The Behavioral and the Mystical: Reflections on Behaviorism and Eastern Thought

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As in the case of other scientific conceptual schemas, features of radical behaviorism can be compared to descriptions of the world that have evolved within Eastern philosophic traditions. Applications of the analysis of verbal behavior can further the move within contemporary scientific writing towards calling attention to the structuring and limiting effects of language, effects long recognized in the East as sources of dualism and mentalism. Use of the three-term contingency automatically integrates organism and environment. Radical behavioral analyses can help demystify the mystical.

Scientists and philosophers of science are describing the world in ways that are strikingly parallel with descriptions of the world considered to be "mystical"—those from such Eastern schools as Zen, Taoism, and Hinduism. This trend is not due to a giving up on scientific analysis, a relaxation of rigor, or the "times," but rather to the evolution of paradigms that now would appear illogical or improbable in earlier, less sophisticated scientific thought.

Communality between East and West has been described with respect to physics by Capra (1975), Siu (1957), Watts (1961), and Zukav (1979) among others. Capra (1975), for example, in his book, *The Tao of Physics*, states:

The two foundations of twentieth century physics—quantum theory and relativity theory—both force us to see the world very much in the way a Hindu, Buddhist or Taoist sees it, and . . . this similarity strengthens when we look at the recent attempts to combine these two theories in order to describe the phenomena of the submicroscopic world: the properties and interactions of the subatomic particles of which all matter is made. Here the parallels between modern physics and eastern mysticism are most striking and we shall often encounter statements

where it is almost impossible to say whether they have been made by physicists or by Eastern mystics. (p. 17)

Capra also provides quotations from such luminaries as Oppenheimer, Bohr, and Heisenberg, each of whom has noted the similarity between ancient Eastern and modern Western views. Oppenheimer (cited in Capra, 1975), for example, observes:

The general notions about human understanding . . . which are illustrated by discoveries in atomic physics are not in the nature of things wholly unfamiliar, wholly unheard of, or new. Even in our own culture they have a history, and in Buddhist and Hindu thought a more considerable and central place. What we shall find is an exemplification, and encouragement, and a refinement of old wisdom. (p. 16)

Watts (1961) expresses the relationship succinctly: "Is it possible . . . that science will become Western man's way of liberation?" (p. 91)

This communality between East and West is no less a characteristic of what many consider to be the most highly developed scientific method within psychology and its attendant descriptive framework—radical behaviorism. In saying this, I do not want to be seen as suggesting that behavioral psychology is imitating physics, or that we should go about patterning ourselves after physics as psychologists attempted in the heyday of logical positivism. Rather, I wish to show that there are interesting parallels that are part of a larger picture of science and the role it plays in how we view and deal with worldly phenomena:

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From physics to psychology, every department of science is realizing more and more that to observe the world is to participate in it, and that, frustrating as this may first seem to be, it is the most important clue of all to further knowledge. (Watts, 1961, p. 91)

An important aspect of this emerging view is the fundamental unity and dynamic interrelatedness of the world. Most of us have mused about how a cause-and-effect assumption about the universe leads to the notion that all events are interconnected. The implications of behaviorism are that behavioral events compose such an extended system. That is, behavioral events are part of a space/time flow that has no beginning or ending through time or across space at any instant.

The entry of verbal behavior into human evolution has entailed the division of the physical and biological world of interrelated events into manageable pieces that can be described. Yet the benefits from the evolution of discriminative verbal control have to some degree been counterbalanced by the autonomy that has developed around these manageable pieces, be they described by word, sentence, or theory. In the process of being verbally identified, an entity or action tends to be automatically separated or isolated from its context. Rather than a flow of events, the world becomes divided into parts that in turn have to be related to one another.

Among the world's entities that have been verbally identified, and thus separated from their context, are individual human beings. The way our use of verbal behavior has segmented existence is thus related to the attribution of autonomy to humans and their behavior. Behaviorists are similar to Eastern writers in resisting this predilection towards considering persons as having varying degrees of independence from their environment. "The skin does not separate you from the world, it unites you with it" (traditional Zen saying). The dislodgement of the person-as-initiator orientation would be difficult for normal psychology—as indeed it is for any of us, given our strongly imbued cultural heritage to see the world

this way. The overall course of science, however, has been towards a decentering of humanity's position in the universe. The difficulty in accepting this decentering has been exemplified by the reactions that Copernicus and Darwin provoked in their times.

