Verbal Understanding: Integrating the Conceptual Analyses of Skinner, Ryle, and Wittgenstein

Ted Schoneberger
California State University, Stanislaus

Gilbert Ryle's (1949) and Ludwig Wittgenstein's (1953; 1958; 1974/78) conceptual analyses of verbal understanding are presented. For Ryle, the term *understanding* signifies simultaneously an acquired disposition and a behavioral episode. For Wittgenstein, it signifies simultaneously a skill and a criterial behavior. Both argued that episodes of understanding comprise heterogenious classes of behaviors, and that each member of such a class is neither a necessary nor a sufficient condition of understanding. Next, an approach integrating the analyses of Ryle and Wittgenstein with that of Skinner is presented. Lastly, it is argued that this integrated analysis adequately counters Parrott's (1984) argument that understanding, for Skinner, is potential behavior and not an event.

What happens when a listener *understands* a speaker? Language theorists have long struggled with this question. In attempting an answer, Skinner (1957, pp. 277-280, 357-367; 1974, pp. 141- 147) posited three different senses of verbal understanding. First, a listener understands an utterance if she can "repeat it correctly" (1974, p. 141). This type of understanding has been termed "echoic understanding" (Schoneberger, 1990). In Skinner's second sense, a listener understands "to the extent that he tends to act appropriately" (Skinner, 1957, p. 277). For example, a student who is told to take his seat shows that he understands by complying with the request. This second type of understanding has been termed "appropriate-response understanding" (Schoneberger, 1990).

In Skinner's third sense, a listener understands if she knows about the variables controlling the speaker's behavior. For example, a listener understands the statement "the sink is clogged" if she knows about plumbing. Knowing about plumbing not only means having had contact with it,

but also "possessing various forms of behavior" related to plumbing. For example, the listener understands the speaker in this sense if she knows under what conditions she might utter the same statement. "We understand anything which we ourselves say with respect to the same state of affairs" (Skinner, 1957, p. 278). This third type of understanding has been termed "understanding-as-knowing" (Schoneberger, 1990).

L. J. Parrott (1984) has offered an extensive critical examination of Skinner's three senses of verbal understanding. Schoneberger (1990) presented a critique of Parrott's account of the first two senses (echoic understanding and appropriate-response understanding) but did not critique her account of understanding-as-knowing. According to Parrott, understanding in the sense of understanding-as-knowing is "really nothing at all until it eventuates in some form of overt behavior" (Parrott, 1984, p. 32). In short, understanding-as-knowing is a "construction, not an event" (p. 32). To *know about* the variables controlling the speaker's behavior is to be "able to respond" to those same variables. Understanding-as-knowing is potential behavior, not an event. However, Parrott argued that understanding is an event. To characterize it otherwise is to

obscure its true nature. Since Parrott considered Skinner's first two senses of understanding as subtypes of his third sense, her critique amounts to the claim that, for Skinner, there is no such behavior as an *act* of understanding.

The central task of this paper is to propose a behavior-analytic approach to verbal understanding which adequately addresses Parrott's claim that Skinner failed to posit acts of understanding. This task shall be accomplished by first examining the views on verbal understanding of two philosophers—Gilbert Ryle and Ludwig Wittgenstein—and then integrating those views with that of Skinner.

CONCEPTUAL ANALYSES OF VERBAL UNDERSTANDING

Ryle's Approach.

In *The Concept of Mind*, Ryle (1949) offered an account of verbal understanding as part of his theory of mind. Central to the presentation of his theory was "a sustained piece of analytical hatchet-work" (Ryle, 1970, p. 12) on Cartesian dualism. As summarized by Ryle (1949), Cartesian dualism holds that

> With the doubtful exception of idiots and infants in arms, every human being has both a body and a mind....
>
> Human bodies are in space and are subject to the mechanical laws which govern all other bodies in space. Bodily processes and states can be inspected by external observers....
>
> But minds are not in space, nor are their operations subject to mechanical laws. The workings of one mind are not witnessable by other observers; its career is private. (1949, p. 11)

For the Cartesianist, actions of the body are caused by immaterial mental events which proceed and/or accompany them. Thus, what a speaker says is caused by what is in her mind. To understand the speaker, then, the listener must use the speaker's words to discern the contents of her mind.

