

Behavior Analysis and Social Constructionism: Some Points of Contact and Departure

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Social constructionists occasionally single out behavior analysis as the field of psychology that most closely resembles the natural sciences in its commitment to empiricism, and accuses it of suffering from many of the limitations to science identified by the postmodernist movement (e.g., K. J. Gergen, 1985a; Soyland, 1994). Indeed, behavior analysis is a natural science in many respects. However, it also shares with social constructionism important epistemological features such as a rejection of mentalism, a functional-analytic approach to language, the use of interpretive methodologies, and a reflexive stance on analysis. The current paper outlines briefly the key tenets of the behavior-analytic and social constructionist perspectives before examining a number of commonalities between these approaches. The paper aims to show that far from being a nemesis to social constructionism, behavior analysis may in fact be its close ally.

Key words: contextualism, social constructionism, behavioral hermeneutics, behavior analysis, discursive psychology, postmodernism

Social constructionism represents a powerful intellectual movement within psychology and related fields. Its influence can be traced to the earliest research in the field of psychophysics (see Zuriff, 1998) and it continues to influence several domains within psychology today, perhaps most notably, social psychology (e.g., K. J. Gergen, 1985a). Social constructionism is, to say the least, a difficult movement to define. Indeed, the field appears to eschew self-consciously any definition as part of its overarching concern with the prevalence of empiricism, positivism, and reductionism within psychology.

In its most extreme form, social constructionism appears to deny altogether the possibility of an empirical psychology and the accumulative approximation of effective knowledge through experimentation (e.g., Bohan, 1992; Potter, 1988; Prilleltensky, 1989). Zuriff (1998) identified such

radical brands as *metaphysical social constructionism*, and he sharply distinguished these varieties from more moderate empirical varieties, such as that espoused by K. J. Gergen (1973, 1982, 1985a, 1989). In any form, however, social constructionism can be seen as attempting to undermine directly the scientific and empirical character of psychology and, in particular, the experimental analysis of behavior (e.g., K. J. Gergen, 1985a; see also Soyland, 1994).

In what follows, we will provide an outline of the behavior-analytic and social constructionist stances. We will then consider several important distinctions between these two approaches to psychology, as well as many important points of contact, that suggest shared philosophical strands. An open exploration of these issues should serve to raise the level of discourse within our field regarding social constructionism as a matter of increasing concern to a wide variety of psychologists. Such discussion is of particular importance to behavior analysts insofar as we are often isolated as a field within psychology and have been explicitly targeted as a primary nemesis of social constructionism (e.g., K. J. Gergen, 1985a).

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The current exercise in conceptual bridge building and the attendant clarification of a range of relevant epistemological issues may be of particular use to many readers who come into regular professional contact with social constructionists, perhaps in a university setting. Although many or most social constructionists feel antithetical to the behaviorist stance, there are solid epistemological grounds for greater cooperation between the two fields. An awareness and understanding of these issues, therefore, may be of great service to the behavior-analytic community in fostering communication and cooperation with mainstream psychologists and promoting the behavioral approach. In addition, the reflective process of exploring behavioral definitions and considering the application and extension of our field is worthwhile, insofar as it prepares us for contact with those outside the field and provides us with responses to common criticisms (Leigland, 1997).

BEHAVIOR ANALYSIS

Before outlining briefly the behavior-analytic stance on psychological events, it is important to remember that behavior analysis is to be distinguished from the philosophy of radical behaviorism and that many behavior analysts adhere to different epistemological views. Thus, like social constructionism, behavior analysis does not represent a single coherent conceptual stance. For instance, in recent years there have been extended debates on mechanism and contextualism in terms of their suitability as worldviews for behavior analysis (see Barnes & Roche, 1994; Hayes, 1993; Hayes & Brownstein, 1986; Hayes, Hayes, & Reese, 1998; Jacobson, 1997; Leigland, 1999; Marr, 1993a, 1993b; Morris, 1991, 1993, 1997, 1998a, 1998b; Sarbin, 1993; Shull, 1993; Staddon, 1993). Thus, some readers may not be entirely comfortable with the contextualistic stance that the current authors adopt towards behavior analysis. Nev-

ertheless, we feel that the relation between social constructionism and the broad palette of activities we call behavior analysis deserves serious consideration. Indeed, behavior analysts who would likely not define themselves as contextualists have echoed the same sentiment (e.g., Shimp, 2001; Zuriff, 1998). Thus, although the current examination of social constructionism has arisen from a contextualistic perspective on behavior analysis, we feel that the issues under consideration are relevant to behavior analysts of all philosophical persuasions.

Before we examine the several points of contact and departure between social constructionism and behavior analysis, we will first briefly outline our domains of analysis. What follows is a brief description of Skinner's radical behaviorism followed by an introduction to the worldview of contextualism (Pepper, 1942). Subsequently an outline of the main tenets of social constructionism, as defined by K. J. Gergen (1985a), will be presented.

Radical Behaviorism

The three-term contingency is the predominant behavior-analytic unit with which psychological events are understood. This unit renders psychological sense for the behavior analyst when it is applied to any event with a reliable and identifiable antecedent and consequence, typically the activity of an organism (see Roche & Barnes, 1997a). The three-term contingency treats all behavioral sequences in terms of antecedents to action, the action itself, and the consequences of action (e.g., feeling cold, putting on a warm overcoat, feeling warm). In effect, behavior analysis understands events with respect to the context in which they occur.

