## Taxonomy as a Contextualist Views It



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The Henriques' article, "Psychology Defined" (this issue, pp. 1207–1221), reflects an underlying philosophy of science that emphasizes coherence as its truth criterion. The taxonomic efforts that result are of unknown value when viewed from other philosophical positions. From the point of view of functional contextualism, the primary metric of successful science is not coherence per se, but the precision, scope, and depth of the analysis as a means of predicting and influencing psychological phenomena. Henriques presents neither data nor specific research proposals that would allow even the beginning application of such a metric. Thus, the proposed taxonomy has no known value when viewed contextualistically. Since the practical goals of clinical psychology are very similar to those of functional contextualism, clinical psychologists interested in making a practical difference will have few current empirical reasons to be attracted to this taxonomy. © 2004 Wiley Periodicals, Inc. J Clin Psychol 60: 1231–1235, 2004.

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All scientists bring assumptions to their work because no symbolic or analytic system can function without assumptions that lie outside of the system itself. Philosophy of science helps scientists recognize, appreciate, and harmonize their assumptions.

I have found it helpful to think through complex psychological issues in terms of the major philosophical division proposed by Pepper (1942). The three general systems that seem most relevant to this paper are mechanism, organicism, and contextualism.

Mechanists seek a comprehensive model of the machine that is the world, and from that point of view, the present exercise is true to the extent that it reveals the underlying parts, relations, and forces that make up reality. Predictive verification or falsification is the primary metric of truth.

Organicists seek an appreciation of the way disparate features unite into an organic whole that reflects the purpose and development of the entire system. Coherence is the primary metric of truth.

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Contextualists seek ways of speaking that accomplish specified analytic goals—truth is always situated and pragmatic, not universal and ontological. Successful working is the primary metric of truth.

This present effort seems situated as an organicist exercise (or perhaps an ambitious formist, which is the same thing). The arguments are focused on coherence and the removal of apparent contradictions in the context of an appreciation of the whole, or as Henriques says in his paper, "any successful conception of psychology should be able to reconcile . . . seemingly contradictory facts" (this issue, p. 1212). The philosophical basis of this statement is revealed, in part, by the fact that he does not say *why* such reconciliation is necessary for success. Removal of contradictions does not have to be justified because it is part of the assumptive base of organicism itself.

I am a functional contextualist (or, in more commonly understood terms, a pragmatically oriented behavior analyst) and have laid out in several venues what that means (Biglan & Hayes, 1996; Hayes, 1993; Hayes, Hayes, & Reese, 1988; Hayes, Hayes, Reese, & Sarbin, 1993; Hayes, Strosahl, & Wilson, 1999). From the standpoint of a contextualist, truth always implies the accomplishment of some goal, and thus analysis for analysis' sake is disparaged:

Serious analysis for [the contextualist] is always either directly or indirectly practical . . . If from one texture you wish to get to another, then analysis has an end, and a direction, and some strands have relevancy to this end and others do not, and . . . the enterprise becomes important in reference to the end. (Pepper, 1942, pp. 250–251)

Behavior analysis is perhaps the most visible functional contextual system, and in the same vein Skinner said:

It is true that we could trace human behavior not only to the physical conditions which shape and maintain it but also to the causes of those conditions and the causes of those causes, almost ad infinitum but we need take analysis only to the point at which "effective action can be taken." (Skinner, 1974, p. 210)

In such an approach, goals are foundational because without them it is impossible to evaluate what is effective. Further on, I will describe the specific goals of functional contextualism.

Thus, it is not surprising that I would look at the present effort and ask, "What effective action can now be taken? Toward what goals?" Henriques does not present actual *data* showing that thinking of the world this way is useful in a practical or empirical sense. The only goals that are mentioned are essentially coherence goals. Thus, no new treatments are described, and no new experiments are laid out. If this analysis is practically useful why can't it be shown in a real, practical way?

This may seem unfair, because my goals need not be the author's. But practical goals are built into applied psychology. The pragmatist in me is willing to stand with that sense of unfairness and withhold judgment on this analysis until there is a good reason to do otherwise. From a contextualistic perspective, there is no difference that does not make a difference. I will await the evidence that this way of speaking makes a difference.