According to Cartesian dualism, a speaker has privileged, direct access to her own mind; what she feels, intends, or means is "inevitably betrayed" (p. 13) to her. The listener lacks such access to the speaker's mind. Hence, to discern the content of the speaker's mind and thereby understand what she has said, the listener "cannot do better than make problematic inferences from the observed behavior of the other person's body to the states of mind which . . . he supposes to be signalized by that behavior" (p. 14). Thus, for a man to understand what his wife is saying, he must use her words to make inferences about her mental states.

According to Ryle, part of what is wrong with Cartesian dualism's view of understanding is the mistaken "logical geography" it assigns to this mental concept. The "logical geography" a theory ascribes to a concept is revealed by (1) presenting the propositions about the concept which the theory proposes and then (2) showing "with what other propositions they are consistent and inconsistent, what propositions follow from them and from what propositions they follow" (p. 8). For Ryle, Cartesianism's logical geography of understanding is mistaken because its propositions about understanding entail the denial of true propositions.

According to Cartesianism, to understand what another says is to use her words to make inferences about the contents of her mind. However, given the Cartesianist's view that one cannot ever gain *direct* access to the mental operations of another, it follows (Ryle argued) that one would never be able to establish the specific correlations between mental causes and their overt behavioral effects required to draw such inferences. Further, Ryle argued that if one cannot establish these correlations, then one cannot use a speaker's words to gain indirect access to the speaker's thoughts.

Ryle noted that some Cartesianists counter this argument with another argument: When a person serves as a speaker, the direct access he has to his own mental events allows him to establish the necessary correlations between words and mental events; by analogy, then, he can assume the same correlations are the case when others speak and he listens. He knows what his own state of mind would be if he were to make the statement the speaker

has made, so he infers that the speaker's statement "signals" a similar state of mind.

Ryle responded to this Cartesian counterargument with a counterargument of his own. For Ryle, inferring another's thoughts from her words based on a *single* set of correlations—namely, those between ones *own* thoughts and words—is a "pitiably weak" inference (p. 53). Such poorly grounded inferences are, Ryle maintained, bound to fail. So, for Ryle, Cartesianism's propositions about understanding entail that "no one has ever yet had the slightest understanding of what anyone else has ever said . . ." (p. 52). Hence, Ryle concluded that Cartesianism's logical geography of understanding is mistaken because its propositions entail the denial of enumerable true propositions ascribing understanding to listeners.

In rejecting the Cartesian account of verbal understanding, it is important to note that Ryle did *not* maintain that a listener *never* uses a speaker's words to make inferences about the speaker's state of mind. Indeed, Ryle observed that understanding "studied talk"—talk in which the speaker is "considering what to say and how to say it"—very often requires that the listener make such inferences (p. 182). For example,

> When talk is guarded . . . sleuth-like qualities do have to be exercised. We now have to infer from what is said and done to what would have been said, if wariness had not been exercised, as well as to the motives of the wariness. (p. 184)

However, in rejecting the Cartesianist's view of verbal understanding, Ryle did maintain these two crucial points: (1) that inferring what is "in the mind" does not mean making inferences about events taking place in an immaterial world; (2) that in most instances understanding does not require making any inferences about the speaker's mind.

Consider these two points in more detail. First, Ryle rejected the Cartesianist view that the mind is a distinct, immaterial substance. Rather, he argued that when we talk about anothers "state" or "frame" of mind, "we are describing the ways in which those people conduct parts of their predominantly public behavior" (p. 51).

Like any intelligent behavior, instances of speech "are not clues to the workings of minds; they are those workings" (p. 58).

For Ryle, then, when a speaker engages in studied talk by considering what to say before she says it, this private self-talk occurs in the *physical* world. However, Ryle's second point is that most talk is, in fact, *unstudied* talk which does not require inferences by the listener about the speaker's state of mind. As Ryle put it, *unstudied* talk is "the normal way of talking" (p. 181). "Learning to talk is learning to make oneself understood. No sleuth-like powers are required to find out from the words and tones of your unstudied talk . . . the frame of mind of the talker" (p. 184).

