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On Terms

Two Correct Definitions of "Applied"

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What do behavior analysts mean when we call a study an *applied* behavior analysis? It seems to me that this question is one important source of the current dialog concerning the purposes and practices of our field (see Arzin, 1977; Baer, 1978, 1981; Baer, Wolf, & Risley, 1968; Birnbrauer, 1979; Deitz, 1978, 1981, 1982; Hayes, 1978; Michael, 1980; Pierce & Epling, 1980; Ribes, 1977). One reason for some of the disagreements among these authors appears to be that the term, applied, is being used in our field in at least two ways.

"Applied" is used by some authors to label that type of research activity which seeks to identify the variables responsible for not just any behavior, but socially important behavior. An *applied* behavior analysis is a form of behavioral research which is notably different from any other form of research only by the "interest which society shows in the problem being studied" (Baer, et al., 1968, p. 92). Both basic research and this form of applied research "ask what controls the behavior under study" (Baer, et al., 1968, p. 91).

When "applied" is used in the second way, it refers to efforts which may be based on research findings but which are not looking for the same types of answers as is basic research. Azrin (1977) is using "applied" in this way when he states, "But cures are what applied psychology has as its domain" (p. 141). When used in this way, *applied* behavior analyses are to improve social problems. The question of the variables responsible for those problems is secondary, at best.

While most commentors in these discussions have vigorously supported the first definition for "applied", strong historical support exists for the second definition. J. B. Watson (1913) in his seminal article "Psychology as the behaviorist views it" stated:

> Experimental pedagogy, the psychology of drugs, the psychology of tests, and psychopathology are all vigorous growths. These are sometimes wrongly called "practical" or "applied" psychology. Surely there was never a worse misnomer. In the future there may grow up vocational bureaus which really apply psychology. At present these fields are truly scientific and are in search of broad generalizations which will lead to the control of human behavior (p. 169).

According to this quote, Watson would be put into the group using "applied" in the second way. He would agree with Azrin (1977) that applied efforts attempt to cure or improve social problems; they are not scientific in that they do not seek "broad generalizations which will lead to the control of human behavior."

Confusion on this issue seems to exist today only because we now have effective "vocational bureaus which really apply psychology." In Watson's time we did not. We can now go into a classroom and clinic and cure problems—in Watson's sense we can apply psychology. But we can also go into a classroom or clinic and seek "broad generalizations." In the former case we are doing applied behavior analysis according to Watson or Azrin. In the latter case we are doing applied behavior analysis according to Baer, Wolf, and Risley (1968) and Michael (1980).

Clarifying the meaning of applied becomes very difficult for several reasons. First, the two types of efforts can, but do not always, interact. Studies designed to improve behavior can shed light on the variables responsible for that behavior. Also, studies designed to investigate the

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variables of which behavior is a function often improve that behavior, as well. They are not always incompatible or even separable efforts.

Second, as confusing as two definitions can be, there are other categories of research which some may want to call applied, but which fit neither of my categories. Some laboratory studies, for example, are quite informative about variables responsible for socially important behaviors. Human operant research or animal analog studies may tell us more about applied problems than would direct investigation in a relevant setting. Calling these types of studies "applied" is less usual; still, the label may fit in certain instances. These possibilities suggest that the term "applied" may have a "family of meanings" (Wittgenstein, 1953, section 77) for which my two might serve as ends of continuum.

Finally, there are problems with a single meaning for "applied," for although we all have preferences, we must acknowledge that all the ways we use this expression are correct. For at least the two on which I have elaborated, both describe legitimate, useful activities for behavioral psychologists. Coexisting traditions within our field support both definitions.

Given these sets of circumstances it would be unusual if differences of opinion were not evident within the behavior analytic community. And, having presented this discussion, I can think of no sure solution to future communication problems which will probably arise. We could drop the term; we could decide on one definition or the other; or we could replace the term with new, more descriptive labels. Since we are our own verbal community, each of these is possible but none of them are likely. We will probably continue with these two uses of this term. Maybe all we can do is state our cases as precisely as possible when discussing these issues with others.

In any case, discussions about key concepts within behavior analysis are, as Pennypacker (1981) recently noted, "entertaining and generally healthy" (p. 159). It is important not to forget that disagreement can be both pleasant and instructive. My purpose has been to present some comments on how and why the term "applied" can be confusing. Pennypacker wrote to clarify what we mean by "analysis". There is only one more word in the title of the field to which many of us state we belong—behavior. I look forward to a future column where that most difficult concept is discussed.

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