morris' theory of signs see Alston (1967).

later reviewer (see Gray), Morris concluded that psychology "has no privileged place" in the understanding of verbal behavior. He found sympathy with Roger Brown and Don Dulaney (see the latter's review below) who have, he said, a formulation similar to Skinner's, but which met the criterion of verbal behavior functioning as a sign for something else.

Although Morris found Skinner's emphasis on the speaker the "distinctive feature" of the analysis, the processes described under reacting to one's own verbal behavior "tended to break down" the "sharp distinction between Skinner's approach and those who stress the role of intra-organismic processes" (p. 214).

Morris concluded the reader of *Verbal Behavior* faced a dilemma: "Skinner has 'spoken,' and [the reaction] as a 'listener' is to be either a conditioned response or a reaction 'appropriate' to the 'given state of affairs.'" It is difficult to 'disagree' with Skinner on these terms, since we are told that to 'understand' a speaker is to talk as he does" (p. 213).

Edith D. Neimark (1960) of New York University reviewed *Verbal Behavior* for the *Psychological Record*. She had received her Ph.D. at Indiana University in 1953, and was perhaps a student of J. R. Kantor, at the least she was familiar with Kantor's *An Objective Psychology of Grammar* (1936), a book she described as the only prior "large-scale attempt by a psychologist" to explain language.

She found *Verbal Behavior* "presented in a form which smacks of intellectual snobbery" (p. 63). The problem was with the examples and illustrations. They were derived from literature, great works that we all should know, but as she said, rarely do. Her criticism was "not merely a personal expression of the annoyance at being made to feel stupid," (p. 63), but the fact that psychologists can do better than rely upon "literature and everyday life as a source of evidence..." Such a practice is a "disservice to the ideal of objective analysis" (p. 63).

The major thrust of Neimark's criticism is whether Skinner gives his audience anything new, or whether *Verbal Behavior* is in

fact no more than "old demons in a new disguise of impeccable language" (p. 65). Could any stronger barb be hurled by an academic psychologist of the 1950's than that "on some points Skinner's analysis is indistinguishable from Freud's..." (p. 65)? *Verbal Behavior* does not meet the methodological cannons of the day. "Experimental evidence," wrote Neimark, "or even the development of testable implications, is in short supply" (p. 66). What we are left with, she said was, "post-hoc analysis of passages from *Finnegan's Wake*" (p. 66).

The review is not, however, without some praise for *Verbal Behavior*. She acknowledged that the book was an "enormous...undertaking" with "stimulating insights" (p. 65). Among these "insights" was a better understanding of our own verbal behavior, and such phenomenon as unintended plagiarism. Yet, in the final analysis, the book is deemed a disappointment, but for reasons that are "difficult to verbalize" (p. 65).

Neimark did make one observation derived from the account offered in the book. Perhaps, she said, *Verbal Behavior* suffered from "a twenty year gestation period during which audience control changed from a small homogeneous group, psychologists, to both a heterogeneous audience containing logicians, linguists, and literary critics and an audience of one: the self-editing of Skinner's functional analysis" (p. 65).

One of the few reviews by a member of the behavioral community appeared in *Human Biology*, and was authored by Leonard Krasner (1958a), then at the Palo Alto V.A. Hospital. Krasner offered a brief set of comments in which little was said about the book itself. Instead, he articulated the general Skinnerian thesis that "the lawful relationships embodied in speech are the same as those governing all other human behavior" (p. 351). Ever the proselytizer, Krasner recommended that *Verbal Behavior* be read with *Walden Two* and *Science and Human Behavior*. A high standard was proposed for evaluating the book: "If one can judge the importance of a book in a scientific field by the amount of

research it generated, then it is highly probable that this book will be a scientific landmark." (p. 351). Clearly, Krasner already believed this to be the case for he had published his own studies based upon a functional analysis of *Verbal Behavior*. His lengthy review of "Studies of the conditioning of verbal behavior" (Krasner, 1958b) had also recently appeared.

Don Dulaney (1959) reviewed *Verbal Behavior for Science*. He had received his Ph.D. at Michigan in 1954, and, while writing the review, was serving with the United States Army subsequent to a lengthy career at the University of Illinois. Although Skinner discussed the private control of responses, Dulaney noted that "there are repeated instances of hesitant, almost wistful, recognition of private control, but they are never given full status in the system" (p. 143). Moreover, Skinner seemed to ready to accept "emotional" private controls, but scorned "ideas," or cognitive private controls, though Dulaney could see no reason for this "peculiar ontological distinction" (p. 143).⁴ For Dulaney, Skinner's analysis of private control was "brilliant," but he could find no reason to limit it to emotional stimuli.

The main difficulty for Dulaney with *Verbal Behavior*, however, was the critical problem of meaning. "As I read a page of Skinner's book" Dulaney wrote, "it arouses numerous ideas and images which I am accustomed to call 'meaning.' In a changing and complicated world, of what can I be more certain? Common sense alone is never a firm base for ultimate positions, but we should not, without very good reason begin by flaunting it" (p. 143). Dulaney could not discern whether Skinner's objection to the concept of meaning was methodological or metaphysical.