The three-term contingency is a dynamic spatiotemporal contextual unit. It is spatio-temporal in the sense that very large temporal or spatial distances between stimuli, responses, and con-

sequences are incorporated into the analysis (at the level of a molar analysis). It is dynamic in the sense that none of its terms (*stimulus, response, consequence*) can be defined independently of the others.

With regard to the truth criteria of a radical behavioral account, Skinner (1974) said the following:

[Scientific knowledge] is a corpus of rules for effective action, and there is a special sense in which it could be "true" if it yields the most effective action possible. . . . A proposition is "true" to the extent that with its help the listener responds effectively to the situation it describes. (p. 235)

Thus, the radical behaviorist strives to develop modes of scientific conduct (including discourse) for predicting and influencing specified events (see also Guerin, 1992). Moreover, the radical behaviorist readily admits that the scientist cannot stand apart from the historical and current (social and cultural) context in which analyses take place, thereby generating completely objective knowledge (e.g., Skinner, 1953; see also K. J. Gergen, 1985a).

Contextualism

According to Hayes (1993), there are currently two broad varieties of contextualism—descriptive and functional. The descriptive contextualist has a personal purpose of analysis. He or she seeks an appreciation of the whole through the examination of its participants. The purpose of such an analysis is coherence. *Coherence* can be defined as the discriminated correspondence between the meanings of various statements; if the descriptive contextualist arrives at two statements that mean the same thing, these statements can be said to cohere. Contextualists do not assume, however, that there can be any ultimate analysis or that analytic conclusions may be generalized to different domains. Moreover, the descriptive contextualist is patently aware that every analysis itself represents yet another act-in-context and that the satisfaction of analytic

acts through coherence is not objective but personal.

Functional contextualism, on the other hand, has an intensely practical purpose for analysis, namely the prediction-and-influence (hyphenated to indicate their inseparability) of events. Variability and change in all phenomena are taken as givens. Thus, influence, rather than control, is sought over phenomena of interest and patterns of interaction, rather than the elimination of variability, become of interest.

The functional contextualist takes a scientific interest in discourse about the physical world and relies on it in the course of scientific behavior. Discourse *must*, however, lead directly to practical influence. To the functional contextualist, practical ends are sought through verbal rules that have been generated across time through the consequences of their use. The use of principles in functional contextualistic science, then, is a practical issue, not an ontological one. Thus, the contextualist can adopt an infinite variety of tools and concepts as long as they move towards the valued end of prediction-and-influence.

SOCIAL CONSTRUCTIONISM

Traditional social psychology has undergone somewhat of a revolution over the past two decades, leading to what has become known as the *new paradigm* for social psychology (see K. J. Gergen, 1982, 1989; Potter & Wetherell, 2001). According to proponents of the new paradigm, mainstream social psychology lacks a unified and coherent philosophical approach to its subject matter. The lack of a well-defined conceptual framework for traditional social psychology and a growing belief that unity and coherence can only be achieved through rhetoric have led a body of social psychologists to abandon their traditional research questions and to turn their attention instead to the social construction of knowledge (see K. J. Gergen, 1989).

Socially constructed knowledge is

knowledge that has arisen out of interactions among people in a community rather than interactions with the non-social environment (cf. Mead, 1934; see also Guerin, 1992). Scientific knowledge represents one such form of knowledge. For instance, from a social constructionist perspective, scientific conclusions emerge from the vicissitudes of social conventions and interactions rather than from ontologically real states of affairs (see Bohan, 1992; Collins, 1982; K. J. Gergen, 1985a, 1989; Gilbert & Mulkey, 1984; Howard, 1985; Latour & Woolgar, 1986; Potter, 1992). From this perspective, scientific accounts are permeated heavily by metaphor; their power to influence audiences lies not in their empirical validity but in their use of rhetoric. In effect, scientific knowledge claims are not literally referential of "facts," despite any ability to seduce an audience to this effect. The role of the social constructionist is to explicate the processes by which people come to describe, explain, or otherwise account for the world in which they live and to articulate the role played by metaphor and rhetoric in the production of "truths" (K. J. Gergen, 1985a).

Social constructionism was the earliest of the postmodernist or literary criticisms of psychology. Much of the intellectual impetus for this movement was provided by the work of such philosophers as Heidegger, Kant, Wittgenstein, and Rorty. These philosophers argued that knowledge is not a direct mirror of reality but is instead a product of social interaction and language convention. More humanistic (Shotter, 1984) and ethnogenic (Harré, 1979) versions of the constructionist position emerged later. Discourse analysis is the modern, and perhaps most popular, incarnation of the social constructionist movement (see Potter & Wetherell, 2001). Other related views might be summarized under the rubric of the poststructuralist perspectives. All of these approaches within psychology share a broad emphasis on the construction of understandings of psycho-

logical phenomena, although some are more radical than others in this regard (see Zuriff, 1998). They also share, to a greater or lesser extent, the methods of traditional science, but in more radical forms adopt an antirealist stance (e.g., Bohan, 1992; Hare-Mustin & Marecek, 1988; Howard, 1985; see also Hogg & Vaughan, 1995, p. 25). Psychological research in the context of the social constructionist approaches involves the critical analysis of narratives, conducted *in vivo* or *post hoc*.

