

THE INTERBEHAVIORIST

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THE INTERBEHAVIORIST

A Newsletter of
Interbehavioral Psychology
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Linda J. Hayes, Editor
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University of Nevada
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THE INTERBEHAVIORIST publishes news, information, discussion, journal and book notes, book reviews, comments, and brief articles pertaining to interbehavioral psychology – a contextualistic, integrated-field approach to the natural science of behavior.

The newsletter also publishes professional communications that fall between informal correspondence and colloquia, and formal archival publication. As such, the newsletter supplements contemporary journals dedicated to basic and applied research, to the history and philosophy of the behavioral sciences, and to professional issues in the field. The newsletter strongly encourages submission of notes about current professional activities of its subscribers, news and observations about interbehavioral psychology and related perspectives, comments on journal articles and books of interest, more extended book reviews, and brief articles. All submissions should be sent in duplicate hard copy and a single computer disk copy (any major word processor; any Mac or IBM disk format) to the editor and should conform to the style described in the Publication Manual of the American Psychological Association (3rd edition).

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Call for News

THE INTERBEHAVIORIST publishes news about subscribers' activities and information about others' activities that may be of interest to readers. If you have published an article, chapter, or book with an interbehavioral orientation, or have read one published by someone else, particularly if the source is obscure, please let us know about it.

The Agora

Interbehaviorist S.I.G. Minutes Association for Behavior Analysis San Francisco, May 26, 1992

Chairs: Linda Hayes & Debra Fredericks

Members Present: Bill Boose, Barbara Dahl, Chris Empey, James Fox, Ramona Houmanfar, Parker Lichtenstein, Duane Lord, Chris McCurry, Noel Smith, David Stroffe and Mark Swain.

1. **The Interbehaviorist** - Linda Hayes reported that the cost of publishing and mailing **The Interbehaviorist** exceeded the income from subscriptions, and that subscription rates may have to be raised next year.

Suggestions for increasing subscriptions and submissions included adding a "research notes" column, publishing special issues of papers given at ABA and other conferences, and establishing an E-mail journal. Mark Swain and Duane Lord agreed to be responsible for establishing an interbehavioral E-mail. Advisory Board members present agreed to continue to support the newsletter with submissions and to encourage others to do so as well.

2. **ABA Program** - It was decided that interbehavioral symposia at next year's ABA conference will not be submitted from the special interest group as the group no longer has representation on the ABA Program Committee due to its reorganization this past year. Ideas for symposia included a collection of expert papers with responders from outside the interbehavioral group. Mark Swain volunteered to organize a symposium.

3. **SIG Offices** - Linda Hayes appointed Mark Swain and Debra Fredericks as co-chairs of the Special Interest Group.

4. **Training opportunities for interbehaviorists** - Linda Hayes reported that the University of Nevada at Reno was hiring a new faculty member in Behavior Analysis this fall and encouraged members of the group to make the interbehavioral emphasis of the program known to prospective graduate students.

5. **Interbehavioral publications** - It was announced that proceedings from the *First International Congress on Interbehaviorism*, held in Guadalajara, Mexico, in 1992 will be published in English by CONTEXT PRESS, and in Spanish by the University of Guadalajara.

News and Notes

James J. Fox, Research Director of the Center for Early Childhood Learning and Development at East Tennessee State University, has joined the Editorial Board of **The Interbehaviorist**.

Patrick Ghezzi, formerly of the University of Arizona, has joined the faculty of the Department of Psychology, University of Nevada, Reno, NV. Dr. Ghezzi will serve as an Associate Professor in the Behavior Analysis Program.

That Little Extra

The Interbehaviorist thanks the following persons who added a little extra to their subscriptions dues: Joe Brady, Louise Kent-Udolf, John Grossberg, Allan Lazar, Parker Lichtenstein, Harry Mahan and Reginald Marsack.

Article

The Privacy Construct as a Stumbling Point in Psychology

Noel W. Smith

State University of New York at Plattsburgh

Customary Assumptions

The concept of "privacy" began with René Descartes as a part of the psychophysical dualism that he helped accentuate. According to Descartes and other dualists who followed him, two radically different forms of reality exist: on the one hand, physical phenomena made of atoms and molecules that extend into space and are perceptually public and, on the other hand, mental phenomena that do not extend into space, do not have any physical properties, and are intrinsically private. The medieval Aristotelians who preceded Descartes held no concept of privacy. For them, thought was best known through thoughtful behavior, intellect through intelligent behavior. But Descartes defined thought in terms of something existing in us of which we have an immediate consciousness. As a corollary he argued that only one's thoughts are known with any certainty and all else is a matter of inference and therefore of doubt. Franz Brentano brought the privacy question to a sharper focus by insisting that it is only by inner perception of our minds or consciousness that mental phenomena are known and that it is therefore clear that such mental phenomena can never be perceived by more than one person.

But is it not true, as Descartes and others claimed, that such psychological events as perceptions, desires, feelings, and many others are private? And does this not indicate that they are internal and inaccessible? Can we ever really know what another person sees, hears, smells, tastes? Is our toothache not private?

Challenges to the Assumptions

Woodbridge (1913) answered by asking, "Does the fact that I can not sense my brother's pain, but must infer it, prove anything else than that my pain-sensing machinery is limited to my own pain?" And Kantor (1963) observed

The famous and perennial argument that only the possessor of the aching tooth could have direct experience or knowledge of the toothache is simply the product of the evolu-

tion of psychic doctrine. Those who accept the doctrine have always been influenced by the dogma of mind to overlook the fact that all events are unique. What A is digesting is not digested by B. The fall of A is not the fall of B. Nor does the fact that neither A nor B can see what the other is digesting nor observe the fall of the other, unless both happen to be in a favorable situation, indicate that psychic stuff or principle is involved (p. 292).

