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Behaviorisms and Private Events

Michael J. Dougher
University of New Mexico

Classical, methodological, neo, radical, inter, analytical (logical), teleological, molar, contextual: Just a sample, readers, of the behaviorisms offered for your metaphysical dining and dancing enjoyment. They vary, both clearly and subtly, along several dimensions, but perhaps none is as fundamental as their treatment of privacy (e.g., private events, consciousness, etc.). The issues are deep, complex, and perhaps unresolvable by data; that is, they may remain solely within the domain of philosophical debate. The papers presented here by Jay Moore (2013) and Howard Rachlin (2013) clearly reflect this complexity, as do recent papers and exchanges in this journal (e.g., Baum, 2011a, 2011b; Catania, 2011; Hineline, 2011; Marr, 2011; McDowell, 2012; Palmer, 2011; Rachlin, 2011, 2012a, 2012b; Schlinger, 2012). The intellectual density of this issue notwithstanding, let me say ironically that I hope my comments will finally bring clarity to this issue and put it to rest once and for all.

Expanding on the theme of several of his previous writings (1984, 1985, 1995, 2008), Moore's paper presents in more detail the evolution of those behaviorisms deemed methodological and offers a typology for distinguishing among them, based on their varying interpretations of the behavioristic proscription against unobservables in a science of behavior. Here and other places, Moore nicely lays out the Skinnerian or radical behavioral view of private events and clearly elucidates its differences from methodological behaviorism. None of this seems very controversial, except perhaps his inclusion of Rachlin's teleological behaviorism and Baum's (2011a, 2011b) molar behaviorisms as examples of at least one kind of methodological behaviorism. Although Rachlin rejects this categorization, both he and Moore agree that neither teleological nor molar behaviorism is radical behaviorism, but they do not agree as to why. For Moore, the categorization hangs on Rachlin's and Baum's apparent rejection of all unobservables in a science of behavior. For Rachlin, the distinction hangs on the differences between his and Skinner's view of reinforcement. Rachlin argues that Skinner was forced into his view of private events via his contiguity-based (rather than a correlation-based) definition of reinforcement.

Rachlin's paper is based largely on his soon-to-be-published book, *The Escape of the Mind* (in press; in particular, Chapter 8). In this extraordinary book, Rachlin makes a clear and compelling case for eliminating the concept of mind from a science of behavior. He neatly illustrates the problematic assumptions that underlie mentalism and dualism, which are still the dominant perspectives of mainstream psychology, including the very vogue neuro-cognitive accounts of consciousness. Rachlin wants to move away from the idea that experience is the datum of psychology and that verbal reports reveal something about internal, mental, cognitive structures or events. In this and many other ways, he is in clear agreement with Skinner. But where he most clearly differs from Skinner (and others) is in regard to Skinner's perspective on private events and, in particular, private events as causes:

Address correspondence to the author at the Department of Psychology, University of New Mexico, Albuquerque, New Mexico 87131 (e-mail: dougher@unm.edu).

> With regard to the admissibility of inner causes in a science of behavior, the explicit purpose of Skinner's much-cited (1945) article, "The Operational Analysis of Psychological Terms," was to interpret mental terms such as *thoughts* in operant-conditioning language. Skinner was constrained in this effort by the necessity, imposed by his radical behaviorism, to find contiguous relationships underlying all behavior change. Skinner did not look for causes in the wider temporal environment because he was constrained to explain all behavior in terms of response–reinforcer contiguity. But, as I have tried to illustrate, both above and below, with a wider temporal understanding, a molar understanding, of the effective response-reinforcer relation, in terms of correlations rather than contingencies, it is not necessary to interpret mental terms ("psychological terms") as unobserved events occurring within the organism. (Rachlin, 2013, pp. 212–213)

For Rachlin, mental events are entirely public. They are said to occur in extended patterns of overt behavior over time and are readily observable in those extended patterns.

Actually, I'll admit that I don't fully grasp the assertion that private events are "in" extended patterns of overt behavior, except insofar as these patterns serve as a source of control over the verbal behavior of an observing scientist about the private events of the organism observed. Nor do I understand that they are readily publicly observable, but that is likely due to my own intellectual limitations or deficient extended patterns of behavior. This is to say I don't understand the problem with considering private events as instances of covert behavior. Can they not, as with overt behaviors, play a role, especially a pragmatic role, in a causal chain? With respect to their causal role, Skinner considered private events to be proximal causes, at best, whose influence is always assumed to derive from contingencies of survival and reinforcement. Given that consideration, my primary question here is what is to be gained pragmatically by abandoning Skinner's position and adopting Rachlin's? If behavior analysis is, in fact, essentially pragmatic (i.e., our truth criteria—our ultimate goals—are prediction and control of behavior), then it is reasonable to ask which position better serves that objective. Given the goals of behavior analysis, this question is not which perspective, Skinner's or Rachlin's, is true in some ontological or analytic sense; it is, rather, an empirical question and pertains to the relative pragmatic advantages each offers a behavioral science.

Rachlin and Baum argue that appeal to private events in a science of behavior obfuscates controlling relations and interferes with the development of a science of behavior. That is undoubtedly true when applied to traditional mentalistic and dualistic perspectives, such as those characterizing mainstream psychology and much of philosophy of mind. Without knowing the historical and immediate determinants of what are called mental or emotional states, behavioral dispositions, personality types, self-defeating thoughts, faulty cognitive schemas, and so on, there can be little hope for the development of a behavioral technology that can be applied to the many pressing behavioral and social issues that plague us today. But, it is not clear how the obfuscation concern of Rachlin and Baum applies to the radical behavioral perspective on private events. How exactly does that prospective obfuscate controlling relations or interfere with a science and technology of behavior? Where is the evidence or promise that a teleological approach would offer more? More specifically, I'm asking whether there might be some pragmatic advantage to considering at least some private or covert behaviors as events in a causal chain. Can we show that considering private events in this way can make a pragmatic difference that would be missed otherwise?