The social constructionist stance on psychological phenomena is difficult to define by its very nature. Social constructionists eschew definition because even their own position is, at least in principle, open to critique and change. Rather than attempt to pigeonhole this rather amorphous and constantly transmogrifying movement, we will refer specifically to a paper by K. J. Gergen (1985a) for our exposition of the social constructionist stance. Gergen's text undoubtedly fails to represent the social constructionist movement adequately, as all texts necessarily do, from a social constructionist perspective. Moreover, his account is relatively conservative as postmodernist approaches go. Nevertheless, we have chosen this particular text because Gergen is a seminal character in the social psychological revolution, and this particular text represents what we understand to be an authoritative exposition of the social constructionist position adhered to, more or less, by the mainstream of social constructionists.

K. J. Gergen (1985a) outlined four philosophical assumptions typically made by the social constructionist. We will summarize each of these here in an attempt to develop a broad understanding of a generally adopted social constructionist epistemology. In what follows, Gergen's original wording is used to as great an extent as possible.

1. What we take to be experience of the world does not itself dictate the terms by which the world is understood. What we take to be knowledge of the world is not a product of induc-

tion, or of the building and testing of general hypotheses. The mounting criticism of the positivist–empirical conception of knowledge has severely damaged the traditional view that scientific theory serves to reflect or map reality in any decontextualized manner. Social constructionism begins with radical doubt in the taken-for-granted world—whether in the sciences or in daily life—and in a specialized way acts as a form of social criticism. Constructionism asks one to suspend belief that commonly accepted categories or understandings receive their warrant through observation. Thus, it invites one to challenge the objective basis of conventional knowledge.

2. The terms in which the world is understood are social artifacts, products of historically situated interchanges among people. From the constructionist perspective, the process of understanding is not automatically driven by the forces of nature, but is the result of an active, cooperative enterprise of persons in relationship. Constructionist inquiry has further been directed to the axioms or fundamental propositions that underlie descriptions of persons in present-day society. It is first asked whether the folk models of mind within a culture necessarily determine or constrain the conclusions reached within the profession. How can the psychologist step outside cultural understandings and continue to “make sense”? Further, it is asked, are there generic rules governing accounts of human action from which common conventions are derived? Such work is of special interest, because it begins to outline the possible constraints over what psychological research can say. If it is possible to isolate propositions or assumptions grounding discourse about persons, then we are furnished with a basis for understanding what psychological theory *must* say if it is to be reasonable or communicable.

3. The degree to which a given form of understanding prevails or is sustained across time is not fundamentally dependent on the empirical validity of

the perspective in question, but on the vicissitudes of social processes. Observations of persons is questionable as a corrective or guide to persons. Rather, the rules for “what counts as what” are inherently ambiguous, continuously evolving, and free to vary with the predilections of those who use them. On these grounds, one is even led to query the concept of truth. Is the major deployment of the term *truth* primarily a means for warranting one’s own position and claims to intelligibility? The move is from an experiential to a social epistemology.

4. Forms of negotiated understanding are of critical significance in social life, because they are integrally connected with many other activities in which people engage. Descriptions and explanations of the world themselves constitute forms of social action. It is in this vein that many investigators have been concerned with the prevailing images or metaphors of human action employed in the field of psychology.

In summary, the social constructionist does not typically seek prediction and control over psychological phenomena but rather an appreciation of the whole through the examination of parts. Put simply, social constructionists aim to make sense of the world, or generate greater verbal coherence, through post hoc analyses of texts and narratives. To the social constructionist, truths are constantly changing; an analysis that works for one individual (e.g., achieves greater coherence, persuades many readers, etc.) may not work for another. The coherence sought is intensely personal. Furthermore, the ever-changing truths that emerge from social constructionist analyses and their close tie to the personal history of the analyst appear to bring the progressivity of social constructionist knowledge into question from a behavior-analytic perspective (see Zuriff, 1998). Surprisingly, however, there are several areas of overlap between the constructionist and behaviorist positions on psychological events

that are worth considering. It is to these matters that we will now turn our attention.

POINTS OF CONTACT AND DEPARTURE

The Nature of Knowledge

Perhaps the most immediately striking area of overlap between behavior analysis and social constructionism relates to their respective views on scientific knowledge. Specifically, both approaches take the view that scientific knowledge is social in origin and that it can be understood in terms of evolved practices within the verbal community (e.g., K. J. Gergen, 1985a; Skinner, 1974).

The social constructionist idea that scientific knowledge is social in origin has important implications for the status of scientific claims. Specifically, if all knowledge emerges from the vicissitudes of social interaction, then no particular knowledge claim can demand higher status over another. Indeed, this problem holds for all forms of knowledge, including scientific knowledge and the knowledge claims of social constructionists. Interestingly, the paradoxical nature of the social constructionist knowledge claim about the limits of knowledge claims is embraced by many social constructionists and is taken as evidence of conceptual coherence rather than viewed as a problem to be surmounted (e.g., Soyland, 1994). In K. J. Gergen's words, "As one moves from individual to social epistemology questions of truth and objectivity recede into obscurity . . . the concept of 'objective validity' ceases to be sacred . . . rather, concepts of truth and objectivity may largely be viewed as rhetorical devices" (1989, p. 473).

