

AN ACADEMIC HOME FOR A NATURAL SCIENCE

Lawrence E. Fraley
West Virginia University

ABSTRACT: The definitive characteristics of a natural science of behavior are reviewed and contrasted with the characteristics of the traditional social sciences. Differences are traced to the different origins of those disciplines. While philosophical and scientific factors auger for the disciplinary independence of a natural science approach to the discipline, arguments against independence are fueled by economic and political contingencies. Efforts by natural scientists to change disciplines rooted in mysticism have been unsuccessful for reasons that could have been anticipated, and the resulting compromises to the integrity of the natural science discipline are explored. Based on the fundamental incompatibility of the disciplines in question, natural scientists of behavior must choose between the integrity of their discipline and the seductions of the extensive resources currently controlled by their mystical counterparts.

In a strictly natural science of behavior/environment relations there are no minds or psyches. A body is *not* inhabited by a mystical administrative spirit called "self" that chooses behaviors for the body to exhibit. Nor is the fallacy of "information" extrapolated to the extreme of information processing. Those are the notions of scholars operating in the absence of a natural science of their behavior-related subject matter. Many behavior analysts have longed for a discipline of behavior analysis that is defined and characterized as behaviorology is now defined and characterized--occupying a place among the other *natural* sciences, such as physics, chemistry, or biology.

The recent histories of behavior analysis and psychology have been entwined but not really connected. The historical precursors of behavior analysis depart from those of psychology and other social sciences. Behavior analysis traces its influences to physiology, evolutionary biology, physics, and the philosophy of natural science (Michael, 1993). Behavior analysis, if really cast as a natural science, would have no intrinsic reason for an affiliation with psychology. In spite of the efforts of some early contributors to that emerging field--especially those with physiological perspectives (Leahey, 1997), psychology never completely outgrew its origins in religion and traditional philosophy--disciplines tolerant of explanatory recourse to mysticism.

As the incipient integrity and identity of behavior analysis was being defined, the early behavior analysts found themselves as natural scientists working in well established organizational units devoted to psychology, which employed scientific methodology to describe and explicate what was construed to be the behavioral implications of fundamentally mystical basic assumptions. The cultural consignment of the scientific study of behavior to organized psychology had already largely

AUTHOR'S NOTE:

Please address all correspondence to: Lawrence E. Fraley, 506-B Allen Hall, West Virginia University, Morgantown, WV 26506-6122. Email: Ifraley2@wvu.edu

occurred. Most early behavior analysts recognized the antithetical relation of their paradigm to that of most psychologists, but in those early times, few, Skinner included, took seriously the possibility of establishing an independent discipline. Most if not all early behavior analysts, already working under the umbrella of organized psychology largely as the result of some historical accidents, uncritically assumed that they should remain there (Skinner 1979).

There were also more compelling reasons. Psychology had the academic departments and a well established reputation as *the* science of behavior. Professional organizations of psychologists were recognized by government, and they controlled the credentialing and licensing of practitioners. Directly or indirectly, organized psychology controlled the training operations, the job markets, the funding for research, and access to scientific and professional opportunities. Reflecting the huge segment of the population predisposed to explanatory reliance on powerful agents, often mystical, and representing that large cultural faction in the scholarly and academic domain, organized psychology was a big and growing establishment.

The fledgling behavior analysts were few in number, only informally organized, and largely unrecognized. To have attempted independence would have meant a severance from a plethora of professional resources that would have remained under the control of their disciplinary competitors. It seemed so unfeasible that the proposition was dismissed by most behavior analysts without serious consideration. Skinner led the way and provided a model, echoing his own earlier declaration from his first year as a graduate student at Harvard in 1928, when he had written, "I shall probably continue . . . [in psychology], even, if necessary, by making over the entire field to suit myself" (Skinner, 1979). The behavior analysts would stay in psychology.

Disciplinary change would be forced on psychology by demonstrating the greater effectiveness of behaviorally informed practices. That approach, a time-honored mechanism for change in the natural sciences, was construed by the early behavior analysts to be their forte in contests of efficacy with the traditional psychologists. But the costly implications of that approach went largely neglected.

First, they failed to recognize that psychology, for the most part, was not a scientific discipline, but only a "scientized" discipline. Psychology has always been home to the study of that interface between the metaphysical and physical worlds thought to reside in the mind of man. Most people in our culture have been conditioned over a lifetime to view a domain beyond the natural world as real, and they deem explanatory reliance on its elements to be rational. A logical implication of that predominant view is that a methodical science could, and probably should, emerge for the study of the interactions between those two domains of putatively real events. The traditional psychology community has drawn its members from that vast population, and represents a subset of it—a cadre devoted to a scientific study of how the natural and nonnatural worlds conjoin in a mind that functions, in part, as a channeling device between those worlds.

Many such people are devoutly religious persons with whom religious students feel a special affinity, and psychology training programs attract many such students. On their Sabbath, those psychology professors and their student followers pray to a powerful and omnipresent deity, primarily for interventions among variables in the

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physical world. They assume that a person's communication with that deity is channeled by way of a minideity functioning as a vital force within the body. In its religious context it is called the soul or human spirit. While the powerful external deity has vast powers and can move huge objects on a universal scale, the minideity within a person's body, with its very limited allocation of similar mystical powers, can move only body parts.

On Monday morning when these people return to their traditional psychology classrooms, the soul is temporarily renamed; it becomes the "self," and the remainder of the week is spent on a secular scientific analysis of how it might work. Some psychologists, who take no part in the religious aspects, stay focused on what they see as a more *secular* body-driving self-agent. But they remain equally mystical. While the psychology community has always had a small population of scholars who worked diligently to wrench the discipline of psychology from mysticism, the cultural recruitment pool from which the psychology community drew new members was so imbalanced toward the embrace of mysticism that the endowment of psychology with its mystical indulgence, secular or religious, was assured merely by the open enrollment policies of its training programs.