Pronko, Ebert, and Greenberg (1966) pointed out that chemists cannot *be* the reactions they study or entomologists the insects they observe; yet this does not make the events any less knowable. Psychologists may, in fact, have an advantage over other scientists in that they have a commonality with other people's perceptions and feelings as expressed in the phrase "I feel for you" or, similarly, "I know how you feel".

Lichtenstein (1971) noted that under the influence of Locke and Müller we have traditionally placed seeing red in the organism and this in turn leads us "very easily to a subjective psychology in which the world does not exist independently but only as a construct of the human mind" (p. 11). He further points out that covert behaviors may be more difficult to deal with than overt ones but do not differ in principle regardless of the difficulty of the technical problems. Even so, other sciences also have difficulty in observing some of the phenomena that are important to them: the basic particles of matter, the causes of cancer, the social organization of prehistoric peoples, the structure of the universe. Difficulty of observation makes them no less objective. Homme's (1965) success in applying operant procedures to "coverants" is indication that the problem is far from unsurmountable. In fact psychologists regularly study covert interactions by asking subjects to fill out questionnaires about their attitudes, interests, and desires and by such procedures as asking what they see projected on a screen. Jacob and Sachs (1971) edited

a book on "private events" and noted that the evidence contained therein "support[s] the proposition that covert events operate as if they are amenable to some of the same learning processes and manipulations as other classes of responses (p. 2-3). Lichtenstein observed that the question about whether seeing red or the verbal statement "I see red" is the "actual datum" for the psychologist was well handled by Schoenfeld and Cumming (1963) who took the seeing red as the verbal response for exactly what it is—a report. Thus there is a perceptual response and a verbal response as a reference to it. One cannot be reduced to the other nor should there be any confusion about them, but dualistic assumptions inevitably produce such confusion (e.g., Alston, 1973).

Greenspoon (1961) offered two resolutions to the privacy "problem". One is to recognize that experience is behavior and thus there really is no problem. The other solution, a methodological refinement of the first, is to consider objectivity to be high reliability of either intra- or inter-observer reports and subjectivity to be low reliability. Stephenson (e.g., 1953, 1968, 1980) developed an entire methodology, *Q*, which is totally objective, out of a recognition of the objectivity of subjectivity as suggested by the title of one paper: "Consciousness Out—Subjectivity in" (1968). A subjective point of view can be represented by a *Q* sort and an objective point of view by another observer. There is no mind-body dualism here.

Replacing "Privacy" with a Field of Events

The perennial problem of how do I know that the red I see is the same red that you see involves both the assumption of privacy and of creationism. The privacy and the color matters I have already dealt with, but the question can still be a meaningful one with regard to possible color blindness and to different viewing arrangements. These problems are easy to resolve: color blindness can be checked with appropriate tests, and viewing arrangements can be standardized. This results in high inter-observer reliability. We can then say with a high degree of confidence that the red I see is the same as the red you see. (This assumes a simple discrimination or identification and disregards any differences in meaning, e.g., the red is harsh to you but attractive to me.) As for the retort that we may have learned the same word while seeing different things, this same claim might be made for the names we give to anything in our surroundings. The objects I call by the names "house" and "dog" are

the same for all those who share the same language reference system. The color red can in no way differ from this unless we assume that the organism creates that color and that different organisms may create different colors. And that takes us back to the original assumption of creationism.

Such covert events as joy or a toothache or seeing a color are not different in principle from more overt activities such as speaking or walking, both overt and covert events being equally individualistic and equally concrete. The only difference is in the degree of accessibility to other observers. We could say that the biologist gazing on a new species in the rain forest is having private experience in that others are not in a position to engage in the same interbehaviors. Although in any interaction any component of the field may vary in accessibility to others, one or another component of the field is usually accessible. In many cases the stimulus is easier to observe than the response.

This suggests that when so-called privacy is analyzed into concrete events it appears to have two major referents: (1) the accessibility of the stimulus object or the response to more than one person and (2) the meaning of the stimulus object to the individual—that is, the individuality or uniqueness of the interaction. Looking at each of these in turn,

(1) Accessibility

The availability of the stimulus object to one or more than one person often depends on whether it resides within the individual organism or outside of it. Ratliff (1962) makes a similar point—a visual stimulus, though different for each observer, has the same source for all and is highly correlated among them while a pain stimulus rarely has a common source and therefore has a low correlation.

(2) Meaning of the Stimulus Object

In all cases each individual may react differently from any other. To you the sighting of a rare bird may be something to enter into your record book. To a deer hunter it is just a distraction. To a small boy it is something to throw a stone at. That is, the same stimulus object has different stimulus functions for different persons depending on each person's prior reactions and the circumstances of the moment. As for the present circumstances or setting, hunters might be more interested if they are not looking for deer; the boy might not throw a rock in the presence of an adult; and bird watchers will be less than enthusiastic if they are lost in the woods. Privacy merely refers to

the fact that no two people interact in the same way with the same stimulus object even when that same object can stimulate more than one person.

However, there is no need to assume that a mental state or phenomenal field resides inside each person constituting his or her private reality. Rather, the different interactions are themselves objective events comprising a part of the reality or ongoing events of the universe.

For example, any number of persons may interact with a giant redwood tree as a stimulus object but their responses may be less accessible and quite individualistic; one person may feel awe for its size and age, but another might feel that it should be cut down to provide lumber for houses and jobs for loggers and mill workers. We might not know these responses without asking the person, but a knowledge of that person's past history—conservationist or mill worker—might lead us to infer the response. In other cases the response is accessible or readily observed by others while the stimulus conditions may be unknown. For example, we may know that a person has committed a crime but be uncertain about the "motive". Similarly, if we observe someone suddenly turn about and walk in the opposite direction for no observable reason (which in fact was due to her suddenly noting that she had forgotten her purse) the stimulation is not known to us even though the response is.