Given their interest in the social contingencies governing scientific behavior, behavior analysts can sympathize somewhat with the idea that all knowledge claims are inherently limited in terms of their absolute objectivity. More specifically, from a behavior-an-

alytic perspective, the social interactions that constitute behavior-analytic activity are controlled by the contingency of successful working. This contingency does not lead directly to *absolutely* truthful scientific conclusions. However, it does select for a variety of scientific discourse that ensures effective action (i.e., behavior-analytic truth) within our scientific community. Methods and practices that produce precise stimulus control over verbal responses in the scientific domain are selected and strengthened compared to practices that yield weak idiosyncratic control over verbal behavior. The former practices will ensure objectivity, not in the ontological sense, but in a pragmatic sense. Thus, in behavior analysis, objectivity can be retained, not as a property of the external world, but as a description of the effectiveness of scientific activity.

Behavior analysis extends its interest in knowledge more generally to include forms of nonsocial knowledge that would be of little interest to the social constructionist. Nonsocial knowledge is often referred to as procedural, implicit, or "knowing how" (see Hayes, 1997). Nonsocial forms of knowledge are important in the experimental analysis of behavior because many sources of reinforcement are mediated by the nonsocial world and continue to shape behavior independent of human supervision (e.g., avoiding very hot or sharp objects). An individual whose behavior is changed by nonsocial contingencies is regarded as acquiring nonverbal knowledge, or coming to "know how." As socially mediated reinforcers are made available for appropriate verbal behavior regarding one's own behavior and the behavior of other systems, an individual is said to be acquiring social knowledge or "knowing that" (see Hayes, 1997).

In summary, both social constructionists and behavior analysts share a social epistemology of scientific knowledge and are content with the limitations this epistemology imposes

on the absolute truthfulness of scientific claims.

Language As a Key Feature of Human Action

One of the most persistent criticisms of behavior analysis has been that the basic principles it has identified, largely with nonhumans, cannot handle the richness and complexity of the language and cognitive phenomena that appear germane to much or all of human behavior. The authors find themselves in part agreement with this criticism. More specifically, the traditional research focus on nonhumans in behavior analysis was for many researchers, including Skinner, based on the idea that the principles of behavior identified with such populations would be generally applicable to humans (Skinner, 1938, p. 47; 1953, p. 38). The generalization in question, however, was not one of ontological process. Rather, behavior analysts strove to develop a generality in their successful working with respect to behavior change. In this regard, the continuity assumption served its purpose well; most of the techniques used in modern applied behavior analysis are derived, in large part, from basic research with nonhumans. Nevertheless, some behavior analysts take the view that what is needed now is an extensive and coherent program of basic research into complex human behavior in its own right, and in particular into language and cognitive phenomena (see Hayes, Barnes-Holmes, & Roche, 2001).

Over the last three decades, an increasing number of behavior analysts have been turning their attention to the empirical and conceptual analysis of verbal behavior and derived stimulus relations in an effort to elucidate scientifically language and cognitive processes. The analysis of derived stimulus relations has provided important opportunities for the prediction and control of many aspects of verbal behavior (see Hayes et al., 2001; Sidman, 1994) and the impact of rules on hu-

man conduct (see Chase & Danforth, 1991; Danforth, Chase, Dolan, & Joyce, 1990; Hayes & Hayes, 1989; see also O'Hora & Barnes-Holmes, 2001). Perhaps more important, behavior analysts have begun to examine the relation between language and other aspects of human functioning, such as anxiety (e.g., Friman, Hayes, & Wilson, 1998), depression (e.g., Hayes & Wilson, 1993), prejudice (Hayes, Nicolls, Masuda, & Rye, in press; Watt, Keenan, Barnes, & Cairns, 1991), self-awareness (Dymond & Barnes, 1995), the development of self-concept (Barnes, Lawlor, Smeets, & Roche, 1996), sexual arousal (Barnes & Roche, 1997b; Roche & Barnes, 1997b, 1998), attitude formation and change (Roche, Barnes, & Smeets, 1997), spirituality and mysticism (Barnes & Roche, 1997a; Hayes, 1984), and group processes (Roche, Barnes-Holmes, Barnes-Holmes, Stewart, & O'Hora, 2002). Indeed, it is now argued by several behavior analysts that complex human behaviors, such as those listed here, cannot be considered properly without considering the role of language processes (see Hayes et al., 2001; see also Leigland, 1999). Progress in the analysis of language may not come as quickly for behavior analysis as it might for social constructionism. By its very nature, behavioral experimentation is slow paced, laborious, and expensive. Nevertheless, many behavior analysts and social constructionists now share the emphasis on language as perhaps the key feature of human activity.

In addition to a common emphasis on the importance of language in human activity, behavior analysis and social constructionism share a view of *language as social convention*. Put simply, both approaches view language as a social activity or performance. In behavior analysis, language is inextricably interwoven into a social fabric (see Guerin, 1992) and thus the meaning of a word is to be found in its use (Skinner, 1953, 1957). In social constructionism, language is similarly

viewed as “shared activity.” The purpose of language interactions is not to arrive at some inalienable “facts” but to produce “meaning” and “shared understanding” (see Shotter, 1993). According to K. J. Gergen,

Until the sounds or markings come to be shared within a community, it is inappropriate to speak of language at all. In effect, we may cease inquiry into the psychological basis of language (which account would inevitably form but a sub-text or miniature language) and focus on the performative use of language in human affairs. (1985a, p. 270)

Thus, it is the process of meaning-production that explains all subsequent behavior for the social constructionist.

