Beyond Basic or Applied

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Applying a categorical label to something forces discriminations about that thing. This object is a *chair* (and that object is not). This writing utensil is a *pencil* (and that writing utensil is not). This research is *applied behavior analysis* (and that research is not). If we have labels, we must have some boundary condition of what constitutes exemplars and non-exemplars of that label. The boundary conditions for applied behavior analysis established by Baer, Wolf, and Risley (1968) occurred at a time that traditional operant procedures were receiving considerable negative public press (see Critchfield & Reed, 2017, and Rutherford, 2009 for detailed discussions). Applying a new label to research that emphasized social validity may have been historically important to establish applied behavior analysis as something “other” than the experimental analysis of behavior (either human or nonhuman). This distinction may have allowed a generation (or more) of behavior modifiers and applied behavioral scientists to gain traction as a field with the society at large.

Recently, researchers have suggested that the bounds of applied behavior analysis should be expanded to encompass other areas of research (e.g., Gray & Diller, 2017; Horner & Sugai, 2015; Leaf et al., 2016; Martens, Daly, & Ardoin, 2015). In this issue of *The Behavior Analyst*, Critchfield and Reed (2017) state that the boundary conditions for applied behavior analysis may have outlasted their time and suggest that the boundaries to be expanded to include any research that “...has the potential to advance our behavior-theory-driven understanding of socially important problems”. The authors’ suggestion of new boundaries may be too inclusive. Their proposed definition would include *any* reasonable research that was based on “behavior theory” and had potential downstream implications for socially significant behavior. Additionally, according to Critchfield and Reed, such research need not measure behavior directly; verbal proxies for behavior would be acceptable. Thus, the proposed definition would include research with rats examining differences in rates of lever pressing when methamphetamine (a commonly abused drug) or saline are administered. It would also include the survey research that my developmental-psychology colleagues do to assess the impact of self-reported parenting styles on teenagers’ developmental stage and self-reported

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drug use. I doubt that most applied behavior analysts would see these examples as fitting within the bounds of our science, but both certainly have the potential to advance our understanding of socially relevant problems like drug abuse and parenting practices. Thus, the proposed definition may include research that falls legitimately outside the boundaries of behavior analysis in general, and applied behavior analysis in particular.

The boundary conditions for applied behavior analysis currently require that “... potentially informative work on important problems must be excluded from consideration” (Critchfield & Reed, 2017) and should continue to do so. This exclusion occurs when you develop boundary conditions for *any* branch of science. In short, applied behavior analysts do not have a monopoly on conducting informative work on problems important to society. Just because research is not applied behavior analytic does not make it any less informative or important—it just places that work in a different (but not necessarily lesser) discipline or subdiscipline of science. If a study is conducted in a highly artificial setting with convenience samples of undergraduate students (as is much of my research, despite often characterizing myself as an “applied behavior analyst”), perhaps that work should not be included as part of “applied behavior analysis” per se. I am okay with that; it does not devalue that work in any way just because the consensus of the community is that the study better fits with a different subdiscipline in the field. Conversely, my field-based studies on staff training and interventions for severe behavior should not be characterized as part of the experimental analysis of behavior, and that is okay too. If we are to have boundary conditions of our disciplines, some of our work may fall outside of them. If our research advances our understanding of socially important problems, it should have an impact regardless of how it is characterized.¹

So why not just leave things as they stand? Critchfield and Reed (2017) argue that the current boundary conditions result in bottlenecks through which important behavior-analytic research cannot pass. Although I have not experienced the bottleneck described by the authors with my own translational research, I know of many scientists who perceive a lack of publication outlets for work that is neither traditionally “experimental” nor traditionally “applied” (as is much of the work described by Critchfield and Reed). I believe that publication barriers are diminishing in modern behavior analysis. Yet, the obvious fact remains that the work published in mainstream applied behavior analysis journals (e.g., *Journal of Applied Behavior Analysis*, *Behavior Analysis in Practice*) is not highly diverse. For example, 57% of research studies in the Winter 2017 issue of the *Journal of Applied Behavior Analysis* focused on changing socially significant behavior of individuals with relatively low-incidence developmental disabilities. This homogeneity may reflect a kind of publication bottleneck—or the exodus of individuals with interests in other areas from the field (Vyse, 2013). If we want our science to have the most impact, we cannot marginalize individuals doing high-quality research about the influences of environment on behavior. Thus, perhaps neither adopting broad definitions nor maintaining the current status quo is ideal.