In still another situation such as a toothache, both the stimulus object and the response are primarily accessible only to the person engaged in the interaction. This is only to say that it is a unique event as all other events are unique. The wind does not blow in exactly the same way twice; one does not sing a song in precisely the same way twice. The toothache is only one of a universe of unique events but even so is not entirely inaccessible. Some phase of the field of events which comprise it remains accessible, even if only by inference, just as some aspects of the interior of the earth are inferred by a geophysicist. The inflammation of the tooth may be observable by the dentist who would expect it to be painful. The verbal reference may also be indicative of the interaction, and the dentist makes use of it in identifying the problem; similarly we often rely on a technician's report of a dial reading that is no longer available to others.

When the object of stimulation or the response to it or the entire interaction are largely covert, accessible to only one person, we often rely on self-reports. We

do this regularly in psychological studies and often successfully; subjects' reports to questionnaires predict the outcome of elections and their reports of phi phenomena give us reliable information for rate of presentations of still pictures that are perceived as motion pictures. Psychology is in the fortunate position of dealing with human subjects who can give these self-reports; this contrasts markedly with the inert rocks of geology or the mute potsherds of prehistory. In that respect psychology has an advantage in its efforts to acquire knowledge, not a disadvantage in relying on self-reports as some have maintained. This is not to overlook the fact that not all self-reports are valid or even informative. For example, the person with anxiety reactions may not know the source of the reactions. Consequently, self reports may be treated as (a) the equivalent of the investigator's own observation of the stimulus object or the response or both concerning the topic on which the subject is reporting, (b) as data to be interpreted—for example, as errors, lies, distortions, judgments, etc., or (c) as objective statements about subjectivity. Observation of other components of the field might suggest whether the first or second category is likely to obtain for any given situation or subject: do we have a reliable or unreliable witness, a trained or untrained observer? Do we have a situation given to accurate or inaccurate observation? The third category might be deliberately chosen for application of Q methodology.

The contrast between private and non-private events may be useful for indicating what components of the interaction are more or less accessible to more than one person at any given time, but as a distinction between internal-external, knowable-unknowable, mental-physical it is artificial and should be discarded. In sum, private and non-private or covert and overt responses are continuous with each other and are both made of the same stuff—fields of interacting factors. As with all sciences there are various conditions under which knowledge may be obtained and various means and degrees of difficulty of obtaining it. All components of psychological events, wherever they may lie on the covert-overt continuum, are, on the whole, as amenable to being known as those of any other science.

References

- Allston, W. P. (1972). Can psychology do without private data? *Behaviorism*, 1, 71-102.
Greenspoon, J. (1961). Private experience revisited.

- The Psychological Record*, 65, 56-63.
- Homme, L. E. (1965). Control of coverants, the operants of the mind. *The Psychological Record*, 15, 501-511.
- Jacobs, A. & L. B. Sachs (1971). Private events. In A. Jacobs & L. B. Sachs (Eds.), *The Psychology of Private Events: Perspectives on Covert Response Systems*. New York: Academic Press.
- Kantor, J. R. (1963). *Scientific Evolution of Psychology*, Vol. 1. Chicago: Principia Press.
- Lichtenstein, P. E. (1971). A behavioral approach to "phenomenological data". *The Psychological Record*, 21, 1-6.
- Pronko, N. E., Ebert, R. & Greenberg, G. (1966). A critical review of theories of perception. In A. L. Kidd & J. L. Rivoire (Eds.), *Perceptual Development in Children*. New York: International Universities Press.
- Ratliff, F. (1962). Some interrelations among physics, physiology, and psychology in the study of vision. In S. Koch (Ed.), *Psychology: A Study of a Science*, Vol. 4. New York: McGraw-Hill.
- Schoenfeld, W. N. & N. W. Cumming (1963). Behavior and perception. In S. Koch (Ed.), *Psychology: A Study of a Science*, Vol. 5. New York: McGraw-Hill.
- Stephenson, W. S. (1953). *The study of behavior: Q-technique and its methodology*. University of Chicago.
- Stephenson, W. S. (1968). Consciousness out-subjectivity in. *The Psychological Record*, 18, 499-501.
- Stephenson, W. S. (1980). Newton's fifth rule and Q-methodology: Application to educational psychology. *American Psychologist*, 35, 882-889.
- Woodbridge, F. J. E. (1913). The belief in sensations. *Journal of Philosophy, Psychology, and Scientific Method*, 10, 599-608.
- A version of this paper was presented at the Annual Meeting of the Association of Behavior Analysis, May 25-28, 1992, San Francisco. Portions of it are drawn from previous publications of the author.*

Article

Pragmatics and Utility of Interbehavioral Methodology

Tom Sharpe

University of Nebraska-Lincoln

Andrew Hawkins

West Virginia University

Educational, clinical, and social psychologists, among others, have shown a . . . change in focus from the study of one organism over time to the study of the social interaction between organisms (Dillon, Madden, & Kumar, 1983, p. 564).

Behavior analytic oratory which questions the relative value of a field systems research perspective (cf., Baer, 1992; Skinner, 1988) remains prevalent in the context of applied interbehavioral methodology portrayal (Sharpe & Fox, 1992). Though systems scholars currently carrying the methodological banner are commended for the depth and breadth of such complex efforts, two contemporary arguments in rebuff of a systems conceptual orientation arise as follows: (1) Are methodologists pursuing a systems perspective for the singular purpose of knowledge enhancement, regardless of its pragmatic or utilitarian nature?; or (2) Are any attempts to (a) enable a more concise method of inquiry, and (b) provide information of use in enhancing the quality of life of the larger culture, inherent to interbehavioral scholarship?