An interest in the functional approach to language popularized by Wittgenstein (1953) forms a common foundation for both the behavioral and social constructionist approaches (see Shimp, 2001). Indeed, according to Zuriff (1998), moderate forms of social constructionism are similar to Skinner’s own conceptualization of radical behaviorism. Both approaches view language as a social phenomenon that influences our responses to the environment. In Zuriff’s words,

The relationship between even our most purely scientific speech and the world we are describing is filtered by the reinforcing practices of our verbal community and our dimensions of generalization, or similarity. Consequently, the role of social interaction and human psychology is built into the very core of descriptive language and therefore of human knowledge. (1998, p. 14)

The Stance on Mentalism

Skinner (1945, 1957) legitimized the study of thoughts and feelings in behavior analysis by arguing that just as the behavior of others is to be understood contextually, so too should the behavior of the scientist be understood in this way. The validity of any scientific observation, he argued, is not to be found in public agreement but rather in the contextual features controlling the observation. This position, which rises to the reflexive challenge set by social constructionists (e.g., K. J. Gergen, 1985a) to examine science itself

from a psychological perspective, had the surprising effect of throwing overboard the earlier behavioral prohibition against the analysis of private experience. From Watson’s (1924) point of view, introspection was to be avoided. However, to Skinner, direct observations of thinking, imagining, feeling, remembering, sensing, and other private events could be as scientifically valid as observations of public events, if the contingencies controlling the observation had maximized the importance of the observed events per se (Hayes & Toarmino, 1999). Because behavior analysis does not insist upon truth by agreement, it can therefore consider events that take place in the private world within the skin, and it does not call these events unobservable (Skinner, 1974, p. 16).

Despite this explicit interest in private experience, behavior analysis does not treat mentalistic concepts as explanatory. Nor are thoughts and feelings seated in a mind or a self. Rather, psychological events that are not normally observed by others (e.g., feelings) are of interest to the behavior analyst as human activities in their own right. Indeed, behavior analysts have recently been developing methodologies for the prediction and influence of private events (see Friman et al., 1998; Taylor & O’Reilly, 1997).

In *About Behaviorism*, Skinner (1974) argued that the use of concepts such as mind and self as explanations for behavior has emerged largely as a result of linguistic practices. In Skinner’s words,

We tend to make nouns out of adjectives and verbs and must find a place for the things the nouns are said to represent. We say that a rope is strong, and before long we are looking for its strength. We call a particular kind of strength tensile, and then explain that the rope is strong because it possesses tensile strength. (p. 177)

To Skinner, the mind was a culturally constructed metaphor that emerged as an explanation for behavior, at least in part, from peculiar linguistic practices. Rather than view the mind, the self, and other hypothesized inner states as

entities in their own right, the behavior analyst is more concerned with the functions that these words and concepts serve for their users. This naturalistic approach to psychological language is also reflected in K. J. Gergen's (1985a) writing, as exemplified by the following passage.

One is forced to question the assumption that anger is a biological state of the organism and is invited to consider it as a historically contingent social performance. Sarbin (1984) extended this line of thinking to the entire array of emotional terms. Emotions are not objects "out there" to be studied, ventured Sarbin; emotion terms acquire their meaning not from real-world referents but from their context of usage. (p. 267)

Thus, for the social constructionist, mind becomes a form of social myth (Coulter, 1979) and the self-concept is removed from the heads of individuals and placed within the sphere of social discourse (K. J. Gergen, 1985a, p. 271, 1985b; Shotter, 1993).

In summary, both the behavior analyst and the social constructionist view mentalistic terms, such as *self* and *mind*, as representing psychological reifications. Moreover, both view such mentalistic concepts as constantly evolving and transforming social functions with and within a social context.

Reflexivity and the Subject-Object Dichotomy

Behavior analysis rises to the social constructionist challenge in viewing its verbal formulations as historically and culturally situated and subject to critique and transformation. Skinner (1974) argued that the behavior of the scientist in formulating the laws of behavior must itself be considered from a radical behavioral perspective. Skinner was patently aware, however, of the impossibility of achieving objective knowledge in this regard. From Skinner's perspective, even the scientific activity of a behavior analyst participates in a behavioral stream, and thus he or she cannot "observe behavior from some special point of vantage, 'perched on the epicycle of Mercury'"

(p. 234). According to Skinner, in the very act of analyzing human behavior we are behaving. Thus, the behavior analyst views it as absurd to contend that he or she is in any way exempt from a behavioral analysis.

