Training Graduate Students to Effectively Disseminate Behavior Analysis and to Counter Misrepresentations

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Abstract Training graduate students to promote behavior analysis and counter misconceptions requires that graduate programs in behavior analysis contain a healthy dose of experimental analysis of behavior so that students understand the experimental foundations of their discipline. Moreover, graduate students should be required to study the theoretical and philosophical foundations of the field because most of the misconceptions of behavior analysis are conceptual and philosophical in nature. Programs should also teach graduate ABA students to think critically about the concepts and principles of behavior analysis in order to prepare them to defend it against misunderstandings and to be more effective practitioners.

Keywords Behavior analysis · Correcting misconceptions of behavior analysis · Dissemination · Graduate students

In an electronic survey distributed through behavior-analytic listservs and social media websites, Becirevic (2014) asked respondents whether a graduate student should be able to respond to statements about behaviorism that misrepresent the field in some way (e.g., that behaviorism is black-box psychology or that behaviorism is dead). Of course, there are many ways in which behaviorism has been misrepresented over the years (e.g., Kestner & Flora 1995; Todd & Morris 1983) and various authors have suggested strategies to correct what Todd & Morris (1992) refer to as this “academic folklore (Morris 1985).” As someone who has spent considerable time and energy both disseminating and defending behavior analysis (see Schlinger 2014a), I am sympathetic to the premise that graduate students in behavior analysis should be equipped to talk eloquently about their field and to counter any misconceptions they might encounter.

However, this premise raises some difficult questions. First, should behavior analysts always respond to misrepresentations?

In answering this question, you should consider what is to be gained by correcting a misconception; and the answer probably depends on the context and the source of the error. For example, if a textbook misrepresents the field in some way, writing to the author and/or publisher with a detailed description of the error(s) supported by references may result in a modification in a future edition as authors and publishers are usually interested in accuracy. On the other hand, it may or may not be worth correcting an instructor in a psychology class who misrepresents behaviorism; it depends on the particular instructor. If the instructor gives the appearance of being receptive to feedback, then perhaps you could approach him or her after class. It would be helpful to come prepared with references to support your position. In this case, the benefit might be that the instructor would either cease perpetrating misconceptions or, even better, would present behaviorism accurately. Of course, should you decide to correct any misrepresentations, you should do it courteously and respectfully.

Some portrayals of behavior analysis, such as that behaviorism is dead or that Chomsky’s (1959) review of Skinner’s book, *Verbal Behavior*, not only demolished the book, but the entire behavioral paradigm, are myths, and may represent wishful thinking by those making such claims. Generally, scholars who promote this view are not amenable to altering their views despite evidence from behavior analysts (e.g., Schlinger 2008; Wyatt et al. 1986) and even arguments by non-behavior analysts (e.g., Roediger 2004) to the contrary. Thus, attempting to counter such claims would probably not be productive.

The next question, and the main focus of this commentary, is: How should graduate programs in behavior analysis be designed such that most graduates would be competent to challenge inaccuracies and misconceptions about their field?

Most of the misrepresentations about behaviorism are conceptual or philosophical in nature (e.g., see Skinner 1974). Thus, if a graduate student decides to challenge or attempt to correct them, he or she would need a fairly sophisticated conceptual verbal repertoire. And that kind of repertoire can only be acquired in a graduate program with a heavy emphasis on conceptual issues in behavior analysis, including training in the experimental, theoretical, and philosophical analysis of

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behavior. I recently suggested that the best way for behavior analysts to further their discipline, broadly conceived, is to take advantage of the demand for applied behavior-analytic graduate programs fueled by the autism epidemic, and the requirements by the Behavior Analysis Certification Board and the Association for Behavior Analysis International accreditation standards, and hire more basic and theoretical faculty members (Schlinger 2014b). The rationale was that if we populated academic departments with more behavior analysts of all stripes, especially those with experimental and theoretical expertise, then we could rejuvenate those parts of our discipline that have declined in recent years.