In developing his own theory of mind, Ryle's central strategy was to examine what "mental conduct" terms signify in ordinary discourse. As a result of this inquiry, Ryle divided mental conduct terms into three categories. The first category is comprised of terms which are used to signify *dispositions* of "characer or intellect" (p. 146) that people acquire through training. Statements which ascribe such dispositions to people Ryle called "hypothetical" statements. For example, the statement "John knows French" uses the term *knows* to signify a disposition; it implies, in part, that John has the capacity, if addressed in French, to respond in French or to otherwise "act appropriately" (p. 123).

The second category is made up of terms which signify *episodes*. Unlike dispositional terms which only report a person's behavioral *potentialities*, these episodic terms are used to report specific behavioral events. Statements reporting discrete episodes Ryle called "categorical" statements. One subcategory of episodic mental conduct words are "achievement words" (p. 149). One may report, for example, that another has "repeatedly solved anagrams . . . or was quick to see the joke." The terms *solve* and *see* in these contexts are episodic because they signify specific, clockable instances of intelligent behavior.

Finally, Ryle's third category comprises *semi-dispositional, semi-episodic terms* (p. 47).

Such a term signifies simultaneously *both* a disposition and an episode. Statements employing such terms Ryle called "mongrel categorical" statements. For example, to say that a person is "on guard" or "resolute" is to report both a clockable behavioral episode as well as a disposition "to perform further operations if the need for them should arise" (pp. 47-48).

Although not explicitly stated, Ryle's strongly suggested that understanding is a *semi-dispositional, semi-episodic term*. Expressed another way, he suggested that statements which predicate understanding are "mongrel categorical" statements. Arguing that the term has a dispositional component, Ryle said that "Understanding is a part of knowing *how*" (p. 54) and that "knowing how . . . is a disposition" (p. 46). For example, the statement "John understands what Mary said" implies that John is disposed to perform behaviors such as answering questions about her utterance or paraphrasing it in his own words (p. 170).

However, Ryle's statements also suggest that the term *understands* in "John understands what Mary said" simultaneously signifies a discrete episode. For instance, Ryle stated that we use understanding to "designate certain of those exercises of your knowledge *how*" (p. 55). Clearly, an exercise is a discrete episode. Further, he acknowledged that understanding another's words may be experienced as "a flash or click of comprehension" (p. 170). Flash and clicks, too, are episodes. Finally, when later confronted with an argument that he had mistakenly classified too few mental conduct statements as "mongrel-categorical," Ryle agreed (Warnock, 1979). Abandoning his previous view that mongrel-categorical statements are exceptional, Ryle instead asserted that "they are the rule" (quoted by Warnock, 1979). There is no evidence to indicate that Ryle considered as exceptions to this rule statements that predicate understanding.

In addition to the three categories of mental conduct terms just discussed, Ryle (1951) later added a fourth: terms which signify *polymorphous* concepts. Although Ryle's discussion of this category is some-

what ambiguous, Urmson (1970) argued forcefully for one particular interpretation. According to Urmson, a concept of X-ing is polymorphous if (1) no specific behavior is a necessary condition of X-ing and (2) no specific behavior is a sufficient condition of X-ing (1970, p. 254).

Ryle's (1949) statements about the episodic component of *understanding* suggest that this term signifies a polymorphous concept. Consider Ryle's statement that intelligent capacities (such as understanding) "are dispositions admitting of a wide variety of more or less dissimilar exercises" (p. 56). This indicates that, for Ryle, there is no one behavior which is a necessary condition of understanding. Next consider Ryle's following analysis of a listener's understanding of a spoken argument:

> it is part of the *meaning* of "you understood it" that you could have done so and so and would have done it, if such and such, and the test of whether you understood it is a range of statements . . . there is no single nuclear performance, overt or in you head, which would determine that you had understood the argument. (p. 170)

For example, neither paraphrasing what was said nor experiencing a "click" of comprehension constitutes a sufficient condition of understanding.