As these issues frequent discussion of the relative value of an interbehavioral methodology within behavior analytic circles, further rejoinder is warranted. Though interbehavioral neophytes, our hope is that argument rebuttal based upon the professional focus and concomitant literature with which we are familiar will serve to stimulate greater reflection with regard to other's advocacy of interbehavioral implementation. In turn, we hope to focus interbehavioral scholars on the importance of demonstrating the pragmatics of their methodology and ultimate utility of their scholarship in light of prevailing criticism.

A Radical Behaviorist Polemic

One of the most pressing arguments put forth by contemporary scholars who still cling to a Skinnerian world view takes the form of analogy. A parallel is

made between interbehavioral methodology and epidemiology – the latter endeavor attempting to describe the sum of possible factors which control the presence or absence of a disease or pathogen, and the former attempting to thoroughly describe the functional interactions among all behavioral and ecological variables within a particular experimental setting.

As science, epidemiology seeks to describe the incidence, distribution, and possible control factors of a disease extant to a particular population. Painstaking efforts are undertaken to inductively track the many possible functional relationships among all variables which are conceivably related to a particular disorder. However, only a microscopic portion of the time-consuming data collection and analysis effort are proven to be functionally related and, hence, of ultimate use to the practitioner in primary remediation of the disease. Questions, therefore arise as to the relative cost-effectiveness of such a methodology, and its relative utility given alternative means of coming to a greater understanding a particular disease.

In this light, analogous issues of (a) inordinate application complexity related to the pragmatics of interbehavioral methodology, and (b) its relative utility to the surrounding profession and culture are brought forth. The central argument against implementation of interbehavioral methodology in answering investigative questions is currently portrayed in terms of cost and time factor concerns weighed against possible knowledge gained and the cultural utility of such knowledge.

On Pragmatism

As argument against interbehavioral application separates the issues of pragmatism and utilitarianism, it may be best to address each independently. Though each conceptual issue is readily assumed to have been successfully confronted on repeated occasions by interbehavioral researchers, the question of a systems methodology's pragmatic nature in light of a quest for

knowledge extension in and of itself warrants further buttress.

Methodological Advocacy

In substantiating the practicality of interbehavioral methodology, one must first consider that recent theory and research point to the functional inseparability of behavioral and ecological events in interactive settings with regard to their joint contribution to the meaning and nature of the whole (Altman & Rogoff, 1987; Kantor, 1969). Not taking into account the functional interactions of multiple operative events has often led to confounding research, for one stimulus may affect many responses, and responses are seldom the function of a single stimulus (refer to Delprato, 1987; Miller, 1952; Morris & Midgley, 1990; and Willems, 1974 for further discussion of these issues). At issue is the importance of investigative recognition of the many interactive components contained within behavior/environment fields as a matter of representative accuracy. As the opening quotation suggests, movement away from the study of the properties of one organism over time (e.g., applied behavior analysis), toward the study of behavioral *and* ecological interactions (i.e., interbehavioral analysis), is recommended to more representatively and, hence, more accurately map the functional characteristics of an experimental setting (c.f., Dickie, 1989; Dillon, Madden, & Kumar, 1983; Pronko, 1980; Schroeder, 1990; Smith, Mountjoy, & Ruben, 1983). In quick illustration, when a mechanic attempts to determine why an automobile will not operate, it is not only important to ascertain if particular engine components such as the carburetor are operating effectively (the molecular perspective of applied behavior analysis); it is also important to ensure that the many engine and transmission components interact effectively in concert (the molar perspective of interbehavioral analysis).

Many behavior analysts interested in applied questions, however, often lack the analytic curiosity recommended above and thus limit their interest to the simple function of summarizing the effects of the primary conditions for comparison (Johnston, 1990). If one subscribes to Johnston's definition of the act of behavioral science: ". . . those who are genuinely interested in learning new things about behavior whatever it takes (p. 165)," then one must necessarily reflect upon the relative effectiveness of traditional means of doing research in applied settings versus the development cost of alternative methodologies.

A means of mutual consideration of organismic history, setting context, and the interactive effects of current behavioral events and ecological variables should, therefore, be pursued in attempts to more accurately capture and analyze applied settings and make an informed decision with regard to relative cost effectiveness. The way in which one conceptualizes, or categorizes observable events is as important (and perhaps more important) than the characteristics of the event itself in avoiding confounding research result and contraindicated intervention recommendations. As such, alternative methodological exploration in an attempt to provide more accurate representations of applied settings play an important role in extending an existing knowledge base.

To illustrate the recommended shift in scientific thought from Skinnerian cause \rightarrow effect explanation toward a Kantorian interbehavioral conceptualization, Newtonian physics may be used as analogy. Many concepts borrowed from classical physics have clear implications for the explanation of behavior. That is, *force* may represent the strength of an independent variable intervention, *mass* may represent baseline rates of responding, and *velocity* may represent the rate of change in responding as a function of force (Nevin, 1988).

Such principles have contributed in part to initial understanding of free operant behavior (e.g., Benes, Gutkin, & Kramer's (1991) work in defining consultant and consultee verbal and nonverbal behaviors in school psychology settings specific to consultation based interventions; and Bouzas (1978) study of the law of effect). However, focus in this genre has, until very recently, been largely confined to laboratory research, and has not as yet successfully captured the more complex ecological setting variables and multiple concurrent and bidirectional force \leftrightarrow mass \leftrightarrow velocity relationships extant to accurate functional representation of human interaction in applied settings. Primary to this issue is the longstanding difficulty of studying "basic" behavioral processes in humans by traditional means, due to the inherent complexity of organism \leftrightarrow organism, organism \leftrightarrow environment, and organism \leftrightarrow behavioral history interactions (cf., *The Behavior Analyst*, 14, 1991). It is in this regard that interbehavioral methodology has greatest potential – the direct observation and accurate representation of the complex relationships inherent to the functional determinants of human interaction.