There is in other matters great praise from Dulaney. He wrote, "Skinner's approach to language is not one that gains a degree of success from excessively modest aims. He has accepted the challenge of ordinary conversation, composition, self-editing, and even scientific discourse. His discussions of

⁴Dulaney did much of the latter work criticizing operant conditioning without awareness.

metaphor, literary style, and verbal wit persuasively argue for the generality of the model. No psychologist has ventured an account of verbal behavior of this complexity, and with certain qualifications, it is a remarkably plausible account" (p. 153).

Dulaney's is the only other review of *Verbal Behavior* which Skinner (1983) had cited in *A Matter of Consequences*. Although he acknowledged that "*Verbal Behavior* received a few favorable reviews" (p. 153), he immediately took up that by Chomsky, which as he said "soon began to receive more attention than my book" (p. 153).

Charles M. Solley (1958), Ph.D. University of Illinois, 1954, was assistant professor at the Menninger Foundation when he wrote his review of *Verbal Behavior*. He expressed surprise that the source of supporting material was not laboratory data, but "instead, poetry, selections from novels, figures of speech, pieces of conversation heard daily, and ordinary grammatical structures" (p. 111).

Reviews in British Academic Journals

Two reviews by British psychologists may be found in the leading British experimental journals. Donald Broadbent (1959), who then had only recently introduced filter theory of attention, (see *Perception and Communication* in which he regarded himself as a behaviorist), and who would come to be called the "father of information processing psychology" (see Knapp, 1986) reviewed for the *British Journal of Psychology*. Broadbent admitted to "a distaste for works...not containing experiments," and said *Verbal Behavior* was not easily assessed. He came to believe that "the merits and vices of Skinner's approach appear[ed] to be very closely similar to those of Freud's *Psychopathology of Everyday Life*...that is, facts must be accepted on the basis of whether they seem reasonable or not" (p. 372).

Broadbent identified himself as a "cyberneticist"⁵ and stated that, from such a per-

spective, what Skinner's work lacked was an "emphasis on central processes in the nervous system" (p. 372). In particular, Skinner was opposed to the view that responses might be controlled by a "long-lasting state of the brain...[which] at present [is] undetectable except by its effects." (p. 372). Thus, "the main weakness of Skinner's attitude from the point of view of a cyberneticist is the lack of emphasis on central processes within the nervous system."

B. A. Farrell (1960) reviewed *Verbal Behavior* for the *Quarterly Journal of Experimental Psychology*. He presented one of the most precise and concise, as well as accurate summaries of *Verbal Behavior* — all in a page and a half of journal text, leaving only a half page for his reactions. These were comprised of four remarks: (1) There are no explicit research directions for experimental psychologists to follow. "If Skinner wanted the experimentalists to get something out of this book," Farrall writes, "he could have helped him by showing where the edifice can be brought down and tied to the earth of the laboratory" (p. 125).⁶ (2) It would not have been necessary to "spin this colossal story in order to answer Whitehead's question." (Why have I just said, "No black scorpion is falling upon this table"?) (3) Skinner's answer to Whitehead's question is an answer that an American psychologist of his period would give, hence, *Verbal Behavior* is a "period piece," a unique and historical "product of American culture." (4) The value of *Verbal Behavior* lies in its contribution to "theoretical psychology" and in its effort to bring together the field of psychology and logic, thereby slaying "the bogey of psychologism."

The reviewer for the *British Journal of Educational Psychology* was E. A. Peel (1960). His reading of *Verbal Behavior* had an original suggestion to add to the classification of verbal operants. He wondered "why should we not complete the scheme of control by defining verbal responses controlled by the audience as *auds*, those by the speaker's previous history as *extends*

⁵Cybernetics originated with the work of Norbert Wiener, a mathematician, who coined the term (from the Greek for Steersman) to describe the "art and science of control," especially through feedback, see Wiener, (1956), pp. 321-332.

⁶But see Sundberg, (1991).

and those by other verbal materials as *reverbs?*" (p. 90). He clearly understood the book, which he said was "as complete a behaviorist account of the individual's verbal life as one could image" (p. 89). The one danger he noted was the freshness of the approach. "At first the book may strike the reader as being so fresh in its approach as to be difficult" (p. 91).

Reviews in Other Disciplines

Verbal Behavior was reviewed in the journals of disciplines other than psychology. Speech was one of them. Both the *Quarterly Journal of Speech*, published by the Speech Association of America, and the *Journal of Speech and Hearing Disorders*, the primary source journal of speech pathologists offered reviews of *Verbal Behavior*.

Giles Wilkeson Gray, a professor of speech at Louisiana State University, described Skinner as "an eminently qualified psychologist" (p. 196) who writes from the perspective of "neobehavioristic determinism" (p. 196). Gray provided a brief description of Skinner's "functional analysis" and welcomed Skinner's "brief, but apropos, excursions into such areas as reading, drama, rhetoric, even speech pathology..." (p. 197). However, he cautioned that classical rhetoric had made more contributions to our understanding than the simple classical schemes Skinner discussed. Gray suggested that Skinner might also have considered "different media as controlling variables" (p. 197).