I could stop there, and on purely pragmatic grounds perhaps I should. But let me explicate this issue by way of an example that deals more directly with one of the author's more specific and applied claims. Henriques agrees that philosophy "coherently connects science with practice" (this issue, p. 1214). He uses cognitive-behavior therapy (CBT) as an example, claiming that CBT uses advancements in the cognitive and behavioral sciences to inform the development of psychosocial treatments, and that its value derives

from its ability to do so. He then points to the deep philosophical incoherence within CBT causes by its combination of mentalism and anti-mentalism.

Henriques is reacting more to labels than to the data. Cognitive-behavior therapy's theory of cognition is an applied theory based on common sense conceptions of cognition. If the author feels that empirically important CBT techniques have been drawn from cognitive science per se some examples should be given. There is very little evidence to suggest that the value of CBT is even dependent on cognition as viewed from within that approach, never mind what supposedly has come from cognitive science. When CBT is analyzed into its components, the most common finding is that there is "no additive benefit to providing cognitive interventions" (Dobson & Khatri, 2000, p. 913; see for example, Gortner, Gollan, Dobson, & Jacobson, 1998; Jacobson, Dobson, Truax, Addis, Koerner, Gollan et al., 1996; Zettle & Hayes, 1987 among others). The response to CBT occurs before the cognitive features have been adequately implemented (Ilardi & Craighead, 1994). Support for the hypothesized mediators of change in CBT is poor, particularly in areas that are causal and explanatory rather than descriptive (Beck & Perkins, 2001; Bieling & Kuyken, 2003). The Henriques solution for philosophical incoherence would presumably not suddenly alter these facts.

Conversely, a more contextualistic approach to cognition might solve both the practical barriers and any philosophical inconsistencies. A robust set of new, more contextualistic procedures have been developed, such as Acceptance and Commitment Therapy (ACT; Hayes et al., 1999), Dialectical Behavior Therapy (Linehan, 1993), Behavioral Activation (Jacobson, Martell, & Dimidjian, 2001), or Functional Analytic Psychotherapy (Kohlenberg & Tsai, 1991). I will use ACT as an example, because its philosophical and theoretical basis is most explicit and because I am most knowledgeable about it.

Acceptance and commitment therapy is based on functional contextualism, which defines the psychological level of analysis as "whole organisms interacting in and with a historical and situational context" (Hayes et al., 1999, p. 18). These psychological events are, in turn, categorized by the processes that allow them to be predicted and influenced with precision, scope, and depth (since those are the analytic goals of functional contextualism as opposed to other types of contextualism; Hayes, 1993). These include both direct contingencies and verbally based processes (Hayes et al., 1999). Acceptance and commitment therapy is based on a specific theory of language and cognition, Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) that defines language and cognition in terms of learned, contextually controlled derived relational responses. Scores of studies have been done on this idea (see Hayes et al., 2001 for a review) and so far the data are almost universally supportive. As an applied matter, this analysis suggests practically useful forms of contextual control that can reduce the impact of negative private events without necessarily changing their form or frequency, such as acceptance and cognitive defusion. This claim has, in turn, been empirically supported by outcome studies (see Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004, for a review), process analyses (e.g., Bach & Hayes, 2002; Zettle & Hayes, 1986) and component analyses (e.g., Masuda, Hayes, Sackett, & Twohig, 2004; Gutiérrez, Luciano, Rodríguez, & Fink, in press).

My point here is that this corner of behavior analysis already has (a) a definition of behavior that avoids the philosophical problems Henriques mentions, (b) a definition, set of new principles, and a robust research program in cognition; and (c) a direct link to applied techniques and concepts that have a growing basis of empirical support. Based on Henriques, either this should not be possible (since it should be incoherent based on his account), or it should not be effective (if he truly means to suggest that his analysis is needed to wed basic and applied psychology in the cognitive and behavioral domains).

There are an infinite number of ways to divide the world. Some of the divisions and definitions in Henriques' article seem very strange, but if they paid off in the empirical prediction and influence of psychological events with precision, scope, and depth I would not complain. Meanwhile, however, there is work to do. Modern behavioral psychology divides events in ways that have, in fact, led to successful prediction and influence, with high precision and high depth. It slowed when it reached human language and cognition, showing a problem in the area of scope, but that barrier seems to have been largely overcome. That background makes it easy to do in this specific instance what any contextualist normally would: await the evidence that this way of speaking makes a difference against goals of interest.