During the kinds of studies that are conducted in such programs, *no findings are tolerated that substantially contradict the underlying metaphysical assumptions*. That is why traditional psychology can be regarded as a scientized community rather than a scientific community. Those mystical assumptions are not inferred *from* scientific evidence. They are brought *to* the scientific evidence, which is then gleaned for any support that it can lend to those postulates. This means that for many members of the traditional psychology community, the persuasiveness of evidence, so compelling among the natural scientists, loses cogency in proportion to its threat to those basic mystical assumptions.

Skinner and his followers never had a chance to make over psychology by demonstrating that practices informed by their natural science were more effective. Their practices, when deemed effective, were merely co-opted and redescribed in psychological language so that not only did they seem new rather than appropriated, but more importantly, so that they did not imply a threat to the prevailing mystical fundamentals. Other effective practices actually originate independently in both communities under common prevailing contingencies. Under sufficiently strong natural contingencies, there is no need for either side's science, although once essentially the same practice appears in both camps, it is given very different descriptions and interpretations in the respective behavioral and psychological communities.

Should accumulating evidence force a traditional psychologist to the brink of either abandoning mystical inner agents or discounting valid and reliable evidence, the typical traditional psychologist treats the dilemma as a Hobson's choice—there is no real option. Any science that contradicts the fundamental mystical assumptions is abandoned. People who got into science in the first place only in order to shed some scholarly light on the details of their deepest philosophical assumptions (including, especially, those of a religious nature) are not going to abandon those foundations if that science starts causing trouble. Instead, they abandon the science, which at that point is merely an intellectual tool that initially looked helpful but has proven to

cause more difficulties than it is worth. The rise and fall of behaviorism in psychology during the 1940s 50s and 60s exemplifies this cycle at a group level.

Behavior analysts who keep trying to "make-over" psychology would appear to be wasting their time. Why then do so many behavior analysts, preoccupied with pointing to limited successes, not seem to notice how well-failed that comprehensive experiment has become by this late date? It has been 46 years since Keller and Shoenfeld referred to acceptance of the basic behavioral viewpoint as "perhaps the most difficult reorientation of all for beginning students in psychology" (Keller & Shoenfeld, 1995/1950, p. 391). Why today do so many continue to present themselves as soldiers devoted to carrying on that good fight? Perhaps they are actually just hanging around organized psychology for a share of the professional resources that it controls while concealing that motive behind the flag of the behavioral crusade. As I wrote in a personal note several years ago, organized psychology is like a big fat sow with endless rows of teats, and few behavior analysts seem ready to let go of the one that they have managed to elbow away from the other piglets.

But what of the cost to the discipline? In psychology training programs, behavior analysis will not be permitted to undermine traditional psychology, so a natural science of behavior dare not be taught well enough to permit students to appreciate behavior analysis as a comprehensive integral and alternative discipline, because, to put it simply, traditional psychology does not seem equally effective in such comparisons. Therefore, behavior analysis is stifled and suppressed in various ways within psychology training programs. Typically, if a behavioral faction is tolerated on the faculty, it is kept relatively small. The conspicuousness of the rare exception proves the rule. Instead of comprehensive behavioral training featuring three or four levels of courses from introductory to advanced, as found in the training curricula of other *independent* natural sciences, only a smattering of behavioral courses are offered, which precludes comprehensive training. Often a whole behavioral *course* is deemed intolerable. Instead, the behavioral subject matter is divided into fragments. After those that conflict too strongly with psychological assumptions and perspectives are discarded, the remaining fragments are shuffled among the traditional contents of various psychology courses where they appear only as integrated chapters or briefer topics-and, in general, are treated as little pieces of psychology rather than as fragments of an integral natural science discipline that is antithetical to a discipline constructed around mystical assumptions of bodies driven by self-agents. Within psychology curricula, the critical comparative analysis of disciplines is seldom included, so students get little or no foundation upon which to give analytical consideration to such fundamental disciplinary disparities. If a facet of behavior analysis is, in general, deemed too antithetical to fundamental psychological assumptions to be allocated any space in a psychology curriculum, it is simply omitted entirely. For example, few psychology training curricula, even those laced with behavior analytic fragments, include coherent training in verbal behavior, a subdivision of our science that substantially dispels the internal agent.

Finally, in psychology departments a strong professional ethic is promoted among the faculty that renders shameful any serious criticism of what another faculty member is teaching. All parties, including any behavior analysts who happen to work

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there, have to behave as though anything being taught within the department is potentially worthwhile, even though much of it wastes students' resources on kinds of explications that cannot support practical behavior technologies, and, more importantly, stunts their scientific intellect.

If the point is to hang around the fountain of resources, then the training programs (and most everything else) must be kept within organized psychology. The science may be sold out to buy into the resources, but if that kind of access to resources is the prime objective, then there is no real choice. But continuing to wave the flag of the "good behavioral fight" to hide why one is really there is increasingly transparent.

If the point is to consolidate and develop an integral natural science discipline, then that cannot and will not happen within organized psychology. Psychology is home to a different and antithetical epistemology. It provides undergirding foundations to a family of disciplines that do not yield their basic premises about the nature of man to contrary evidence. If the point is really to establish behavior analysis as the *natural* science of environment/behavior relations, then psychology must eventually be circumvented, because it cannot be changed. The prescription in that case is to move toward greater independence, and press for membership in the coalition of natural sciences. Some preliminary steps in that direction have been taken (Fraley & Ledoux, 1997).

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Lawrence Fraley will respond to the following critical reviews of Grote, Johnston, Rakos, and Wulfert in the next issue of BSI.