Some of us view Skinner's contributions, especially those that place verbal behavior thoroughly within the province of naturalistic occurrences, in the same way as we view the contributions of Copernicus and Darwin. From this perspective, the cognitive-learning trend in psychology, which Mahoney (1977) has described as a "revolution," might best be considered reactionary or regressive. Skinner (1977) has described the difficulties inherent in cognitive frameworks:

Having moved the environment inside the head in the form of intention, will, and choice, and having stored the effects of contingencies of reinforcement as knowledge and rules, cognitive psychologists put them all together to compose an internal simulacrum of the organism, a kind of Doppelgänger, not unlike the classical homunculus. (p. 9)

Acquaintance with Eastern perspectives may help fortify behaviorists in the proper movement towards a world view that places humans completely within and not above or independent from the rest of nature.

A further difficulty in our use of language lies in the part it plays in the way we view the relationship between overt and covert events. Words, concepts, and theories, along with images, have been and still are largely seen as representative of the "real" world. This representative or correspondence manner of construing the role of language in relating internal (private) and external events is thoroughly infused into our verbal behavior. A great deal of attention has been devoted in the past to describing the relationship between the internal and external worlds, but the separation of these worlds is merely a function of the language system itself. The mind-body problem can be considered an artifact largely created by the representational features of language.

Historically, the dualistic separation of the worlds inside and outside the skin has

led to the assigning of a higher status in "reality" to one side or the other. For Plato, the world inside was more reliable or real because it was the source of the world of forms, those perfect concepts, such as a straight line, that are never encountered in the world. In logical positivism, centuries later, the external world was assigned greater reality because aspects of it could be observed by more than one person. Thus, while these two examples of dualism are apparently quite different and in opposition to each other, they share a representational epistemological basis. In both, there is a comparison between external and internal worlds, and though the choices differ, each one places the source of true knowledge on one side or the other (see also Moore, 1985).

Orthodox psychology, reflecting the influence of the ubiquitous representational system intrinsic in the structure of language, holds that knowledge and effective action are dependent upon how accurate a model of the world a person has established somewhere in the head or brain. Psychologists operating from this point of view seek to understand behavior by discovering the nature of this internal world. Within this context, the positivist heritage leads in turn to looking for repetitive patterns in the external world so we can make better inferences about or get a better picture of the internal representations and related processes. From a behavioral perspective, to search for isolable, solid, repetitive stuff that can be pointed to over and over again in order to understand the mind (or "cognitive processes") is frustrating because this search sidetracks inquiry from the actual interactive process between organism and environment. In a sense, we have a static as opposed to a dynamic psychology (see also Catania's, 1973, discussion of structural and functional in psychology.)

Wienpahl (1970), in describing mysticism as "a state of mind in which one realizes that there is no such thing as a conceptual understanding of the world" (pp. 18-19), reflects the long-standing awareness of various Eastern schools about problems based in the way we use

language. Many of the exercises these schools have developed for themselves and their students are designed to undo the reifications of concepts and abstractions. In Zen, for example, conditions are created to enable students to loosen their attachments to both words and worldly possessions so they can better stay in touch with, or under the control of, the features of an ever-changing environment (Williams, 1977). Words are not the world, nor should they be considered as representing the world. They allow us to interact with and control it sometimes, if only limitedly. Diminution of the referential interpretation of the role of verbal behavior in Zen serves to curtail mentalism.

There is no place to seek the mind

It is like the footprints of the birds in the sky
(Sohl & Carr, 1970, p. 17).

The above is an example of Zenrin, ancient Japanese poetry.¹

That verbal behavior has its limits is not easily come to terms with or readily recognized. Latter-day semanticists, as well as philosophers of science such as Hanson (1958), Kuhn (1962), and Toulmin (1960), however, do describe the limitations of verbal behavior in the course of their interesting accounts of the interdependence of language formats and scientific observations. Hanson (1958) depicts scientists as being unable to extricate themselves from the language used to construct meaning. Scientists impose verbal constructions upon the world in the course of scientific analysis, but are incapable of discerning the relativity of these constructions. Hanson suggests that

¹ In their sayings, poetry, and other verbal explications, Zen masters frequently use metaphors to help reveal the desired state and means of achieving it. Behaviorists feel that metaphors are not part of the domain of science (Skinner, 1957, pp. 98, 99) and that they are risky because they may lead to irrelevant sidetracks or engender two-level (positivistic) thinking through the error of identifying the metaphor with what it is meant to clarify (Wood, 1976). Zen Buddhists reduce this hazard by using multiple metaphors and continually cautioning the student against concretely identifying the state of "mindlessness" with the metaphors used to describe it.

the determination of what is real for the scientist rests on paradigms that the scientist cannot see beyond. Heisenberg's indeterminacy principle serves as a model of the process; scientists are said to be unable to see the world as it is because in the act of looking the world is changed. Thus, we can never see things as they would have been if we did not look at them. Similarly, the use of any particular verbal framework structures the view obtained of the world. This conception can become almost solipsistic—these philosophers of science see us as locked away from the world or as unable to make contact with it because the language we use is itself a barrier to knowing the world.