In response to Baum's (2011a) article on private events and molar behaviorism, Palmer (2011) offered several examples where attention to

private or covert events facilitates our understanding of behavior. One is a "mental" arithmetic problem in which an individual is first told that each letter in the alphabet is said to equal its ordinal position, so that A = 1, B = 2, and so on. The individual is then asked, "What is F + I?" As Palmer notes, most people get the correct answer, after a pause, even though they have not been asked this question before nor reinforced for answering it in this context. It is reasonable to assume (although it might be proven otherwise) that during the pause individuals covertly or privately recite the alphabet to F and then to I, while counting and then adding the number of letters named. Obviously, this covert repertoire results from a complex learning history, but Palmer's appeal to the proximal, intervening role of private behavior (a) infers no mental (nonbehavioral) processes; (b) does not appeal to a different, nonbehavioral level of analysis; and (c) postulates no discrimination of events (mental or otherwise) other than the individual's own behavior. The covert behavior occurs as part of a causal chain, and its effects are hard to deny unless we take the position that what we think (e.g., say to ourselves) has no effect on what we do. But this flies in the face of what we know about rule-governed behavior (Catania, Matthews, & Shimoff, 1982) and raises the question of why we spend so much time talking to ourselves if that talk is truly epiphenomenal.

A more empirical example of the pragmatic value of examining the role of subjects' covert verbal behavior as they interact with complex contingencies is offered in a study we published some years ago (Wulfert, Dougher, & Greenway, 1991). This study was an attempt to understand why some college students fail to show the emergence of stimulus equivalence classes after the appropriate match-to-sample training. Using Ericsson and Simon's (1980) protocol analysis procedure, the students were asked to talk aloud as they interacted with the match-to-sample tasks programmed on the computer. A comparison of the verbal behavior of the students who demonstrated the emergence of equivalence classes after training compared to the verbal behavior of the students who did not revealed that the former described the relations among the relevant stimuli (e.g., A, B, and C are all equal), whereas the latter described the sample and comparison stimuli as unitary compounds (e.g., A and B go together, A and C go together). Because the experiment demonstrated only a correlation between the students' talk-aloud behavior and the emergence of equivalence classes, a second experiment was conducted. In Experiment 2, equivalence class formation was brought under experimental control through pretraining manipulations that facilitated responding either to stimulus compounds or to relations among stimuli. The results demonstrated that a history of reinforcement for describing stimulus compounds interfered with equivalence class formation, whereas reinforcement for describing relations among stimuli facilitated class formation. Again, the students' covert behavior was controlled by their reinforcement and training histories, but these findings do demonstrate the role played by covert behavior as part of a causal chain of behavior, as well as the utility of analyzing verbal reports to identify possible controlling variables.

Skinner (1945) described plausible social and verbal processes that could account for humans' ability to discriminate and name private events. However, once discriminated, these events may acquire other functions. For example, in contexts in which feelings of anxiety or depression or the occurrence of certain thoughts are labeled as *pathological, abnormal, deviant, maladjusted,* and so on, it

isn't hard to imagine that these kinds of "negative" private events could themselves acquire aversive properties, thereby occasioning escape and avoidance repertoires. Indeed, this is a fundamental assumption of acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 2012), and the attempt to avoid such private events is labeled *emotional avoidance*. Emotional avoidance can take many forms (substance use, social withdrawal, suicidal behavior, ritualistic cutting, obsessions, etc.), but their common function is emotional avoidance.

In line with the view that thoughts and feelings are causes of behavior, cognitive and cognitive-behavioral therapies seek to alter directly the cognitions (thoughts, expectancies, beliefs) that are said to give rise to these behavioral problems. In line with the radical behavioral view that private events are instances of behavior, ACT seeks to alter the functions of private events rather than their occurrence or content. That is, clients are helped to see their private events as what they are (instances of behavior that can be observed and left alone) rather than problems that must be responded to or changed. The literature attesting to the effectiveness of ACT-based interventions for a variety of clinical problems is impressive (e.g., Hayes et al., 2012; Ruiz, 2010; Zettle, Rains, & Hayes, 2011). Moreover, there is evidence to support ACT's purported mechanisms of change: altering the functions of private events (Forman, Herbert, Moitra, Yeomans, & Geller, 2007).

The point here is that a behavior-analytic clinical intervention based on a radical behavioral view of private events has proven to be effective with a range of clinical problems and appears to work for the reasons it says it does. Does this prove that the Skinnerian or radical behavioral view of private events is correct or true? No, that contention would be a prime example of the logical fallacy of affirming the consequent. But it does show the pragmatic value of the radical behavioral perspective and invites discussion of how other behaviorisms might account for these data.

As mentioned at the beginning, there are now many behaviorisms from which to choose, and they all are (or claim to be) theoretically coherent, internally consistent, logically defensible (within their own set of assumptions), and entail an empirical research agenda. Both teleological and molar behaviorism are intellectually rigorous and philosophically compelling perspectives with very different views on the role of private events in a science of behavior from those of radical behaviorism. As radical behaviorists, however, the critical question is not which perspective is the most philosophically elegant or persuasive, but which best advances the goals of a science of behavior. And that is an empirical question that remains to be answered.

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