Rather than revolt against reflexivity, contextualistic behavior analysts have embraced it, viewing reflexivity as an important part of the "language game" we call behavior analysis (Barnes & Roche, 1997a). In the words of Malone (1999),

Skinner's radical behaviorism . . . deals with private experience in a way that is compatible with recent phenomenological views (e.g., Kvale & Grenness, 1967), a feature by no means true of present or past cognitive theories. Radical behaviorism and phenomenological views are specifically opposed to the subject-object distinction, Plato's division of experience into *known* and *knower*. (p. 116)

The important point here is that the contextualist who embraces scientific reflexivity can no longer view science as offering insight to the fundamental processes of nature or allowing us to develop increasingly accurate knowledge of an ontological reality (although reflexive analyses may still have merit). Rather, from that perspective scientific activity itself becomes part of the subject matter of behavior analysis and the relation between scientific and nonscientific discourse becomes of interest (see also K. J. Gergen, 1985a).

A concrete example will serve to illustrate the foregoing. To both the functional and descriptive contextualist, the output from a cumulative recorder is not viewed as a perfect representation of what a research participant "really" did in an experimental chamber. Rather, the cumulative record is viewed as a discriminative stimulus for a particular response on the part of the psychologist, such as reporting "scallop" or "break-and-run" (i.e., it is viewed functionally). These responses may have been differentially reinforced by fellow scientists in the context of the current observations (i.e., the particular pattern of data). In effect, scientific reports always form part of a

particular scientist's behavioral stream. Of course, the behavior analyst may sometimes speak as if his or her verbal formulations refer literally to extant behavioral events, and, for all the contextualist knows, they might! Nevertheless, the choice to view the cumulative record as a reflection of extant behavioral activity or merely as a discriminative stimulus for further scientific responding will be made entirely on pragmatic grounds.

Choosing to cease a behavioral analysis with a practical knowledge claim, such as "the fixed-interval schedule produced a scallop in responding," rather than pursuing a reflexive line of inquiry regarding the stimulus properties and reinforcement history that controlled that claim, does not render that claim incomplete, as long as prediction and influence have been achieved. The social constructionist takes precisely the same stance. More specifically, given that all analyses are ultimately reflexive, the choice to end analysis must be made in accordance with criteria set by the analyst (see Mulkay, 1985). According to Soyland (1994), "It will always be possible to re-analyze the analytical text. However, that claim was made without inferring the *necessity* of always doing so (see also Potter, 1988). Thus, while [the above] statement may look circular, it is not viciously circular; the circularity could be highly informative" (p. 31).

Given the social constructionists' fondness for explication and elaboration, the opportunity to end analysis is often consciously ignored. In the words of Hogg and Vaughan (1995):

Many social psychological concepts such as attitude, motivation, cognition, identity and so forth may likewise be constituted through discourse and therefore any discussion of them as causal processes or structures is misguided. If accepted in its extreme form, this idea necessarily rejects much of social psychology. . . . Critics believe, however, that [social constructionism] can be extreme in its rejection of cognitive processes and structures (Abrams & Hogg, 1990; Zajonc, 1989) and that it may be more profitable to retain cognition and theorise how it articulates with language (Giles & Coupland, 1991). (p. 501)

It appears that neither the social constructionist nor the behavior analyst can render universal formulations of the behavior of others. Not surprisingly, the impossibility of doing so has been echoed on many occasions in even the earliest social constructionist literature (e.g., Baron, 1971; K. J. Gergen, 1973; Kenniston, 1971; Luria, 1971). According to K. J. Gergen (1985a), the historically and culturally bound nature of scientific conduct precludes the formulation of universal laws, thereby rendering the behavior-analytic agenda ultimately futile. Interestingly, many behavior analysts would concur with this position as it refers to *absolute* truth. More specifically, the universality of behavioral laws refers not to invariance in universal states of affairs but to the consistency of successful working achieved through the use of such laws. In this view, behavioral statements, whether resulting from experimental or interpretive analyses, are not intended as statements about the world, but statements about the behavior of the scientist. In Skinner's (1969) words,

Scientific laws . . . specify or imply responses and consequences. They are not obeyed by nature but by men who deal effectively with nature. The formula $S\frac{1}{2}gt^2$ does not govern the behavior of falling bodies, it governs those who correctly predict the position of falling bodies at given times. (p. 141)

In an almost parallel perspective on the status of scientific knowledge claims, the social constructionist takes the view that scientific statements about the world are social artifacts rather than literal truth statements.

Whether rendering the conduct of organisms intelligible or demystifying existing forms of understanding, research methods can be used to produce "objectifications" or illustrations useful in advancing the pragmatic consequences of one's work. . . . Although some methods may hold the allure of large samples, others can attract because of their purity, their sensitivity to nuance, or their ability to probe in depth. Such assets do not thereby increase the "objective validity" of the resulting constructions. (K. J. Gergen, 1985a, p. 273)

The behavior-analytic stance on the

relativity of scientific principles (i.e., their value in moving us towards prediction and influence) does not appear to have been noted by our contemporaries from other domains of psychology. K. J. Gergen (1973), for instance, rejected the notion that reinforcement and punishment are universals on the grounds that particular reinforcers do not remain stable over time (e.g., food can no longer be used in a reinforcement contingency once a subject is satiated). However, given the foregoing, it seems that Gergen has applied the concept of universality and stability in a way that is in fact alien to the behavior analyst. Gergen's observation that reinforcers are of constantly changing value is in fact a defining feature of the operant. Indeed, for this very reason behavior analysts avoid speaking of reinforcers in isolation, preferring to speak of reinforcement as a process (see Catania, 1998). In effect, behavior analysis embraces the transience of contingency effects without rejecting the principles of reinforcement and punishment as useful constructions of behavioral processes (Lee, 1988). Finding that a particular contingency relation does not obtain universally, therefore, does not negate the principle of reinforcement but rather exemplifies it.