Writers such as Hanson appear to become somewhat extreme in their depiction of how lodged "reality" is in language. These philosophers *have* moved away from the representative view of verbal behavior; for them, language is not a conceptual picture of external events or a world of forms. But, they *have not* moved completely away from the imposition of "reality" on the world by the "mind." The importance of the interchange between person and environment is acknowledged by these philosophers of science, but much consequence is placed on the verbal-conceptual side. Similarly, semanticists seem to emphasize the concealing/limiting features of language. The depiction of an outer world that the inner world cannot see in actuality implies a version of the basic representational view.

Behavior analysts acknowledge that language does not provide us with a complete and accurate command of the environment; they consider the problem to be one of partial and selective control, rather than of a distorted and incomplete picture. Communicating this functional perspective on language to others poses difficulties as we must rely on this same language which is itself infused with representative forms and person as initiator, subject-predicate, structure. When trying to undo the representative viewpoint, we are bound by the necessity to use standard syntactical structures.

A common strategy used by Eastern mystical schools to give perspective on

the effects of language is to speak of a special, fundamentally unknowable world which underlies the world we talk about. This fundamental world cannot be grasped, represented, or dealt with verbally. Such a stratagem, to which Capra (1975) also seems sympathetic, may be effective in making us more humble about the powers of verbal behavior, but problems are inherent in the process of attempting to tell us about this unknowable world. Eastern mystics and their Western spokespersons try to describe what is said to be indescribable. They and their students are thereby sent on an impossible mission, chasing their "tales."

The analysis of verbal behavior (Skinner, 1957) may help us to go further than the Eastern philosophers' incomplete efforts at weakening the hold that the representative orientation has over us. This is a surprising suggestion because Skinner would be automatically associated with the Western approach of domination over the environment which many writers such as Suzuki (1960) contrast with the Eastern way of integration with the world. On the surface, the Western way seems to be characterized by the functionalism of behaviorism with its attendant analysis, control, and goal directedness. Certainly, many behavior analysts have this view underlying their practice. A close look, however, reveals that behaviorism has gone beyond this limited perspective and may be seen to resemble the Eastern mode. The nondualism and integration of person with environment have already been noted. Also pertinent to note is that Skinner acknowledges the interdependence or mutuality of control. He evidently has no difficulty in accepting the viewpoint of the famous cartoon in which one rat is shown stating to another, "Boy, have I got this guy conditioned! Every time I press this bar he drops in a piece of food" (Skinner, 1972, p. 122).

Skinner's analysis enables us to see verbal behavior as nothing more than what it is—a way of interacting with and controlling the environment, whether by ourselves or through other people. Although the development of verbal behavior has been vitally important in

humanity's management of the environment, this behavior has no special status and can be explained in terms of the same principles that we use to explain any other behavior. When verbal behavior is placed in the realm of functional events, there is no need to speak of unknowable worlds as do Zen Buddhists in order to dissuade us from attributing an omnipotence to language that it does not have. Eastern mystics (and Western science writers) may benefit from coming in contact with the analysis of verbal behavior to assist with both explaining their positions and eliminating the need to solve the spurious puzzles that arise from their traditional methods of changing perspectives on language.

Besides helping to see the continuity of the verbal with other behavior, the principles of the analysis of behavior keep us in sight of the interconnectedness of events and the mutuality of control. Kantor (1970) has expressed the desirability of attending to the contributions and interrelatedness of all factors in the analysis of behavior. Although Sidman (1960) and Skinner (1972) do not as clearly express the importance of the behavioral field, they have portrayed the scientist as being as much under the control of the laboratory animal as vice versa. Data, response rates, and graphs may be considered as denoting the relationship between researcher and researchee rather than solely expressing the performance of the organism under investigation. This mutuality makes it inappropriate to locate a source of events either in the organism or in the environment. For comparison, we have a description by David-Neel (cited in Watts, 1961) of Tibetan Buddhist practice: "[The student] ought to succeed in understanding, in noting that nothing of all that is *from him*, is *him*. *He*, physically and mentally, is the multitude of others" (p. 62). Evidently, the objective is the realization of a thoroughgoing integration of the students with their environment.