Does Ryle posit a necessary condition of understanding? Yes. For Ryle, it is a necessary condition that the listener has acquired a disposition, through training, to perform an "assemblage of heterogeneous performances" (1949, p. 46) in appropriate contexts. What about a sufficient condition? Yes again. When a listener is presented with a verbal stimulus, his acquired disposition to behave appropriately in numerous ways, coupled with the performance of one of these heterogeneous behaviors, constitutes a suffcient condition of understanding.

In summary, Ryle's writings may be interpreted as suggesting that the term *understanding* in statements such as "A understands what B said" is a semi-dispositional, semi-episodic term. It reports both an occurrent behavior and an acquired behavioral disposition. Furthermore, it

may also be classified as a polymorphous term because no single occurrent behavior is either a necessary or a sufficient condition of understanding.

The Later Wittgenstein's Approach

In developing his position on verbal understanding, Wittgenstein (1953; 1958; 1974/78) began by identifying what he saw as a general inclination among Western language users to assert that one cannot *observe* understanding, but only the behavior which *demonstrates* understanding. On this view, understanding is an inaccessible mental phenomenon which *precedes* the behavior which demonstrates it. Quoting Wittgenstein (1974/78), "We speak of the understanding of a sentence as a condition of being able to apply it. We say 'I cannot obey an order if I do not understand it' or 'I cannot obey it before I understand it'" (p. 45).

For example, consider a listener who is ordered to shut the door. If the listener fails to comply, does this mean that she didn't understand the order? Not necessarily. She may understand and yet refuse to comply. This suggests that understanding and obeying are two separate activities. Again quoting Wittgenstein (1958), "we are inclined to say 'A man *must* understand an order before he obeys it'" (p. 130).

Often this general inclination to view understanding as an inaccessible mental phenomenon takes a more specific form; namely, one of asserting that understanding is a mental *event*. Although clearly rejecting mind/body dualism, Parrott (1984) nonetheless agrees with this view to the extent that she, too, views understanding as an event (albeit not a *mental* one). This inclination to view understanding as an event which precedes overt behavior is perhaps most compelling when we consider the experience of *suddenly* understanding.

In an attempt to discern what happens when one suddenly understands, Wittgenstein (1953, pp. 59-60) examined the hypothetical example of person A who writes down the series of numbers 1, 5, 11, 19, 29 and then requires person B to demonstrate his understanding of the series by continuing it. For awhile person B is not be able to continue the series, but then he says "Now I can go on" and proceeds to do so. What happened to person B when she *suddenly* understood how to go on?

Wittgenstein noted that there are a variey of events that may have happened when B suddenly understood. For example, while A was writing the numbers down, B may have been trying various formulae on the numbers. When A wrote the number "19," B tried a particular formula which was confimed when A wrote the next number. Now B knew how to go on. What else might have happened prior to B proclaiming to know now to go on and then doing so? Perhaps B covertly asked and answered the question "What is the series of differences?" which then allowed her to go on. A third possibility is that B recognized the series and said "Yes, I know *that* series" and then continued it. Lastly, perhaps B may have experienced "a light quick intake of breath, as when one is slightly startled" and then proceeded with the series.

Is it a necessary condition of understanding that one of these prior events take place? Wittgenstein (1953; 1974/78) argued that it is not. His argument was a simple one. As Baker and Hacker (1980) expressed it, "one may continue the series without having any of these experiences; if asked 'What happened when you understood?' one may answer blankly 'Well—I continued the series—nothing else happened'" (p. 606). In addition, Wittgenstein argued that none of these experiences is a sufficient condition of understanding. Again Wittgenstein's argument is simple. If one has any of these experiences and yet cannot continue the series, then, except in some unusual situations (e.g., when one suddenly dies), one does not understand. Again citing Baker and Hacker (1980), "The experiences are neither necessary nor sufficient for understanding" (p. 606). Rather, these experiences are the "characteristic accompaniments or manifestations of understanding" (Wittgenstein, 1953).