Notwithstanding lapses in communication, behavior analysis, as construed here, and social constructionism seem to share the relatively curious characteristic that neither takes their own formulations as referential of states of affairs in an extant world. From both of these perspectives, current knowledge claims represent just one of many possible analytic outcomes, each of which may achieve veracity for different reasons and in different research contexts (e.g., what exactly a behavior analyst is trying to predict and control when observing a rat in an experimental chamber may well vary across research settings). Indeed, Skinner called for further attention to be paid to the elaboration of what is meant by the term *knowledge* and the functions of the term's use in

psychological literature and in science more generally (e.g., Skinner, 1945, p. 277; 1957, chap. 18; 1961, p. 392; 1963).

The Use of Interpretive Methodologies

Along with an impressive battery of experimental methodologies, behavior analysts have also developed and adopted a variety of analytic methods, including interpretive and hermeneutic methodologies (e.g., Day, 1969). However, these interpretive methodologies differ from those employed under the broad umbrella of the poststructuralist perspectives. Many of the latter approaches infer motive and cognitive states of individuals through the interpretive analysis of person-as-texts (see Wollfolk, Sass, & Messer, 1988). Behavior analysts and social constructionists concur, however, on the logical and methodological impossibility of reaching consensus on inner states, based primarily on the unreliability of descriptions of inner states and the social origins of the language used to describe them (Dougher, 1993; see also Skinner, 1957, 1974; Wittgenstein, 1953). According to M. Gergen (1988), consensus about the inner states of an individual can only be arrived at by definition—"by virtue of circularity rather than verification" (p. 39). Thus, behavior analysts and social constructionists inevitably reach an impasse when they attempt to infer emotional or cognitive states.

Given the foregoing, both the social constructionist and the behavior analyst conduct interpretive analyses at the same level at which phenomena are encountered. From this phenomenological stance, human behavior qua behavior is of interest in its own right, rather than as the expression of some other psychological processes taking place at an ontological level (Day, 1992; Dougher, 1993; M. Gergen, 1988; Skinner, 1953, 1974). Both the behavior analyst and the social constructionist, then, argue that behavior is best un-

derstood if we look to the social and interpersonal context in which it occurs. In this way, interpretation is restricted to the relation between an act and its context. The relation between behavior and its postulated underlying causes is not considered.

One behavior analyst who developed an interpretive methodology for the analysis of verbal behavior was Williard F. Day. Day was heavily influenced by Skinner's *Verbal Behavior* (1957), which was itself an elaborate exercise in interpretation. Day was impressed that Skinner's interpretations were based on principles derived from the experimental analysis of behavior. Although he was of the opinion that one of the cornerstones of radical behaviorism is the emphasis on behavioral control, he also advocated a focal awareness that any scientist is him- or herself a behaving organism (e.g., Day, 1969). According to Day, science is at heart either the behavior of scientists or the artifacts of such activity.

In a passage remarkable for the time at which it was written, Day (1969) provided what might be viewed as a social constructionist rationale for behavioral researchers.

The radical behaviorist faces the fact that the ultimate achievement of his scientific activities is for the most part either further verbal behavior on his own part or a new set of acquired behaviors which hopefully enable him to control nature more effectively. Yet in viewing his own verbal and intellectual behavior as significantly controlled in a number of ways, he is led in a sense not to trust it at face value. He is aware, for example, that much of what he says in offering systematic psychology is likely to reflect psychological distinctions that are modeled after linguistic practices uncritically acquired simply in learning to speak the lay vocabulary. He is particularly conscious of the fact that much psychological talk reflects stereotyped conceptions both of the nature of the knowing process and of the relation between our knowledge of things and the structure of whatever it is that is taken to be the object of psychological investigation. (p. 319)

Day set about developing a rigorous interpretive methodology for the analysis of verbal events that became known variously as behavioral phe-

nomenology, behavioral hermeneutics, and the Reno methodology. The main goal of this method is to develop and refine the discriminations of the controlling relations between given instances of verbal behavior and their functional antecedents in a specific context. The methodology of behavioral interpretation bears some striking similarities to the discursive analytic methods that have emerged from the social constructionist movement.

As Dougher (1993) explained, the first step of an interpretive behavioral analysis involves the *prima facie* examination of a text in search of occurrences of behaviors of interest and antecedents to which this behavior appears functionally related. A second step involves a further functional analysis of the analyst's behavior during the inspection of the text. This serves to provide feedback to the analyst about his or her own interpretive behavior and to refine his or her discriminations of the text. The third step of the analysis involves the gathering together of the identified antecedent-behavior relations and grouping them into classes that share common functions. The fourth and final step involves a description of the experience of the analytic process for the analyst in order to elucidate the discrimination process.