In 1968, Skinner gave an invited address envisioning the field in the year 2000. In it, he notes, “In the long run, the distinction between basic and applied science is probably not worth maintaining.” (Skinner, 2004). Although 17 years past Skinner’s projections,

¹ I am not the first to make this suggestion. Critchfield (2015) echoed this sentiment by arguing that Positive Behavior Interventions and Supports (PBIS) may fall outside the domain of applied behavior analysis, but that distinction does not make PBIS research any less valuable.

are we now at the point that scientific subdisciplines of behavior analysis are not worth maintaining? Perhaps, rather than expanding the definition of applied behavior analysis, we should rid ourselves of the distinctions between basic behavior analysis and applied behavior analysis altogether.² Perhaps we should begin to label ourselves as behavior analysts who study particular topics (rather than as applied behavior analysts, behavioral pharmacologists, experimental behavior analysts, translational behavior analysts, and quantitative behavior analysts). This suggestion may seem structural at first glance, but may result in functional outcomes.³ Labeling ourselves first as behavior analysts, with a subspecialty as a secondary consideration, may shift the focus of our work back to the fundamentals of our discipline: behavior as a subject matter in its own right, and identification of functional relations between behavior and environment.

Behavior analysts share a common interest in behavior as a subject matter and environmental impacts on behavior; this interest defines the boundary conditions of our science and differentiates us from other areas of psychology and other areas of inquiry. We should have much in common with each other. Yet, basic and applied scientists do not frequently cite each other's work (Elliot, Morgan, Fuqua, Ehrhardt, & Poling, 2005). Translational researchers like Critchfield and Reed are not alone in feeling isolated. Behavioral pharmacologists lament the lack of offerings about their subdiscipline at meetings like the annual conference of the Association for Behavior Analysis International and feel drawn to other fields like behavioral neuroscience. If bottlenecks exist, they exist for many subgroups of our field, not just those who might be included in the subdiscipline of applied behavior analysis. Expanding the definition of "applied" will not resolve all bottlenecks or feelings of isolation; removing the distinctions might.

Developing labels for response classes of people (such as "basic researchers" and "applied researchers") necessarily results in the development of in-groups and out-groups. Applied researchers become an out-group to the basic researchers (and vice versa) rather than having both groups approach problems jointly from the perspective of "us" as behavior analysts. The distinction between groups in behavior analysis may lead to reduced consumption of the literature from out-groups in the field and increased likelihood of fighting over resources, such as faculty lines. Removing the distinctions between areas of behavior analysis might help to put us in better contact with each other's work and advance the science by pooling resources rather than divvying them. Let behavior analysis remain a unique discipline of psychology,⁴ but be a unified discipline rather than a splintered one.

The future of behavior analysis as a discipline may depend on unification by removing our subgroups rather than by expanding just one subgroup to be more inclusive. We do not need more "applied behavior analysis"—we need more high-quality science aimed at understanding problems of behavior. We need more resources as a field, not as a particular subdiscipline of the field. To get these resources, we will

² Much like Reed and Critchfield (2017), I believe we should maintain distinctions between research and practice. Thus, like Reed and Critchfield, my suggestion pertains to research, not to practice.