Is Wittgenstein, then, equating understanding with appropriate responding? No. Wittgenstein recognized that a listener can respond appropriately and yet not understand. For example, even if someone continues the series correctly, we may still not know whether he understands the series. This is the case because we cannot determine how far he must continue the series before we can proclaim that he has mastered it. Quoting Fogelin (1976), "We can imagine a person who can count correctly and still not understand counting . . . . We can imagine a person learning the first 637 numbers by rote. This would be a remarkable achievement, but still, the person would not know how to count" (p. 129).

For Wittgenstein, events such as stating "Yes, I know that series" are *criteria* of understanding which, given certain circumstances, justify an attribution of understanding. What sort of circumstances does he have in mind? Consider the example again of a person who thought of the formula and then continued the series correctly. His thinking of the formula and proceeding to continue to develop the series are criteria which justify attributing understanding to him "given such circumstances as that he had learnt algebra, <and> had used such formulae before..." (Wittgenstein, 1953).

In summary, Wittgenstein argued that the term *understands* in the statement "John understands what Mary said" simultaneously signifies an ability and a criterial behavior. We attribute understanding to someone because of what she does and because we judge (rightly or wrongly) that she has the skills of a competent listener. Thus, if I ask someone to close the door and she complies, I may ascribe understanding to her because she exhibits a criterial behavior—in this case, closing the door—and also because I have evidence (direct or indirect) that she knows the language.

An Integrated Approach

Ryle suggested that the term *understanding* signifies simultaneously an acquired disposition and a behavioral episode.

Taking somewhat the same position, Wittgenstein argued that this term simultaneously signifies a skill and a criterial behavior. Both maintained that the episodes of understanding appropriate to any given verbal utterance comprise a heterogenious class of behaviors, and that each member of such a class is neither a necessary nor a sufficient condition of understanding the given utterance. Expressing this dispositional/episodic account behavior-analytically, an observer's statement that "John understands what Mary said" is evoked by (1) John's behavior following Mary's utterance and (2) other stimuli (e.g., John's past behaviors under verbal control) correlated with competence as a listener.

Parrott (1984) argued that understanding, for Skinner, is potential behavior but not an event. In other words, she saw Skinner as providing an exclusively dispositional account. To be sure, Skinner explained understanding, in part, in terms of what the listener is able to do, tends to do (1957, p. 277), or can do (1974, p. 141). For Skinner, part of what it means for a listener to understand is that he "possesses" behavior which is not currently being executed.

However, Parrott failed to note that, in addition to his dispositional account of understanding, Skinner suggested an *episodic* account as well. For example, he said that one can attribute understanding to a listener "if he simply behaves in an appropriate fashion." Further, he said that we are credited with understanding a language when "we respond to previous exposure to certain contingencies in a verbal environment" (1957, p. 277). These and other passages strongly suggest that, for Skinner, the term *understanding* also denotes a discrete behavioral episode.

Ryle, Wittgenstein, and Skinner each offered a dispositional/episodic account of verbal understanding. However, integrating the approaches of Ryle and Wittgenstein with that of Skinner provides a more explicit and detailed behavior-analytic treatment of the episodic component. In so doing, this integrated approach sug-

gests a response to Parrott's (1984) argument that "according to Skinner, understanding is a construction, not an event" (p. 32).

With the exception of those rare instances when a listener is prevented from behaving (e.g, by sudden death or unconsciousness), a listener always behaves after a speaker has spoken. Further, if she understands the speaker in any of Skinner's senses, this behavior constitutes an exercise of understanding. Consider an example. A college student told his two roommates, Bob and Deter, that the sink was clogged. Bob suggested buying *Drano*. Deter said nothing, even though he possessed a variety of potential behaviors relating to plumbing. However, Deter's behavior, like Bob's, nonetheless demonstrated understanding. Why?

Deter is a foreign student who has a history of asking questions when he doesn't understand. Thus, *any* behavior *except* asking such questions demonstrates, in most cases, his understanding. In short, even though Deter understood his roommate's statement in Skinner's third sense of understanding (i.e., understanding-as-knowing), his silence constituted an act of understanding. Integrating the conceptual analyses of Ryle, Wittgenstein, and Skinner makes more salient the fact that Skinner characterized understanding as an act as well as a dispositon.

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