A Practical Argument

Termed pragmatism, and founded on the writings of William James and C. S. Pierce (Titus, Smith, & Nolan, 1986), methodological concision is marked by the doctrine that conceptual meaning is to be sought in its practical bearings, that the function of thought is to guide action, and that truth is preeminently to be tested by the practical consequences of belief. Given that an interbehavioral orientation may provide a more accurate representation of the experimental domain and, in turn, a heightened propensity for intervention success; what remains is argument in favor of implementation relative to traditional methodological alternatives.

Germane to pragmatics advocacy is explication of the relationship between scientific knowledge (and accompanying methodology) and cultural application. If such a relationship lags historically in bidirectional manner as Moxley (1989) suggests, then more representative analyses of experimental phenomena should result in professional and cultural benefit in future – though present time, cost, and complexity challenges are frequent.

The scientific evolution of transportation technology and resultant cultural enhancement serves to illustrate Moxley's point well. With the turn of the twentieth century western culture evidenced a cataclysmic shift from animal to fuel driven transportation. Initially, the quest for additional knowledge to enhance transportation mode was time and cost aversive to the extent of general non-understanding of possible benefit, and to the point of great cultural resistance. In retrospect, however, initial expenditure has provided significant benefit as the science of transportation has been translated into time and cost efficient travel, in turn fueling the search for greater knowledge specific to even more optimal travel modes – despite the initial insurgency encountered.

In similar fashion, the science of interbehavioral methodology is rapidly evolving in concert with computer technology to provide a time and cost efficient means of data collection, topographic description, and parametric analysis (cf., Bakeman & Gottman, 1986; Barton & Johnson, 1990; Gottman & Roy, 1990; Ray & Delprato, 1989; Sharpe & Hawkins, 1992; Sharpe, Hawkins, & Wood, 1991; S&K computer Products, 1985). Though by no means construed to be exhaustive, referenced examples of such an evolving technology provide evidence of very time efficient "push-button" implementation. With regard

to cost efficiency, current economic trends in computer technology provide interbehavioral researchers with an inexpensive avenue to the equipping of laboratory facilities necessary to the implementation of research agendas in applied settings. Relative to the economic costs of laboratory facility establishment of other disciplines (e.g., biological science, exercise physiology, epidemiology, biomechanics), and the time-intensive nature of alternative methodologies (e.g., ethnography, experimental analysis of behavior with non-human subjects), a case may be readily made for the relative time and cost effectiveness of interbehavioral methodology implementation, given evolving computer applications.

From this, it is clear that a systems conceptual world view is beginning to guide methodological action in a practical and relatively succinct manner. As previously indicated by Sharpe and Hawkins (1990), it may be more accurate to speak of applied behavior analysis and interbehaviorism in methodological context as similar scientific perspectives. Each view is moving quickly toward scientific and technological application, though interbehavioral methodology is in tumultuous infancy (absorbing the brunt of intolerant aberrations) and a Skinnerian view has, perhaps, evolved to fruition (though largely resistant to methodological evolution). What is now necessary is rejoinder to the issue of professional and cultural impact with regard to the utilitarian nature of interbehavioral knowledge gained.

On Utilitarianism

Though by no means an exhaustive content area list, the view that field system constructs have utilitarian promise are currently found in (a) family therapy (cf., Wahler & Hann, 1987), (b) school psychology consultation (cf., Martens & Witt, 1988a, 1988b), (c) clinical psychology (cf., Ruben & Delprato, 1987), (d) ethology (cf., Mjrberg, 1972; Ray, in press), (e) health related issues (cf., Ray, 1983) and (f) instructional effectiveness (cf., Greenwood, Carta, Arreaga-Mayer, & Rager, 1991; Hawkins & Sharpe, in press; Kamps, Leonard, Dugan, Boland, & Greenwood, 1991). In each of these disciplines scientific information has been uniquely uncovered via a systems methodology which serves to (a) better train professionals toward expertise in their respective content area, and (b) impact positively on clients and students served by such trained professionals, ultimately providing for enhanced quality of life for the larger culture.

The wealth of conceptual literature in advocacy

of more accurate representation of naturalistic settings via a systemic view, when coupled with recently emerging applications of interbehavioral research results, brings one to the conclusion that clinging to a linear view of cause \rightarrow effect based upon implementation efficacy runs counter to scientific evolution in the ideal. In light of narrowly focused applied behavior analytic study's propensity to lead one to contraindicated interventions when attempting to enhance the quality of life of a part of the culture (i.e., student, client, etc.), evolving toward an interbehavioral world view as applied to methodological implementation becomes particularly salient.

Though pockets of resistance still remain within the behavior analytic community, the utilitarian information which may be gained from a field systems methodology warrants further illustration. As the instructional domain is most familiar to we authors, it is used as our example.

It has been asserted by many interbehaviorists that a systems methodology embodies applied behavior analysis and much more, rather than embracing a separatist view. Drawing, again, on the automobile mechanic depiction, both molecular and molar characteristics are inherent to interbehavioral study. Specific to education research, it has been reassuring to find that a systemic methodology provides molecular information that is already known, making it easier to accept the molar knowledge that is also generated by a new methodology (cf., Berliner, in press). With regard to new information generated, the following areas provide example: (a) sensitivity to the functional differences in teaching behavior across different grade levels, (b) sensitivity to the particular ecologies of lesson forms across content and context, (c) examination of the functional differences in the behaviors of the same teacher across subject matter content areas, (d) scrutiny of effective (and not so effective) instructional differences across differential SES and cultural characteristics of classroom settings, and perhaps most importantly, (e) making more explicit the connection among functional teacher stimuli and student responses (and, in turn, student stimuli and teacher responses) within particular teacher and student fields. In addition, though effective time based behavioral patterns of rule-example-rule and structure-solicit-respond-evaluate are well known and reinforced via interbehavioral research, previously unaccounted for chains extant to exemplary instruction are also amenable to discovery (cf., Hawkins &

Sharpe, in press).

