
Pluralism in the Sciences Is Not Easily Dismissed



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The unification scheme proposed by Henriques in his article "Psychology Defined" (this issue, pp. 1207–1221) holds promise as a coherent and comprehensive approach to psychology and as a helpful way to think about the relation of psychology to other sciences. There is, nevertheless, room for concern that there is no concept of unification to date that does not neglect important dimensions of human experience. It is argued that the disunities in psychology need not result in a sense of disciplinary inferiority. In fact, many leading scholars now challenge the belief that other sciences are models of integration and unity. It is also argued that there are not true type identities between levels of organization (e.g., experience and underlying neurological processes). Accordingly, there are serious questions about the kind of unity that can be achieved. © 2004 Wiley Periodicals, Inc. *J Clin Psychol* 60: 1275–1278, 2004.

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Henriques, in his article "Psychology Defined" (this issue, pp. 1207–1221), has attempted to provide a systematic approach to psychology that bridges awkward gaps (e.g., mental vs. behavioral, animal vs. human) that beset the field. His wish is to provide a more coherent scientific and philosophical base as a means of enhancing communication and the scientific status of the field. He has indeed produced a reasonably coherent approach to psychology with a much more comprehensive reach than one encounters in earlier systems such as classical behaviorism, structuralism, and psychoanalysis. Though mental behaviorism may receive high marks for its reach and for its coherence, there may be legitimate concerns regarding its adequacy and its faithfulness to many rich dimensions of human experience. In what follows, I outline concerns with the general concept of unification, argue that the other sciences are not as unified as Henriques would have us believe, and point to difficult work that will have to be accomplished if mental behaviorism is to become a viable system.

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The Disunity of Unity

The concept of unification apparently speaks to deep and pervasive human needs. History, from ancient times, has witnessed continuing quests in religion, philosophy, economics, government, and science for grand all-encompassing schemes that attempt to speak to the disconnections, brokenness, and fragmentations encountered in human experience. Huxley (1962), in his novel *Island*, captures the sentiment beautifully in the expression "Nothing short of everything will really do" (p. 134). A "theory of everything" is the grand dream of many physicists, though we are reminded that such a theory is a misnomer, because as noted by Stephen Hawking (1993), a theory of everything will still not tell us "that Sinead O'Conner will be at the top of the hit parade this week, or that Madonna will be on the cover of *Cosmopolitan*" (p. 128). Hawking's reminder underscores problems associated with theoretical unity. Is there any unity that will really clean up all the litter or pick up all the pieces or will there forever be a foreign hull filled with phenomena regarded as secondary or epiphenomenal? Is there any unity anywhere that does not blur the distinction between advocacy and genuine inquiry? Can unity be instituted so as to assure that it does not slip into totality? If there are genuine mutations and chaos in the world itself, can unified schemes be responsive and adaptive, or will they place us in intellectual straight jackets and thus impede progress and creativity?

More difficult questions arise with respect to kinds of unity. A grand unity would somehow bring epistemology, ontology, and axiology together into some kind of, very complicated and possibly unimaginable union. The focus of Henriques' proposal, as I understand it, is largely on epistemological unity, but epistemologies come along with ontological and axiological baggage. Within a purely naturalistic framework, there are quarrels among nominalists, classical empiricists, and materialists. Each of these naturalistic orientations favors different methodologies. It is no surprise, that a great many scientific and philosophical luminaries argue that there is no one scientific method (e.g., see Bridgman, 1955; Brush, 1974; Dupré, 1993; Feyerabend, 1975; Haack, 2003; Hildebrand, 1957; Medawar, 1984). Psychologists, like other scientists, use a host of different kinds of methods (deduction, induction, intuition, introspection, controlled experimentation, correlational studies, naturalistic observation, amplification of the senses, etc.) each adapted to the demands of specific and highly variable content areas. Are these methods really all of a piece or is it more realistic simply to admit that scientific epistemology and methodology are pluralistic?

Are the Other Sciences Unified?

Henriques views fragmentation as the alternative to unification. Another alternative, more accurate I think, is to contrast unification with pluralism. A pluralistic discipline is marked by genuine "islands" of intellectual work. Methods and content differ from island to island, but each work zone enjoys some degree of coherence and intelligibility. Connections and disconnections are recognized. Work zones are sometimes bridged both through conceptual schemes and through hard experimental work. Galison and Stump's (1996) book *The Disunity of Science*, Dupré's book (1993) *The Disorder of Things: Metaphysical Foundations of the Disunity of Science*, and Parson's book (2003) *The Science Wars* are among the many important sources in a growing literature that challenges the idea that everything is connected to every other thing in the sciences. One need not be a radical constructionist to have serious doubts about the unity of the sciences. In my earlier work as Director of the Biology Core Curriculum at Colorado State University, I found that the biologists were divided on many of the same issues that divide psychologists

(Viney, 1996, 1998). Even a cursory examination of a journal such as *Biology and Philosophy* confirms the observation. Biologists, like psychologists, are unified by evolutionary perspectives, but even here, there are major quarrels about how evolution works. There is little need for bio-envy on the part of psychologists.

Mental Behaviorism

Henriques envisions a Tree of Knowledge (ToK) System that includes four dimensions, including four classes of science (physical, biological, psychological, and social) associated with four classes of objects (material, organisms, animals, and humans) and four levels of complexity (matter, life, mind, and culture). The four dimensions correspond to current academic structures marked by physical, biological, behavioral, and social sciences. The four dimensions in the ToK System are associated with four theoretical “joint points” that account for the emergence of new levels of complexity and for transitions (top down or bottom up) from one dimension to the next.

The ToK System is a helpful way to think of the sciences and the evolution of the sciences. It is the concept of joint points that is problematic and that raises questions about how unity can be achieved and the kind of unity that can be achieved. In the biological sciences, there are compelling reasons to believe that major disjunctions challenge the idea that there are clear-cut bridges from molar to molecular domains. Kincaid (1990), for example, argues that molecular biology cannot be reduced to biochemistry because major functions are lost in the transition and because explanations at the biochemical level “presuppose biological facts rather than eliminate them” (p. 577). If there is not a type identity between the biochemical and molecular biological levels, then what kind of unity can we expect? Do we have a real substantive unity or a mere correlational unity? In psychology, the functional component of the phi phenomenon is the experience of movement. The difficulty of understanding the functional component in terms of the underlying parts contributed to the idea set forth by Gestalt psychologists that “the whole is psychologically, logically, epistemologically, and ontologically prior to its parts. A whole is not only more than the sum of its parts, it is entirely different from a sum of parts” (Wertheimer, 1983 p. 43). If there are true type disjunctions between the whole and its parts, then various levels of study (e.g., physical, biological, psychological, social) are legitimate in their own right and need no justification in terms of their connections (substantive or correlational) to lower level realities. Nobody denies the importance of the quest for connections between levels but, from a pluralistic perspective the discovery of type identities may forever be frustrated and if that is the case, a pluralistic perspective just may be more empirical and more scientific than any of the varieties of monism that are always too quick to tell how to count and what to count.

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