³ Labeling ourselves as behavior analysts shares features with a proposed restructuring of language suggested by Iwata, Pace, Cowdery, and Miltenberger (1994) regarding extinction. In that paper, the authors argue that extinction may be misapplied because of labels like *planned ignoring* that emphasized the form of the procedure over the function. Iwata et al. recommended an alternative annotation that emphasizes process over form by using the label extinction and only parenthetically stating the form of the reinforcer. In this way, "planned ignoring" becomes "extinction (attention)." In parallel, instead of being an *applied behavior analyst*, I should be a *behavior analyst (applied)*.

⁴ Although some would argue that even this distinction should be abandoned. See Vyse (2013) as an example.

need to act together rather than treating each other as distinct groups of researchers. We will need to step beyond “basic” or “applied.”

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Compliance with Ethical Standards

Conflict of Interest The author declares that she has no conflict of interest.

References

- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1, 91–97. doi:[10.1901/jaba.1968.1-91](https://doi.org/10.1901/jaba.1968.1-91).
- Critchfield, T. S. (2015). PBIS may not qualify as classical applied behavior analysis. So what? *Behavior Analysis in Practice*, 8, 99–100. doi:[10.1007/s40617-015-0048-1](https://doi.org/10.1007/s40617-015-0048-1).
- Critchfield, T. S., & Reed, D. D. (2017). The fuzzy concept of applied behavior analysis research. *The Behavior Analyst*.
- Elliott, A. J., Morgan, K., Fuqua, R. W., Ehrhardt, K., & Poling, A. (2005). Self- and cross-citations in the journal of applied behavior analysis and the journal of the experimental analysis of behavior: 1993–2003. *J Appl Behav Anal*, 38, 559–563. doi:[10.1901/jaba.2005.133-04](https://doi.org/10.1901/jaba.2005.133-04).
- Gray, J. M., & Diller, J. W. (2017). Evaluating the work of applied animal behaviorists as applied behavior analysis. *Behavior Analysis: Research and Practice*, 17, 33–41. doi:[10.1037/bar0000041](https://doi.org/10.1037/bar0000041).
- Horner, R. H., & Sugai, G. (2015). School-wide PBIS: an example of applied behavior analysis implemented at a scale of social importance. *Behavior Analysis in Practice*, 8, 80–85. doi:[10.1007/s40617-015-0045-4](https://doi.org/10.1007/s40617-015-0045-4).
- Iwata, B. A., Pace, G. M., Cowdery, G. E., & Miltenberger, R. G. (1994). What makes extinction work: an analysis of procedural form and function. *Journal of Applied Behavior Analysis*, 27, 131–144. doi:[10.1901/jaba.1994.27-131](https://doi.org/10.1901/jaba.1994.27-131).
- Leaf, J. B., Leaf, R., McEachin, J., Taubman, M., Ala'i-Rosales, S., Ross, R. K., & Weiss, M. J. (2016). Applied behavior analysis is a science and, therefore, progressive. *Journal of Autism and Developmental Disorders*, 46, 720–731. doi:[10.1007/s10803-015-2591-6](https://doi.org/10.1007/s10803-015-2591-6).
- Martens, B. K., Daly, E. I., & Ardoin, S. P. (2015). Applications of applied behavior analysis to school-based instructional intervention. In H. S. Roane, J. E. Ringdahl, T. S. Falcomata, H. S. Roane, J. E. Ringdahl, & T. S. Falcomata (Eds.), *Clinical and organizational applications of applied behavior analysis* (pp. 125–150). San Diego, CA: Elsevier Academic Press. doi:[10.1016/B978-0-12-420249-8.00006-X](https://doi.org/10.1016/B978-0-12-420249-8.00006-X).
- Rutherford, A. (2009). *Beyond the box: B. F. Skinner's technology of behavior from laboratory to life, 1950s–1970s*. Toronto, ON: University of Toronto Press.
- Skinner, B. F. (2004). Psychology in the year 2000. *Journal of the Experimental Analysis of Behavior*, 81, 207–213. doi:[10.1901/jeab.2004.81-207](https://doi.org/10.1901/jeab.2004.81-207).
- Vyse, S. (2013). Changing course. *The Behavior Analyst*, 36, 123–135.