It is our position that a cost and time efficient tool now exists via interbehavioral technology for the study of some of the basic processes of successful instruction in different settings, subject matter areas, and across different lesson forms. However, one may readily agree that the ultimate value of scientific pursuit may be gauged by its usefulness to the profession from which it stems and the culture at large. In this light, this instructional assessment technology and research information, in turn, has been integrated with undergraduate teacher certification program instruction and evaluation functions — directly applied to the training of more effective teachers in treatment package form (cf., Hawkins, Sharpe, & Ray, in press). Initial study of the utilitarian nature of interbehavioral application to preservice teacher training has shown great promise in (a) making teachers more aware of the functional connections among teacher and student behavior; (b) effectively changing singular teacher behaviors and complex analytic units of functionally related teacher behaviors over time toward greater instructional expertise; (c) providing for simulation and comparison of effective and novice instructional episodes, of great utility in preservice instruction (Berliner, 1986); and (d) overcoming the historical impediment of first year teacher socialization away from the teacher effectiveness principles learned within the certification program context (Sharpe, 1992).

Though this paper is limited to one disciplinary illustration, it should be apparent that such a utilitarian argument is plausible across many research areas in which interbehavioral methodology is amenable to application. It, therefore, becomes not an inability dilemma with regard to the pointing to what we know about the world around us via interbehavioral research. Rather, it is a responsibility challenge with regard to effective communication of interbehavioral research results and their utilitarian application to both scientific and popular cultures in a readily understood fashion. This is particularly germane in view of current systems methodology resistance within the applied behavior analysis community.

Conclusions

In spite of the productive nature of the behavior analytic tradition, there is much that is yet unknown about the determinants of more complex forms of human behavior. It is likely that these behavior clusters, and the ecology in which they reside, are those which are next in need of development in furthering

an applied behavior analytic knowledge base. It is also apparent that a spatio-temporal perspective which emanates from an interbehavioral world view is necessary for more representative evaluation and, hence, a better understanding of the complete meaning and nature of organismic interaction. Thus, the need is apparent for more sophisticated methodological technologies, to not only better assess human interaction, but to discover how to more effectively enhance the behaviors of the involved organisms. This brings one to our advocacy of current attempts to employ technologically driven methodological systems related to an interbehavioral perspective, though philosophical cautions are replete.

It is also well recognized within the interbehavioral community that the following four areas of recommended methodological application (Greenwood, Delquadri, Stanley, Terry, & Hall, 1985) are currently underway in many disciplines: (a) development of a comparative data base derived from differential settings as temporal conglomerates of contextual and behavioral variables, (b) implementation of subsequent causal analyses of relationships which appear frequently in such data bases, (c) monitoring of the fidelity of interventions in specific contexts based upon descriptive-analytic conclusions, and (d) assessment of long term changes in contextual and behavioral functional dependencies which have resulted from these interventions.

The point is well taken that, as the technological revolution approaches human research, careful consideration of the empirical and ethical limits of technology must be undertaken through the scholarly dissemination of its functional possibilities. However, the end of more thorough and more accurate methodological strategies, as applied to human interaction, will necessarily include calculated experimentation with emergent technologies.

Though the interbehavioral research community may readily accept that many other examples regarding the utility of systems research are available, it is hoped that our education research exemplar will give impetus to focus future presentation and publication efforts around both methodological pragmatics and cultural enhancement issues which are currently serving to inhibit wide acceptance of systems methodologies. With regard to current radical behaviorist polemic, the systems research community must repeatedly illustrate that interbehavioral science fits a pragmatic orientation to methodological evolution and is

moving toward greater time and cost efficiency as technological means allow.

Such efficiency issues as related to knowledge gained must be argued favorably if one is to espouse systems research as a legitimate pursuit of knowledge, even if for the singular purpose of knowledge extension. Second, our community must continually place priority on dissemination of the professional and cultural utility of research result, given consensus specific to a utilitarian definition of scientific pursuit. In presentation of an alternative conceptual orientation toward the interactive world around us, and concomitant means of representatively studying that world, interbehaviorists must be eternally vigilant regarding opportunities to advocate (a) methodological feasibility as related to evolving computer technologies, (b) the evolving cost and time efficacy of methodological implementation as related to alternative strategies, and (c) the utilitarian nature of scientific results.

The concerns illuminated above by our more traditional behavior analytic colleagues are well taken (cf., Baer, 1992), albeit with a necessary rebuttal. However, concentrated focus on the above issues must remain at the forefront of future interbehavioral symposiums held within the hallowed halls of ABA among attendant traditional behavior analytic thinkers. For only in this light will interbehaviorism realize the full measure of its methodological capacity under an applied behavior analytic umbrella.

It is readily acknowledged that interbehaviorism embodies all that behavior analysis is (Morris & Midgley, 1990) and merely attempts to evolve original precepts toward greater focus on the complexity of organismic and environmental interactions in applied settings. In this regard, it is our hope that the behavior analysis community will become more receptive to interbehavioral research efforts (and not take to blowing up automobile prototypes so to speak), given an evolving ability on our part to convey the concision and utility of our research.

