



Short report

Interbehavioral psychology and the behavior systems framework: A brief reply

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ARTICLE INFO

Keywords:

Behavior systems theory
Field orientation
Interbehavioral psychology
Psychological event
Systems

ABSTRACT

The present commentary considers a paper by Silva, Silva, and Machado (2019) published in this special issue, which describes some relations between Behavior Systems Theory and Interbehavioral Psychology. In particular, the systems aspects, field orientation, and role of experimentation in both Behavior Systems Theory and Interbehavioral Psychology are discussed. Similarities and differences among the two perspectives are highlighted, and misconceptions about Interbehavioral Psychology are addressed.

Silva et al. (2019) propose some connections between Timberlake's Behavior Systems Theory and J. R. Kantor's Interbehavioral Psychology (e.g., Kantor, 1958). As Kantor's work is not particularly well known to researchers, both in the larger field of psychology and even within behavioral circles, noting connections to Kantor's work is important. Moreover, while there are several offshoots of mainstream behaviorism (i.e., Skinner's radical behaviorism), few proponents of these positions make the effort to note similarities among them. There are many benefits in doing so however, including highlighting the potential for integration, opportunities for further clarification of various aspects of the approaches under consideration, and more. In what follows we comment on some recurring themes throughout the manuscript by Silva et al., elaborate further upon them, and also clarify potential points of confusion and opportunities for clarification.

1. Systems orientation

The systems orientation of both the behavior systems framework and interbehavioral psychology is noted by Silva et al. (2019) throughout the manuscript. Broadly speaking, it seems that this similarity is about a greater appreciation of the context in which behavior occurs. For example, the behavior systems framework acknowledges that there is much to be considered with respect to the fit between the subject's evolutionary history or species characteristics and the experimental context. In interbehavioral psychology, contextual factors are considered to be setting conditions, and as explained in the authors' description of Kantor's psychological event (Kantor, 1958), setting conditions are fundamental in the analysis of behavior. Setting

conditions of the organismic type such as fatigue or sickness, for example, have a significant impact on psychological happenings (also see Hayes and Fryling, 2014). Importantly, setting conditions are just one factor in Kantor's description of the psychological event. Psychological happenings are complex, involving interbehavioral history, stimulus and response functions (which are often substitutional in nature), and more.

While the interest in context does seem to be a broad similarity among the two perspectives, in interbehavioral psychology (Kantor, 1958) the word *system* is used to describe scientific disciplines. In organizing sciences as systems, scientific disciplines are encouraged to continually engage in system building activities, which involve evaluating the validity, significance, and comprehensiveness of the discipline. In this context validity refers to the internal consistency of the discipline; the extent to which the discipline is free from internal contradiction. Significance, similar to validity, is concerned with coherence, except in this case the coherence is with respect to the larger domain of the sciences. These issues are particularly important in a science such as psychology where dualistic folklore, which is always lurking in the background, may undermine efforts to develop a natural science (Kantor, 1953). Finally, scientific disciplines are urged to be comprehensive in the sense that they are to pertain to the full range of events that fall within the purview of the subject matter (in this case, psychological events). Looking at sciences as systems also encourages a careful analysis of disciplinary assumptions and constructs, among other features of the enterprise (see Clayton et al., 2005).

Further, Kantor's conceptualization of sciences as systems involves specific *subsystems* (Kantor, 1958). These subsystems pertain to matters

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of investigation, interpretation, application, and technology. Importantly, when activities specific to particular subsystems are viewed as *parts* of a larger scientific discipline, the risk of confusing or substituting those activities for the entire discipline is minimized. Moreover, this view encourages the valuing of all varieties of scientific activity. For example, work on the philosophical foundations of a science, or in its interpretive sub-system would be valued as much as the investigative work of that science. Likewise, application would be less likely to overshadow or be considered more important than basic experimental work. In other words, when all of these activities are conceptualized as aspects of a larger effort, the scientific discipline as a whole, their importance is clear. To Kantor, the *system* is the scientific discipline itself, whereas in behavior systems theory, the *system* appears to be a feature of the subject-matter of the discipline.

2. Field orientation

As mentioned above, the authors draw a connection between the behavior systems framework and Kantor's psychological event construct, which exemplifies the broad field orientation of interbehavioral psychology. While there does seem to be some similarity among the two positions, as both draw attention to the larger context in which behavior occurs, there may be some differences worth additional consideration. In reading through the article by Silva et al. (2019) we note the use of words such as "levels" and "control" in descriptions of the behavior systems approach (e.g., p. 117). In other writings on the approach, words such as "underlying" also stand out as being suggestive of potential differences among the perspectives (e.g., Timberlake, 2001, p. 197, p. 202). While we are in no way experts on the behavior systems perspective, we provide some brief comments on potential differences related to this language to highlight opportunities for integration and clarification among the positions.

