Where Are All the Behavior Analysts Coming From?

H. S. Pennypacker^{1,2}

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Critchfield and Reed (2017) have performed a monumental service by illuminating in detail the impact on our field and ultimately on our culture of the Baer, Wolf, and Risley (BWR) manifesto of 1968. This article is so exhaustively researched that direct comment would be superfluous.

Instead, I will expand on the consequences of BWR as viewed by a converted Hullian with a 1962 degree from Duke (Pennypacker, 2016). If pressed, I would identify as my iconic texts Sidman's *Tactics of Scientific Research* (1960) and Ulrich, Stachnik, and Mabry's *Control of Human Behavior, Vol I* (1966). By 1968, I was convinced that Skinner's expectation that a natural science of behavior would spawn beneficial technologies was being realized. I looked forward to the appearance of *JABA* and its potential to serve as a recognized archival repository for the good applied work that was being done.

I read the first few issues carefully. I slowly became disappointed. While I sympathized with the BWR wish to avoid the sterility of laboratory apparatus in favor of real-world settings and real-world problems, I was not prepared for their doctrinaire abandonment of the most essential feature of the science—direct measurement based on absolute units of the natural dimensions of behavior such as rate or frequency, latency, and other dimensions. The other natural sciences kept their basic units allowing such disciplines as engineering and pharmacology to grow seamlessly out of physics and chemistry, respectively.

In contrast, editorial policy not only tolerated but encouraged use of dimensionless measures such as percent correct and percent of time intervals filled. It was argued that observation was easier this way. Unfortunately, such important dimensions of behavior as celeration and fluency would never have been

✉ H. S. Pennypacker
hsppacker@gmail.com

¹ University of Florida, Gainesville, FL, USA

² MammaCare Foundation, Gainesville, FL, USA

discovered in the absence of frequency measures. It is ironic that although behavior change was a significant criterion, its precise quantification was apparently eschewed.

Rejection of automatic machine recording was another departure from the basic science that I found troubling. For an application to be effective in dealing with behavioral problems that society deems important, it must also be efficient. The use of multiple observers in place of machines is a labor-intensive regression to an earlier practice that would have to be replaced if widespread application was envisioned. While possibly defensible in a pure research context, as a requirement, it displaced efforts to devise and report recording systems that were far more cost-effective (e.g., Saunders, Goldstein, & Stein, 1978; Goldstein, Stein, Smolen, & Perlini, 1976). Modern devices such as pedometers and Fitbits generate individual data of universal acceptability. Computers and computer-supported simulations are now in widespread use in military and industrial as well as medical training settings. Many of these have a strong behavioral component, e.g., clinical breast examination (Pennypacker & Goldstein, 2016).

Among the other exclusions that flowed from BWR into editorial policy was the study of private events. Although Skinner (1945) advocated their admission and Ebbinghaus in 1885 used himself as a subject to explore phenomena associated with learning nonsense syllables, the proscription of self-report as a measurement procedure has all but totally suppressed such research in the modern behavioral tradition. One exception is the work of Abigail Calkin (2016) who is from the Precision Teaching tradition and has amassed thousands of charts of her own and others' inner behaviors. She finds the same level of order in these charts as one observes in self-recorded public behavior.

The importance of Critchfield and Reed's (2017) concluding paragraph increases with time. Behavior analysts are becoming more visible and indispensable in such multidisciplinary efforts as behavioral safety, gerontology, veterinary medicine, pharmacology, and neuroscience (e.g., Schlund, Brewer, Magee, Richman, Solomon, & Dymond, 2016), to name but a few.

In my view, behavior analysts are able to contribute three critical components to such enterprises: clear definitions of the behavior under study, precise measurement, and training of behavioral preparations. Done well, these contributions serve to advance the quality of the cooperative efforts well above the level of others in the same discipline. This means that thoroughly and broadly trained behavior analysts must be available.

To increase the likelihood of this happening, rewards for those already contributing must be accessible. Further loosening of the editorial restrictions that have characterized *JABA* since the days of BWR might allow *JABA* to become the general repository of significant contributions to the broader field, much as *Science* serves this function generally. In that event, publication in *JABA* could attract the attention of those university administrators who could be persuaded that our field is a useful adjunct to the STEM disciplines and, accordingly, should be strengthened on their campuses. The long-term fulfillment of our role in the realization of Skinner's vision is at stake.

Compliance with Ethical Standards

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

References

- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *J Appl Behav Anal*, 1, 91–97.
- Calkin, A. B. (2016). Always the back door. In R. Holdsambeck & H. S. Pennypacker (Eds.), *Behavioral science: tales of inspiration, discovery and service* (pp. 215–230). Beverly, MA: Cambridge Center for Behavioral Studies.
- Critchfield, T. S., & Reed D.D. (2017). The fuzzy concept of applied behavior analysis research. *The Behavior Analyst*, 40
- Goldstein, M. K., Stein, G. H., Smolen, D. M., & Perlini, W. S. (1976). Bio-behavioral monitoring: a method for remote health management. *Arch Phys Med Rehabil*, 57, 253–258.
- Pennypacker, H. S. (2016). Reinforcement in the key of C. In R. Holdsambeck & H. S. Pennypacker (Eds.), *Behavioral science: tales of inspiration, discovery and service* (pp. 51–66). Beverly, MA: Cambridge Center for Behavioral Studies.
- Pennypacker, H. S., & Goldstein, M. K. (2016). Progress in manual breast examination. *European Journal of Behavior Analysis*, 17(1), 81–86.
- Saunders, K. J., Goldstein, M. K., & Stein, G. H. (1978). Automated measurement of patient activity on a hospital rehabilitation ward. *Arch Phys Med Rehabil*, 59, 255–257.
- Schlund, M. W., Brewer, A. T., Magee, S. K., Richman, D. M., Solomon, S., & Dymond, S. (2016). The tipping point: value differences and parallel dorsal-ventral frontal circuits gating human approach-avoidance behavior. *NeuroImage*, 136, 94–105.
- Sidman, M. (1960). *Tactics of scientific research: evaluating experimental data in psychology*. New York: Basic Books.
- Skinner, B. F. (1945). An operational analysis of psychological terms. *Psychol Rev*, 52, 270–277.
- Ulrich, R., Stachnik, T., & Mabry, J. (1966). *Control of human behavior* (Vol. 1). Glenview, IL: Scott Foresman.