References

- Altman, I., & Rogoff, B. (1987). World views in psychology: Trait, interactional, organismic, and transactional perspectives. In D. Stokolis & I. Altman (Eds.), *Handbook of environmental psychology* (pp. 1-40). New York: Wiley.
- Baer, D. (1992). *A discussion of interbehavioral data collection and analysis: An epidemiology analogy*. Paper presented at the meeting of the Association

- for Behavior Analysis, San Francisco, CA, (May).
- Bakeman, R., & Gottman, J. M. (1986). *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Barton, L. E., & Johnson, H. A. (1990). Observational technology: An update. In S. R. Schroeder (Ed.), *Ecobehavioral analysis and developmental disabilities: The twenty-first century* (pp. 201-227). New York: Springer-Verlag.
- Benes, K. M., Gutkin, T. B., & Kramer, J. J. (1991). Micro-analysis of consultant and consultee verbal and nonverbal behaviors. *Journal of Educational and Psychological Consultation*, 2, 133-149.
- Berliner, D. (in press). Some perspectives on field systems research for the study of teaching expertise. *Journal of Teaching in Physical Education* [special monograph issue].
- Berliner, D. (1986). In pursuit of the expert pedagogue. *Educational Researcher*, 15(7), 5-13.
- Bouzas, A. (1978). The relative law of effect: Effects of shock intensity on response strength in multiple schedules. *Journal of the Experimental Analysis of Behavior*, 30, 307-314.
- Contents. (1991). *The Behavior Analyst*, 14, 95-186.
- Delprato, D. J. (1987). Developmental interactionism: An integrative framework for behavior therapy. *Advances in Behaviour Research and Therapy*, 9, 173-205.
- Dickie, R. F. (Ed.). (1989). The Juniper Gardens project. *Education and Treatment of Children* [Special Monograph Issue], 12(4).
- Dillon, W. R., Madden, T. J., & Kumar, A. (1983). Analyzing sequential categorical data on dyadic interaction: A latent structure approach. *Psychological Bulletin*, 94, 564-583.
- Gottman, J. M., & Roy, A. K. (1990). *Sequential analysis: A guide for behavioral researchers*. New York: Cambridge University Press.
- Greenwood, C. R., Carta, J. J., Arreaga-Mayer, C., & Rager, A. (1991). The behavior analyst consulting model: Identifying and validating naturally effective instructional methods. *Journal of Behavioral Education*, 1, 165-191.
- Greenwood, C. R., Delquadri, J. C., Stanley, S. O., Terry, B., & Hall, R. V. (1985). Assessment of ecobehavioral interaction in school settings. *Behavioral Assessment*, 7, 331-347.
- Hawkins, A., & Sharpe, T. L. (Eds.). (in press). Field systems analysis: An alternative strategy for the study of teaching expertise. *Journal of Teaching in Physical Education* [special monograph issue].
- Hawkins, A., Sharpe, T. L., & Ray, R. (in press). Toward instructional process measurability: An interbehavioral field systems perspective. In R. Gardner (Ed.), *Behavior analysis in education: Focus on measurably superior instruction*.
- Johnston, J. M. (1990). What it means to be a scientist. *The Behavior Analyst*, 13, 163-165.
- Kamps, D. M., Leonard, B. R., Dugan, E. P., Boland, B., & Greenwood, C. R. (1991). The use of ecobehavioral assessment to identify naturally occurring effective procedures in classrooms serving students with autism and other developmental disabilities. *Journal of Behavioral Education*, 1, 367-397.
- Kantor, J. R. (1969). *The scientific evolution of psychology* (Vol. 2). Chicago: Principia Press.
- Martens, B. K., & Witt, J. C. (1988a). Ecological behavioral analysis. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (Vol. 27, pp. 115-140). Beverly Hills, CA: Sage Publishing.
- Martens, B. K., & Witt, J. C. (1988b). Expanding the scope of behavioral consultation: A systems approach to classroom change. *Professional School Psychology*, 3, 271-281.
- Miller, G. A. (1952). Finite Markov processes in psychology. *Psychometrika*, 17, 149-167.
- Mjrborg, A. A. (1972). Ethology of the bicolor damselfish, *Eupomacrus partitus* (Pisces Pomacentridae): A comparative analysis of laboratory and field behaviour. *Animal Behavior Monographs*, 5.
- Morris, E. K., & Midgley, B. D. (1990). Some historical and conceptual foundations of ecobehavioral analysis. In S. R. Schroeder (Ed.), *Ecobehavioral analysis and developmental disabilities: The twenty-first century* (pp. 1-32). New York: Springer-Verlag.
- Moxley, R. A. (1989). Some historical relationships between science and technology with implications for behavior analysis. *The Behavior Analyst*, 12, 45-57.
- Nevin, J. A. (1988). Behavioral momentum and the partial reinforcement effect. *Psychological Bulletin*, 103, 44-56.
- Pronko, N. H. (1980). *Psychology from the standpoint of an interbehaviorist*. Monterey, CA: Brooks/Cole.
- Ray, R. D. (in press). Interbehavioral methodology: Lessons from simulation. *Journal of Teaching in Physical Education* [special monograph issue].