Although these methods have much in common, one important difference between the behavioral and social constructionist interpretive methods relates to the goals of the interpretive exercise. Whereas the social constructionist strives to achieve coherence in narrative accounts, the behavior analyst continues to seek prediction and influence over behavioral phenomena of interest through the identification of manipulable variables. It does not pose a threat to the behavioral account that the behavioral relations rendered through an interpretive analysis are themselves a product of behavior. The purpose of this style of analysis is not to uncover features of the world but simply to increase scientific confidence

in our statements about behavior (Day, 1992). Despite this important difference in the goals of psychological analysis, both the social constructionist and the behavior analyst share an interest in interpretation in research and value the construction of meaningful verbal accounts of both behavior and the interpretive process itself.

The Historical Narrative

An emphasis on context and history defines the behavior-analytic and social constructionist paradigms for the analysis of psychological events. The three-term contingency, for instance, draws historical relations between responses and consequential events that are brought to bear in current context. An individual does not respond appropriately in a given context, therefore, because he or she remembers former consequences or "possesses" relevant knowledge based on experience (cf. K. J. Gergen, 1985a, p. 269). Rather, the individual behaves in a particular way because of the past consequences of action. Although an individual may construct narratives about his or her future behavior (e.g., "I will go to the supermarket because I have run out of milk"), such narratives do not literally control behavior but form part of the broad palette of activities of interest to the observing psychologist (i.e., language is not a thing apart from human performance).

The explanation of current activity in behavior analysis, therefore, requires the construction of historical narratives in terms of response-consequence relations. The explanation for a current aggressive outburst in a child, for instance, might be rendered in terms of the past attention-giving responses of caregivers towards the child during such tantrums. Such an account is both technical and historical. Moreover, it is only one of many possible narrative accounts of the relevant history that might be constructed. For instance, an alternative account might be constructed that relates tantrums to the parent's

feeding of the child on a variable-ratio schedule. Given the varieties of behavioral interpretations that are possible, historical narratives are judged in terms of their effectiveness in identifying manipulable variables of behavior. In effect, the behavior analyst does not become overly concerned with the nuances of historical narratives but places the burden of psychological explanation on the overall effectiveness of the behavioral account.

The social constructionist also proceeds with analysis through the construction of narratives in which events of interest are contextually situated. Because part of the context for any act is historical, narrative accounts of contextually situated acts will necessarily appeal to history. Thus, both social constructionist and behavior-analytic accounts could be seen as forms of storytelling (see Sarbin, 1993).

In summary, both social constructionist and behavioral accounts involve, at heart, a historical narrative in which human action is understood through its rich participation in ongoing and ever-changing context.

CONCLUSION

The literature of criticism of psychology has expressed uncertainty and despair among psychologists concerning the goals, methods, and achievements of psychology. As a discipline, psychology is replete with confusion, malaise, doubt, disillusionment, and mutual antagonism and lacks shared direction and enthusiasm (Lee, 1988). Interestingly, despite massive criticism (e.g., regarding the use of statistics in psychology), mainstream psychology has been affected little in the past (K. J. Gergen, 1978). Furthermore, the commitment to physiological reductionism and a decontextualized view of human behavior persists in many fields.

Because of the foregoing, K. J. Gergen (1985a) has argued that confidence in empiricist assumptions has been eroded in psychology and that there is

no obvious contender on the horizon. He has called for an approach to psychology that can both acknowledge the social vicissitudes in scientific reports but also give alternative criteria for evaluating knowledge claims with practical considerations. Gergen clearly states that social constructionism cannot offer such alternative truth criteria: It can compel an audience with rhetoric but it cannot gain favor on the grounds of veracity (1985a, p. 273). Behavior analysis, however, appears to fulfill both criteria specified by Gergen. Specifically, both the radical behaviorist and the contextualistic behavior analyst can provide a truth-by-successful-working criterion to evaluate psychological knowledge claims with intensely practical considerations, while at the same time eschewing literal reference and mentalistic explanatory mechanisms and acknowledging the reflexivity of scientific behavior.

In addition, the behavior analyst does not view experimentation as the only valid source of knowledge about human conduct (cf. K. J. Gergen, 1978), and uses hermeneutic methods in appropriate contexts. Moreover, the behavior analyst is suspicious of hypothesis testing, the hypothetico-deductive method, and even of theories themselves unless used with extreme caution (Skinner, 1945; see also Barnes-Holmes, Dymond, Roche, & Grey, 1999). Caution notwithstanding, any analytic method is in principle acceptable within behavior analysis because research methods are viewed entirely as means and not ends. Thus, we are free to adopt the methods of the social constructionist in the appropriate context (e.g., interpretive methods), and they are free to adopt ours (e.g., observational methods). In K. J. Gergen's words, "It would seem that virtually any methodology can be employed so long as it enables the analyst to develop a more compelling case" (1985a, p. 273).

Given the degree of overlap between behavior analysis and social constructionism, behavior analysts find them-

selves in kinship with a popular field within psychology. By building on this relationship and encouraging discussion and debate between proponents of both perspectives, we can bring behavior-analytic ideas to the mainstream of the discipline in a form that is palatable to many psychologists. In effect, the obvious philosophical partnership with social constructionism may allow behavior analysts to participate more fully in what can reasonably be called an influential intellectual activity of our milieu (Shimp, 2001).

It is perhaps ironic that behavior analysis is often considered to be one of the chief antagonists of social constructionism when in fact both perspectives share many important philosophical viewpoints. We hope to have shown that far from being a nemesis to social constructionism, behavior analysis may in fact be its close ally.

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