Gray found potential usefulness in *Verbal Behavior*, but clearly was suspicious of psychologists intruding into the field of communications. "Although psychology is unquestionably involved in verbal behavior, it is not the whole story. Granted that it is indispensable in any complete study of communication, it must also be insisted that other areas of thought make significant contributions as well" (p. 197). Possibly Gray had in mind philosophy, classical rhetoric, hermeneutics, and the then emerging field of behavioral studies of communication.

James J. Jenkins (1959), who was to have a distinguished career in the psychology of

language was at the time of writing his review a Fellow at the Center for the Advanced Study in the Behavioral Sciences (later he joined the University of Minnesota faculty from where he had received his Ph.D. in 1950). His review is a concise summary of the book, for in less than two pages he described the classification of verbal operants, the nature of autocalitics, and much more. Skinner's account of verbal behavior is "ingenious" though its explanations are "after the fact" (p. 114). It rests upon "a metaphorical extension of the language of the psychological laboratory." The use of illustrations rather than experiments leads to the fundamental terms (e.g., stimuli, responses, and reinforcement) being "further and further away from defined concepts with clear referents" (p. 74).

According to Jenkins the limitations of *Verbal Behavior* are in the nature of what is promised. He believed Skinner had given "a program suggesting how we ought to proceed and where we ought to look," in short he had given a "series of promissory notes..." (p. 74). Jenkins singled out two "especially note worthy" contributions which Skinner's book made. The first was the shift to emphasizing the speaker rather than the listener. The second was "his attention to the intraverbal determinants of language. Here Skinner seems to be on firmest ground, yet it is ground that has not been adequately treated in earlier literature in spite of the fact that most of the bulk of verbal behavior must have intraverbal determinants" (p. 74).

Other Foreign Reviews

We are fortunate in having a review from a "Soviet behaviorist" (see Andresen, 1990 for a more complete description). O. K. Tikhomirov, found that Skinner overlooked the social and transforming nature of speech (verbal behavior) which gives rise to the differences between people and animals. Speech adds a new dimension to what must be explained, a Skinnerian functional analysis is simply an extension of Skinner analysis of nonverbal responding. For Tikhomirov, "the acquisition of speech

does not simply create in man a new function, a new layer of behavior, but, what is especially important, it qualitatively transforms all the other forms of behavior. These theses, which were already advanced by L. S. Vygotskij in his doctrine of higher psychological functions, have in recent years been worked out in detail by A. R. Luria and his collaborators" (p. 366).

Reviews in Psychiatry and Psychoanalysis

An Army clinical psychologist, Colonel Frederick August Zehrer (1959), who had received his doctorate in Education at Harvard in 1948, (perhaps having heard the William James Lectures in the summer of 1947) commented on *Verbal Behavior* for the *Journal of Orthopsychiatry*. His comments were brief and descriptive, concluding with "It is a scholarly reference which does more than epitomize the literature on the subject: it should be considered as a basic reference text on verbal behavior in the behavioral sciences" (p. 430).

George Mahl (1958), who had earned his Ph.D. at Yale and was associated with the Institute for Human Relations reviewed *Verbal Behavior* for the *Psychoanalytic Quarterly*. He acknowledged Skinner's twenty-five years of contributions to psychology, and regarded the book as original, imaginative, and systematic" (p. 595). One which "can have different values for different readers" (p. 596). His most important comment, however, concerned the relationship between Skinner's functional analysis and psychoanalysis. Mahl said he "came away from the book believing there is a closer underlying kinship between Skinner and the psychoanalyst than either might realize or concede, and that each can gain something from the other" (p. 597).

CONCLUSION

Verbal Behavior was widely reviewed in respectable scientific and professional journals both in the United States and abroad. A large number of the reviews were positive and congenial in tone, offering only minor or qualifying criticisms. Many of the reviewers used the occasion to advance his/her own particular analysis of speech

or language, e.g., for Morris the theory of signs and signification, for Osgood mediational processes, for Tikhomirov the transformational and social nature of speaking, for Dulaney and for Broadbent mediational and central processes. The dominant criticisms were neglect of central or implicit processes and the lack of experimental data.

Ernest Hilgard and Gordon Bower, in the first edition in which they shared joint authorship of *Theories of Learning*, concluded a brief description of *Verbal Behavior* in this fashion: "The book on *Verbal Behavior*, while certainly a serious effort has not proved to be very influential. This may have come about because it was not well received by the professional linguists, whose rapidly developing linguistic science has made great strides by means of analyses different from Skinner's (e.g., Chomsky, 1959). Or it may be that the interest in programmed learning, coming to a head about the time when this book appeared (1957), siphoned off the interest and debate that the book might otherwise have provoked. If that should prove to be the case, we may some day see a revived interest in the book" (1966, p. 133). The appearance of this tenth volume of *The Analysis of Verbal Behavior* provides evidence of the prescient of Hilgard and Bower remarks, as does Eshleman's history of verbal behavior research in the immediately preceding volume (Eshleman, 1991) when compared to the baseline rate of research on verbal behavior through 1983 (McPherson, Bonem, Green, & Osborne, 1984).

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