The most important device the behavior analyst can use to divide the ongoing stream of events into manageable portions is the three-term contingency. The

delineation of the dynamic interdependence of the three components—discriminative stimulus (or antecedent), response, and reinforcement/punishment (or consequence)—has proven to be a very potent description in terms of its applicability in the control of behavior. A vital feature of the interdependence of these three components lies in the integration of environment and organism. None of the three can stand alone; the definition of each is dependent upon the other two.

The use of terms to identify events as components of a contingency of reinforcement is, in a sense, discretionary and flexible, a function of our focus at the time. Although the relationship among the three components is a constant, the application to the analysis of behavioral events is determined by the requirements of each particular situation. Such flexibility confuses and upsets behaviorism's critics (e.g., Kitchener, 1977) who want the terms to have concrete, unchanging referents in the organism/environment. Critics may ask us to define a reinforcer so they will know whether some occurrence or thing is one or not. However, a single segment of, for example, conversational verbal behavior may be identified as discriminative stimulus, response, or reinforcer depending upon its function and the immediate objective of the particular analysis. For example, take a short interchange such as:

A: I saw you run.
B: How did I do?
A: Very well.
B: Thank you.
A: You're welcome.

The response, "Very well" may be termed a *response* to a question (S^D), a *reinforcer* for a questioning response, "How did I do?" (a mand), or a *discriminative stimulus* for the appreciative response, "Thank you." In a standard experimental situation, a lighted key may be an S^D or S^R for a pigeon, but might also be viewed as an experimenter's response that is reinforced by its usefulness in controlling pigeons' behavior.

Do comparisons such as those made here between radical behaviorism and Eastern mysticism clarify or further the

cause of behaviorism? Some may feel the type of analysis attempted here hampers or dilutes behaviorism through distraction or incorrectly characterizing it. The effects are difficult to evaluate. The present intent is to give perspective to radical behaviorism through suggesting historic and current intellectual connections. As we continue the process of bringing our verbal behavior under the discriminative control of the world, we are kept humble, appropriate, and active. Two final possible positive aspects include: (a) the chance that such descriptions may broaden those who are not well acquainted with or who are prejudiced towards radical behaviorism and (b) the expansion of perspectives and possibilities for those behaviorists who are limited to the more conventional scientific schemes.

The writing of material such as this is not easy to justify in terms of having a clear place or role in some current line of inquiry; no obvious "purpose" is served. Perhaps a comparison is warranted with artists who are controlled more by the immediate reinforcement of what they see as the brush is moved on the canvas than by the question of who will buy the canvas. For a few readers, there may be a use for the article in the context of their present areas of academic pursuit, but for most it will serve, as do many other articles, as part of a mix of personal history and establishing operations that may contribute to the probability of behavior on future occasions. Perhaps as you read this you can be reminded of the immediate importance of natural as opposed to arbitrary reinforcement (Ferster, 1979), the role of which is sometimes overlooked by behaviorists.

In conclusion, I would like to suggest a few ways that we may look at mysticism from a behavioral viewpoint. First, events or effects not well described or controlled by verbal behavior may be called mystical. Much is constantly going on around and inside us that we have not yet learned to deal with verbally or that may happen too quickly or subtly to be caught by our verbal behavior. Related to this is a second aspect, the large number of contingencies that can and do play a part in

most behavioral events—often too many for us to identify or keep track of concurrently. When these multiple contingencies cannot all be precisely verbalized, we may resort to describing an event as mystical.

A third factor relates to the instrumental use of the word "mystical." In using it, we are reminded not to identify the world as being the same as the verbal frameworks we have developed to control it. As mentioned above, these frameworks are neither as inclusive nor as incisive as is usually automatically assumed. We can use repeated reminders that we typically will not be able to describe all the pertinent factors in an event (though there is the converse danger of giving up too soon on an inquiry by calling a problem insoluble).

Fourth and finally, mysticism appears related to the puzzle and intrigue of consciousness, and the weak control others have in educating us about our private events. There are several types of experiences that are identified as aspects of consciousness (Natsoulis, 1978, 1983). The long history of humanity's attempts to come to terms, so to speak, with these phenomena has left most of us, behaviorist or not, dissatisfied. The sense of mystery about the origins, sources, and functions of our ability to experience and to be conscious remains, though the attempts to include these phenomena in psychological analyses may impede or sidetrack our scientific conceptualizations (Skinner, 1974).

In summary, I have tried to show similarities between Eastern perspectives and behaviorism, two world views that many would consider antithetical. The mystical and the scientific are not contradictory—each can illuminate the other. Exploration of and acquaintance with Eastern perspectives will keep us intrigued and active in our scientific undertakings, yet humble and appreciative in this pursuit. The recognition that the events of the world will never come under the complete control of verbal behavior enables us to realize that there is nothing mysterious about the experience of mystery.

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