

Is Our Focus Becoming Overly Narrow?

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As is evident from the fact that the beginning of my career preceded the birth of APS (indeed, I was at the initial meetings that spawned our organization), I have been in the field for a long time, having received my PhD more than 38 years ago. As a consequence, I have observed changes in the field over 4 decades. Many of these have been very positive, but some trouble me. One of the perks of being President of APS is that I have a forum for expressing some of those concerns. In this initial column, I would like to draw attention to several related issues that concern me about our discipline.

In the past 20 or so years, there have been major advances in our understanding of the role of genetics, neural processes, and physiological processes (e.g., hormones, respiratory sinus arrhythmia) in human functioning. These domains of research have contributed immensely to our understanding of an array of issues in psychology and will no doubt continue to do so. However, as a consequence of the visibility and excitement about biologically oriented work, I have noticed a tendency toward reductionism by some individuals in the field and by some funding agencies. There seems to be an increasing tendency to assume that studying genetic/neural/physiological processes is more important than research on behavior and psychological processes per se because biological findings will eventually explain most of human psychological functioning. This belief is especially evidenced in the funding priorities at some of the National Institutes of Health. It can also be seen in the hiring patterns of many psychology departments that place a priority on hiring people who study biological processes or aspects of cognition that can be tied to neuroscience.

It has been argued that such reductionism is not always productive (e.g., Turkheimer, 1998). As eloquently expressed by the Nobel Prize winning physicist P. W. Anderson in 1972, some sciences, such as psychology, build upon the laws and concepts (“fundamental laws”) of the more “basic” sciences, such as physics, biology, and genetics, in what he labeled “the hierarchy of science.” Anderson maintained that the main fallacy of the reductionist hypothesis is that “the ability to reduce everything to simple fundamental laws does not imply the ability to start from those laws and reconstruct the universe” (p. 393). Anderson noted that “psychology is not applied biology” (p. 393). Although each science (or aspect of science) builds upon the principles of the lower (i.e., more fundamental) levels, at each new level of complexity entirely new principles — not reducible to those at the lower level(s) — appear, and new processes and outcomes must be understood. In other words, human behavior and social interactions/relationships are not reducible to a simple combination of neural firings or to the expression of genetics, the functioning of hormones, or other primarily biological processes (although, of course, they are certainly constrained by these factors).

A partly related issue is the diminished status of and focus on measures of meaningful overt behavior, a shift that is more apparent in some subdisciplines of psychological science than in others. As discussed by Baumeister, Vohs, and Funder (2007), measures of meaningful actual behavior — behaviors other than filling out questionnaires or performing tasks on a computer that assess action times, implicit associations, or memory recall — have become fairly rare in social and personality psychology. Based on an examination of papers published in the *Journal of Personality and Social Psychology*, the researchers found a dramatic decline in studies involving overt behavior from the 1970s to 2006. By actual behaviors, they meant overt behaviors like “jumping, goofing off, flirting, stealing, walking, playing ...” — not reporting on relevant behaviors, using a computer for experimenter-implemented tasks, or internal processes like remembering. Baumeister et al. suggested that this trend is partly due to the priority in the premiere journals for multiple studies and for including measures that tap mediating cognitive processes. Given the cost in time and money, as well as the difficulty, of collecting meaningful behavioral data, it is difficult to publish a set of studies based on observed behavior in a timely manner. In a similar vein, Cialdini (2009) noted that field studies are seldom published in the relevant premiere journals in psychology, in part because of those journals’ focus on mediating cognitive processes, which are hard to access in real-life contexts.

Although behavior is more valued in some subdisciplines (e.g., developmental psychology) than in others, the same problems exist in many areas of psychology. Direct measures of behavior seem to be valued no more, and perhaps less, than self-report data and other types of nonbehavioral data collected in artificial experimental contexts. Yet the crux of what many of us want to understand is real-life human behavior.

A third concern is that research on micro- and macroenvironments also seems to be undervalued. One very important lesson learned from studies of epigenetics and Gene \times Environment interactions is that the environment is essential in understanding genetic and biological processes as they play out in life and affect adjustment and other aspects of human functioning (e.g., Ellis et al., 2011; Meany, 2010). The more we learn about genetics, the more obvious it becomes that we cannot understand human beings without careful study of processes such as social stressors and parenting quality that influence, as well as moderate, the expression of biologically based individual differences. Moreover, neural functioning is affected by the context individuals are in at the time of assessment, especially if they are processing information of significance. Thus, a focus on environments should go hand in hand with a focus on

genetics and neuroscience.

When assessed, the microenvironment (e.g., the context an individual is in, the family environment) often is measured with only self-report measures. Yet observations, objective data, and information from multiple observers are likely to better capture the complexity of the social environment. With regard to the macroenvironment (e.g., economic systems, political systems, religious systems, climates, geography), Oishi and Graham (2010) noted the decline in recent decades of research on the social ecology, especially as reflected in the decline of programs on environmental and community psychology (as well as, I would add, departments of sociology). They did acknowledge the current interest in cultural psychology, which highlights some aspects of the macroenvironment, but simultaneously noted the neglect of other macrosystems that exert a distal yet important influence on human cognition and behavior.

A last issue was aptly expressed by Philip Cowan (a clinical psychology faculty member for many years at the University of California, Berkeley) in a discussion of change in the priorities in psychological science. Let's assume, for the sake of argument, that it were to be proved that all mental illness is caused by genetic, neurological, and other biological factors. Without contextual and psychological theories and data, biological explanations of mental illness would leave us with inadequate tools to guide our approaches to treatment and intervention. In other words, to be relevant to social problems, we must understand real-life behavior and how to change it.

To summarize, in my view, there has been a shift in what psychological science values, with a cost to our science. The recent illuminating research on biological mechanisms has added greatly to our understanding of human functioning. However, it cannot replace research on overt human behavior, human cognition in situ, or the roles of social interactions and cultural, historical, and geographical factors in human functioning. A larger perspective informed by knowledge about all levels of analysis is in jeopardy. An important challenge for psychological science is to better frame and assess the interconnections among the various levels of analysis.

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