Graduate programs in applied behavior analysis (ABA) should provide a well-rounded education in all three branches of behavior analysis (experimental, theoretical, and applied) because that thoroughness will help graduates to be more effective practitioners and to be more able spokespersons for the field. So, in order to attain these goals, the first course a graduate program should offer is one in concepts and principles. Regardless of which textbook is used, students need not only to learn the basic concepts and principles, but also, more importantly, how to talk critically about them.

Consider the concept of reinforcement. Most non-behavior analysts (and even some behavior analysts) have a simplistic view of reinforcement. In fact, even though the definition (induced from thousands of experiments over the past 80 or so years) is a functional one, many still view reinforcement formally. A formal conception of reinforcement is suggested when, for example, a practitioner says, “Did you bring the reinforcers?” or “We reinforced her,” meaning they delivered praise or a treat, with no consideration of whether the targeted response class was altered under similar circumstances (i.e., motivating operations [MOs] and discriminative stimuli [S^D s]).

Such a naïve conception of reinforcement may derive from an inadequate analysis of the concept itself. One could learn a fairly standard and, in my view, incomplete definition of reinforcement as “any consequence that strengthens behavior,” or, a little better, “any event that immediately follows behavior and increases it in the future.” However, without an in-depth understanding of the concept of reinforcement, a graduate will not be as effective as a practitioner or as a promoter or defender of behavior analysis as when, for example, someone says that reinforcement is akin to bribery, or that it weakens intrinsic motivation (e.g., Deci 1971; but see Dickinson 1989). Here’s why.

First, a reinforcer does not follow behavior; it follows a response. Second, that particular response does not increase in the future; the probability of similar responses (members of the targeted response class) increases under similar circumstances. Thus, a reinforcer does not just increase behavior (similar responses); it brings it under the control of relevant MOs and S^D s (Skinner 1953). In other words, reinforcement (and, indeed, all consequent operations) is function altering;

that is, it alters the function of antecedent events (MOs and S^D s) (Schlinger & Blakely 1994). Of course, there are other ways to think about the concept of reinforcement (see Donahoe et al. 1993; Premack 1962; Timberlake and Allison 1974), and a well-trained graduate should be familiar with them.

This more in-depth analysis of reinforcement also has implications for the concepts of MOs and S^D s. For example, before conditioning lever pressing in a rat, food deprivation is not technically an MO because it does not evoke the relevant response class (Any assumption about its value-altering effects is based solely on whether it evokes responses (see Cherpas 1993). Likewise, light onset is not an S^D for the same reason. However, once food is delivered to a food-deprived animal contingent on pressing the lever in the presence, but not the absence, of light (the four-term contingency), food deprivation and light onset are altered such that they now evoke the lever pressing. The evocative functions of MOs and S^D s have been established (altered) by the reinforcement contingency (Schlinger & Blakely 1994).

This brief analysis of reinforcement, as well as motivation and discrimination, suggests a more complex understanding of the concepts than is usually presented in textbooks or by many instructors, can help behavior analysts be more effective as practitioners and more facile in talking about the concepts that form the basis of their discipline, and is but one example of how one concept or principle can be taught beyond a simplistic definition.

In addition to a course in concepts and principles, graduate programs in behavior analysis should include a course on Skinner’s analysis of verbal behavior and a course in radical behaviorism, or the philosophical assumptions and implications of a science of behavior. It is these courses that will best prepare students to identify and correct many misrepresentations of the field. The reason, as mentioned earlier, is that many of the misconceptions are philosophical in nature. Skinner wrote an entire book—*About Behaviorism* (1974)—to counter what he viewed as 20 of the most common misrepresentations of behaviorism (as the philosophy of the science of behavior). While his book could be used as the basis of a course to explicitly teach graduate students to be able to counter myths or errors about behaviorism, it still needs an instructor to shepherd students through Skinner’s sometimes obtuse writing.

Likewise, rather than simply teaching students that within-subject (a preferable name to single-case which suggests only one subject) designs are what behavior analysts use, it would be better to teach them why; that is, when and where within- or between-subjects designs are appropriate and the benefits and drawbacks of each. This strategy gives the student an informed basis for arguing for the use of within-subject designs.

A curriculum featuring the content described above would prepare graduates to be thoroughgoing behavior analysts, which would then enable them to act as ambassadors for the field both promoting and defending it.

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