## References

- Bach, P., & Hayes, S.C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. Journal of Consulting and Clinical Psychology, 70, 1129–1139.
- Beck, R., & Perkins, T.S. (2001). Cognitive content-specificity for anxiety and depression: A metaanalysis. Cognitive Therapy & Research, 25, 651–663.
- Bieling, P.J., & Kuyken, W. (2003). Is cognitive case formulation science or science fiction? Clinical Psychology: Science & Practice, 10, 52–69.
- Biglan, A., & Hayes, S.C. (1996). Should the behavioral sciences become more pragmatic? The case for functional contextualism in research on human behavior. Applied and Preventive Psychology: Current Scientific Perspectives, 5, 47–57.
- Dobson, K.S., & Khatri, N. (2000). Cognitive therapy: Looking backward, looking forward. Journal of Clinical Psychology, 56, 907–923.
- Gortner, E.T., Gollan, J.K., Dobson, K.S., & Jacobson, N.S. (1998). Cognitive-behavioral treatment for depression: Relapse prevention. Journal of Consulting & Clinical Psychology, 66, 377–384.
- Gutiérrez, O., Luciano, C., Rodríguez, M., & Fink, B.C. (in press). Comparison between an acceptance-based and a cognitive-control-based protocol for coping with pain. Behavior Therapy.
- Hayes, S.C. (1993). Analytic goals and the varieties of scientific contextualism. In S.C. Hayes, L.J. Hayes, H.W. Reese, & T.R. Sarbin (Eds.), Varieties of scientific contextualism (pp. 11–27). Reno, NV: Context Press.
- Hayes, S.C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). Relational frame theory: A post-Skinnerian account of human language and cognition. New York: Plenum Press.
- Hayes, S.C., Hayes, L.J., & Reese, H.W. (1988). Finding the philosophical core: A review of Stephen C. Pepper's "World Hypotheses." Journal of the Experimental Analysis of Behavior, 50, 97–111.
- Hayes, S.C., Hayes, L.J., Reese, H.W., & Sarbin, T.R. (Eds.). (1993). Varieties of scientific contextualism. Reno, NV: Context Press.
- Hayes, S.C., Masuda, A., Bissett, R., Luoma, J., & Guerrero, L.F. (2004). DBT, FAP, and ACT: How empirically oriented are the new behavior therapy technologies? Behavior Therapy, 35, 35–54.
- Hayes, S.C., Strosahl, K., & Wilson, K.G. (1999). Acceptance and commitment therapy: An experiential approach to behavior change. New York: Guilford Press.
- Henriques, G. (2004). Psychology defined. Journal of Clinical Psychology, 60, 1207–1221.
- Ilardi, S.S., & Craighead, W.E. (1994). The role of nonspecific factors in cognitive-behavior therapy for depression. Clinical Psychology: Science & Practice, 1, 138–156.
- Jacobson, N.S., Dobson, K.S., Truax, P.A., Addis, M.E., Koerner, K., Gollan, J.K., Gortner, E., et al. (1996). A component analysis of cognitive–behavioral treatment for depression. Journal of Consulting and Clinical Psychology, 64, 295–304.

- Jacobson, N.S., Martell, C.R., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. Clinical Psychology: Science & Practice, 8, 255–270.
- Kohlenberg, R.J., & Tsai, M. (1991). Functional analytic psychotherapy: Creating intense and curative therapeutic relationships. New York: Plenum.
- Linehan, M.M. (1993). Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford.
- Masuda, A., Hayes, S.C., Sackett, C.F., & Twohig, M.P. (2004). Cognitive defusion and self-relevant negative thoughts: Examining the impact of a ninety-year-old technique. Behaviour Research and Therapy, 42, 477–485.
- Pepper, S.C. (1942). World hypotheses: A study in evidence. Berkeley: University of California Press.
- Skinner, B.F. (1974). About behaviorism. New York: Knopf.
- Zettle, R.D., & Hayes, S.C. (1986). Dysfunctional control by client verbal behavior: The context of reason-giving. The Analysis of Verbal Behavior, 4, 30–38.
- Zettle, R.D., & Hayes, S.C. (1987). Component and process analysis of cognitive therapy. Psychological Reports, 64, 939–953.