Intraverbal Behavior: The Codic, Duplic, and Sequelic Subtypes

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In an advanced course in verbal behavior, Skinner's book, *Verbal Behavior* (1957), provides a foundation for discussions in epistemology and ethics. To elucidate the issues involved in those discussions, certain verbal relations differentiated in *Verbal Behavior* were reworked and relabeled. Since such a reworking appears to clarify for the graduate students the material in the book, it might also interest, and benefit, the readers of *The Analysis of Verbal Behavior*. The following sketches only in outline a larger work in progress, and thus describes only in part the reworking of the category Skinner calls, "verbal behavior under the control of verbal stimuli."

To understand well any portion of Skinner's book, the reader of the book must understand Skinner's overall analytic design. Skinner interprets a complex type of human behavior mediated by others, isolating it under the rubric "verbal behavior." He assumes, that always, an event or a set of events controls that verbal behavior. The book demonstrates that thesis by systematically describing those events, and their dynamic features, within a framework derived from the experimental analysis of behavior.

Three sets of events control verbal behavior: events that are themselves verbal behavior; events of the physical environment or due to conditions of deprivation or aversive stimulation; and events that are a unity of verbal and nonverbal stimuli. Control thus resides in verbal behavior, in occurrences independent of verbal behavior, and in a combined interaction of the two. We can label these sources of control *intraverbal*, *extraverbal*, and *autoverbal*. Each of these labels attempts to capture the salient feature of the control relationship with respect to its locality: "intra" for "within" i.e., verbal behavior controlled solely by other verbal behavior;

"extra" for "outside" i.e., verbal behavior controlled by bodily and environmental events; and "auto" for "one's own" i.e., verbal behavior controlled by nonverbal and verbal events concurrently operating in concert with prior verbal relations already in place with a given organism. Imagine a continuum of control from verbal events to nonverbal events, and now place intraverbal control at one end, extraverbal at the other, and autoverbal in the middle. Each type of control occupies a sector of the continuum. The autoverbal type begins where intraverbal and extraverbal controls begin to blend toward the middle. A figure that more or less portrays these relations follows:

INTRAVERBAL CONTROL

The term, "intraverbal," designates those verbal relations in which verbal stimuli control verbal behavior. (Skinner uses the label, "intraverbal," but only as one of the subcategory names, along with "echoic," "textual," and "transcriptive," in the assemblage of verbal relations he calls, "verbal behavior under the control of verbal stimuli." As the following discussion will show, the term, "intraverbal," best characterizes the entire category.) Skinner organizes by degree and type of correspondence the verbal relations he describes in this category. Thus, the underlying theme in this set of verbal relations is the correspondence of verbal responses (and their products) to verbal stimuli. This correspondence ranges from complete identity to complete nonidentity. Consequences are delivered by the verbal community based either on this correspondence or on other criteria pertinent to the pair-

ing of verbal stimuli and responses. Three major subcategories emerge: *duplic*, *codic*, and *sequelic*. (The terms "*duplic*," and "*codic*," are borrowed from Michael, 1982. I earlier used other names for these subcategories, but his seemed best. The reasons given by both of us for the subcategories are similar, and follow Skinner's analysis.)

In the subcategory, *duplic*, verbal stimuli, and verbal response products, correspond in form. The physical dimensions of the verbal response, most often its product, duplicate those of the verbal stimulus. Verbal behavior matches in critical physical dimensions, except possibly for scale, the verbal stimulus. Thus, as a matter of necessity, both stimulus objects and events and response products occur in the same physical medium and correspond point-to-point. An everyday type of behavior here is repeating something just spoken. Skinner names this verbal behavior, "*echoic*." Formal matches can also occur within other media. Someone may write something down and a second person may immediately copy it. A common example is that of penmanship exercises. Motions, as verbal stimuli, may also control other motions. In sign language an individual may gesture with his fingers and have those gestures immediately duplicated by the verbalizer. The name "*echoic*" will not do for the latter two types of formal matching. The names "*identigraphic*," and "*mimetic*" capture the essential characteristics of *duplic* relations in graphic and gestural media.

In the subcategory, *codic*, the correspondence is that of order. Verbal behavior and verbal stimuli correspond point-to-point in their correlated sequence. They occur, however, in different media and of necessity, they differ in form. In "*dictation*," someone speaks and a second party writes it down. (Skinner categorizes "*dictation*," a verbal relation of point-to-point correspondence, under "*transcription*." He also includes the copying of written matter, a verbal relation of formal correspondence, under "*transcription*." Thus the appellative, "*transcription*," covers two verbal relations for which criteria differ for reinforcement by the verbal community. It would be best to restrict the title "*transcription*" to only one subcategory relation or not to use it at all.) The action in this relation may be reversed. Someone may write something and a second party

responds vocally to the written stimulus. Someone who speaks or writes following the gestures of finger spelling, or conversely, also expresses ordered point-to-point correspondence. A familiar sight on television is a commentator orally presenting the news accompanied by a small window "*subscript*" in one corner of the screen where an individual correspondingly presents the news visually with movements of his hands and fingers. Names have not been suggested for these latter verbal relations.

In the last subcategory, *sequelic*, verbal stimuli and verbal responses do not correspond in any consistent manner. Verbal behavior and verbal stimuli neither match in form nor do they necessarily relate in point-to-point order. Both the verbal stimulus and the verbal response may or may not occur in the same medium. Speech may be followed by speech or by a gesture or by a handwritten note. In the continuum of correspondence between verbal behavior and verbal stimuli, the correspondence between verbal stimuli and verbal responses may vanish to zero since the stimulus and response features that correspond become irrelevant. The criteria for reinforcement are outside any formal or point-to-point correspondence of response features to the preceding verbal stimuli. The currently reinforced relation between verbal behavior and verbal stimuli is based upon pairing of terms—in Skinner's words, their "*contiguous usage*." But this pairing is based on criteria significant to the verbal community, though not necessarily important to the speaker or writer or gesturer at the time the pairing is initiated and consequted. The process is easy to observe in the pairing of dates to events, in the learning of the times tables, in the memorization of poetry.

They roused him with muffins—

They roused him with ice—

They roused him with mustard and cress—

They roused him with jam and
judicious advice—

They set him conundrums to guess.

(Carroll, 1976 [1876])

What does it mean? Someone says it or writes it if on a given occasion a verbal community demands it. One last point must be repeated for the *sequelic* subcategory: Skinner reserves the designation "*intraverbal*" for this subcategory, but **all** of the relations

described above are *intraverbal*, i.e., between *verbal* stimuli and verbal behavior, rather than between *nonverbal* stimuli and verbal behavior, i.e., *extraverbal*.

CONCLUSION

The reader will note that I have not redrawn, except in rather small scale, any of the verbal relations portrayed by Skinner. I merely adjusted their boundaries so what is there may perhaps be seen more clearly. The terms—duplic, codic, and sequelic—that denominate the verbal functions described directly imply the distinctions Skinner makes. For example, on page 71 of *Verbal Behavior*, he writes, "in echoic behavior and in writing from copy there is a *formal* correspondence between stimulus and response-product. In textual behavior and in taking dictation there is a *point-to-point* correspondence between different dimensional

systems." (Emphasis mine.) It facilitates recalling and working with the classifications to use as names the very features that suggest those names, and to use them for categories and subcategories at the proper analytic level. That is why, for example, I substitute the name "sequelic" for the name "intraverbal." The subcategory term "sequelic" reflects accurately the verbal relations described under that name. The term "intraverbal" now can represent the entire category, as it should.

REFERENCES

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