- Ray, R. D. (1983). Interbehavioral systems, temporal settings and organismic health. In N. W. Smith, P. T. Mountjoy, & D. H. Ruben (Eds.), *Reassessment in psychology: The interbehavioral alternative* (pp. 361-380). Washington, DC: University Press of America.
- Ray, R. D., & Delprato, D. J. (1989). Behavioral systems analysis: Methodological strategies and tactics. *Behavioral Science, 34*, 81-127.
- Ruben, D. H., & Delprato, D. J. (Eds.). (1987). *New ideas in therapy*. Westport, CT: Greenwood Press.
- Schroeder, S. R. (Ed.). (1990). *Ecobehavioral analysis and developmental disabilities: The twenty-first century*. New York: Springer-Verlag.
- Sharpe, T. L. (1992). *Validation of a behavior analytic preservice teacher certification program*. Paper presented at the meeting of the Association for Behavior Analysis, San Francisco (May).
- Sharpe, T. L., & Fox, J. (1992). *Current technologies in interbehavioral data collection and analysis*. Paper presented at the meeting of the Association for Behavior Analysis, San Francisco (May).
- Sharpe, T. L., & Hawkins, A. (1992). Field systems analysis: Prioritizing patterns in time and context among observable variables. *Quest, 44*, 15-34.
- Sharpe, T. L., & Hawkins, A. (1990). Interbehaviorism: Philosophy or science? A rejoinder to Delprato. *The ABA Newsletter, 13*(3), 16-17.
- Sharpe, T. L., Hawkins, A., & Wood, D. (1991). "Hawkins" and "Sharpe" temporal analysis system users' manual. (Available from Tom Sharpe, School of HPER, 204 MABL, University of Nebraska-Lincoln, Lincoln, NE 68588-0229).
- Skinner, B. F. (1988). The cuckoos. *The ABA Newsletter, 11*(3), 7.
- Smith, N. W., Mountjoy, P. T., & Ruben, D. H. (Eds.). (1983). *Reassessment in psychology: The interbehavioral alternative*. Washington, DC: University Press of America.
- S&K Computer Products, Ltd. (1985). *Portable event recorder protocol*. (Available from S&K Computer Products, Ltd., P.O. Box 146, Station M, Toronto, Ontario, M6S 4T2, Canada).
- Titus, H. H., Smith, M. S., & Nolan, R. T. (1986). *Living issues in philosophy* (8th ed.). Belmont, CA: Wadsworth Publishing.
- Wahler, R. G., & Hann, D. H. (1987). An interbehavioral approach to clinical child psychology: Toward an understanding of troubled families. In D. H. Ruben & D. J. Delprato (Eds.), *New ideas in therapy* (pp. 53-78). Westport, CT: Greenwood Press.
- Willems, E. P. (1974). Behavioral technology and behavioral ecology. *Journal of Applied Behavior Analysis, 7*, 151-165.
- Direct manuscript correspondence to Tom Sharpe, Graduate Pedagogy Director, Department of Health and Human Performance, 204 MABL, UN-L, Lincoln, NE 68588-0229.*

Research Notes

Social Skills Research on Children at the University of Arizona

P. M. Ghezzi*
S.W. Bijou

University of Arizona

The research at the University of Arizona on elementary school-age, withdrawn children with mild retardation is based on the assumption that deficiencies in social skills are, for the most part, deficiencies in linguistic behavior. The method for analyzing such behavior is based on J.R. Kantor's concept of psychological linguistics (1977; see also Bijou & Ghezzi, in press).

Guidelines for using the method, which requires rating videotaped conversations, have been published in *The Psychological Record* (Bijou, Chao, & Ghezzi, 1988; Bijou, Umbreit, Ghezzi, & Chao, 1986; Ghezzi, Bijou, & Chao, 1991). Procedures for enhancing social skills, which are based on the operant paradigm, are conducted in a quasi-laboratory, elementary school setting and involve a five-stage subject selection process.

Thus far, the research has proceeded through three phases: The first investigated the feasibility of applying the method to a well-known finding, namely, the differential effects on a speaker of varying listener age (Ghezzi, Bijou, Umbreit, & Chao, 1987). The second investigated the various parameters of adult-mediated social skills training, and the third examined peer-mediated training (Ghezzi & Bijou, in press).

The results of the training studies highlight some of the advantages of not only conceptualizing social skills in terms of interpersonal linguistic behavior, but also of studying linguistic behavior from an interbehavioral point of view.

References

- Bijou, S.W., Chao, C.-C., & Ghezzi, P.M. (1988). Manual of instructions for identifying and analyzing referential interactions II. *The Psychological Record*, 38, 401-414.
- Bijou, S.W., & Ghezzi, P.M. (in press). *Outline of J.R. Kantor's Psychological Linguistics (1977)*. Chicago: Principia Press.
- Bijou, S.W., Umbreit, J., Ghezzi, P.M., & Chao, C.-C. (1986). Manual of instructions for identifying and analyzing referential interactions. *The Psychological Record*, 36, 491-518.
- Kantor, J.R. (1977). *Psychological Linguistics*. Chicago: Principia Press.
- Ghezzi, P.M., & Bijou, S.W. (in press). Social skills training for withdrawn mildly retarded children. In E. Ribes, L.J. Hayes, & A. Lopez (Eds), *Interbehaviorism: Proceedings of the First International Congress of Interbehavioral Psychology*. Reno, NV: Context Press.
- Ghezzi, P.M., Bijou, S.W., & Chao, C.-C. (1991). A manual for training raters to identify and analyze referential interactions. *The Psychological Record*, 41, 473-486.
- Ghezzi, P.M., Bijou, S.W., Umbreit, J., & Chao, C.-C. (1987). Influence of age of listener on preadolescents' linguistic behavior. *The Psychological Record*, 37, 109-136.

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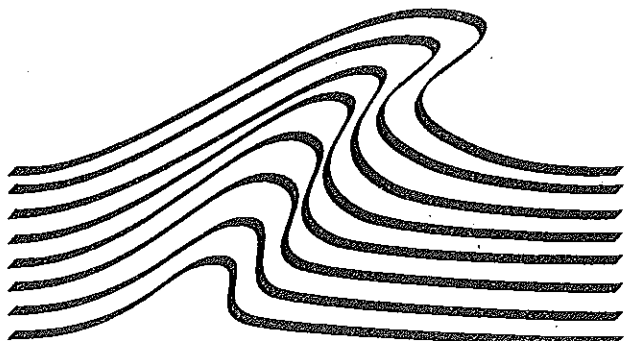
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