Kantor's psychological event doesn't involve any *levels* that exert some sort of *control*. From Kantor's perspective, no factors are held to be "operating" at a higher or lower level than other factors. Further, no factors are held to be "in control" of other factors (Kantor, 1958). Rather, all factors *participate* in psychological events from an interbehavioral perspective. Second, and related to the authors' notion of *levels*, it seems that there may be a linear-type sequence involved in the aforementioned description of the behavior systems framework. That is, that systems impact subsystems, which impact modes, and so on. Kantor's psychological event does not involve such a linear sequence, one factor doesn't lead to another factor, etc. This is even the case in the context of interdisciplinary relationships (e.g., biological events aren't held to underlie or be in control of psychological events; Hayes and Fryling, 2009). This is not mentioned here as a critique of behavior systems theory, rather to point to potential conceptual differences between the positions.

2.1. Multiple measures

Related to the psychological event, Silva et al. (2019) also note a similar interest in multiple-measures among the two perspectives. While this also seems like it may be a similarity between these positions, the interest in multiple-measures may also bespeak of a potential difference between them. Specifically, in behavior systems framework it seems that the interest in multiple-measures may derive from the various levels involved, the systems, subsystems, and so on. In other words, it appears that in behavior systems perspective it is not a single behavior that is changed in the course of learning, but rather an *entire system* (or what some might say an entire "class" of behavior). In interbehavioral psychology, the interest in multiple-measures pertains to one of the system assumptions of interbehavioral psychology (Kantor, 1958, p. 79), namely that "Psychological events involve the participation of total organisms, not merely special organs or tissues". While particular behavior is measured for experimental purposes, it is always

the whole organism that is responding. In Kantor's words:

We never make only one kind of contact with a stimulating object. We do not hear through our ears alone, but through our eyes also. And conversely, we see things through our ears and touch reactions too. In all cases we do nothing less than act as a complete and complex person with all the numerous reaction systems which make a complex response to a stimulus situation, and which moreover may be influenced by a very elaborate setting (Kantor, 1977, p. 127).

3. Experimentation

Finally, Silva et al. also note a common critique of Kantor's work, that it did not generate a body of traditional empirical research. This critique is puzzling for a number of reasons. First, it seems to rest on an implicit assumption, namely that science is about proving things to be correct or incorrect, true or false. It assumes that there is a *true* way of looking at things, and that science is about discovering this truth. From an interbehavioral perspective science isn't about discovering "truth" or proving things to be correct (Kantor, 1953). Rather, science is about discovering relations among factors, to better understand how various factors participate in psychological events. Interestingly, the authors seem to acknowledge this, but at the same time continue to endorse the idea that a lack of empirical research is a shortcoming. In their words, "this does not change the widespread belief that Kantor's views were not readily amenable to scientific research" (Silva et al., 2019, p. 123).

This is an unfortunate misunderstanding. As the authors note, interbehavioral psychology conceptualizes psychological events as multi-factored fields (Kantor, 1958). Interbehavioral research, then, involves manipulating some aspect of the field and evaluating the extent to which that manipulation impacts the organization of the other factors comprising the psychological event. In other words, investigators manipulate something and then look to see what happens when they do so. This is what all researchers do – including interbehavioral psychologists. Given this, it is difficult to understand how Kantor's ideas are not seen as "amenable to scientific research". How events are selected for investigation, research questions concerning them are developed and results are interpreted, among other matters, may differ in interbehavioral perspective, but this has nothing to do with the extent to which interbehavioral psychology is amenable to research.

While the view that Kantor's work is "not amenable to scientific research" is a common misunderstanding of interbehavioral psychology (and of science more generally), the persistence of this idea is a questionable rationale for repeating it. Perhaps the question as to *why* more interbehaviorists haven't pursued experimental research should be asked. As we see it, this is related to their pursuit of the broader aims of interbehaviorism as a philosophy of science, including its obligation to engage in continuous self-evaluation of scientific disciplines (Kantor, 1953, 1958).

4. Conclusion

In this brief commentary we have attempted to elaborate upon some of the themes mentioned in the commentary by Silva et al., with the hope that points of contact and departure among the perspectives may be considered further. Kantor's work spanned a great many topics, including work in the general area of the philosophy of science. In this sense, while sharing a general concern with the narrow focus of more mainstream behavioral approaches, it does seem that the aims of the two perspectives are somewhat different. The consideration of organismic conditions seems to be a particular strength of the behavior systems framework, and especially pertinent to the research conducted by workers in this area. As a thoroughly developed and articulated philosophy of science and science of psychology, it seems that Kantor's work could serve as a broad foundation for the behavior systems

framework as the framework continues to expand and evolve over time.

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