

THE INTERBEHAVIORIST

A Quarterly Newsletter of Interbehavioral Psychology

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Number 1

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University of Nevada, Reno

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THE INTERBEHAVIORIST is a quarterly publication of 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 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 triplicate 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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That Little Extra

We appreciate the "little extra" a number of subscribers included with their 1990 subscriptions: Sidney Bijou, David Cornwell, William Gardner and James Herrick. Thank you.

THE PRINCIPIA PRESS

Principia Press's currently available titles in interbehavioral psychology, all by J.R. Kantor, are listed below. Check your bookshelves, and those of your library and bookstore, for possible oversights. In addition, the books make excellent gifts for colleagues and students, especially for the latter in honor of their completed degree requirements. The books may be purchased directly from Principia Press, 5743 Kimbark Avenue, Chicago, IL 60637. Handling charges are \$.75 per title; prepaid orders are postpaid. Any queries should also be directed to the address above.

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1990 Subscriptions

1990 subscription fees are past due. If you have not already done so, be sure to send them in right away.

The next issue of **THE INTERBEHAVIORIST**

will be sent to 1990 subscribers. Don't miss it!

Editorial

Paul Mountjoy introduced me to the work of J. R. Kantor in 1976 while I was a student at Western Michigan University. I was at the time a radical behaviorist, studying Skinner's writings under the tutelage of Jack Michael. I was captured by the field construction of interbehaviorism, by the comprehensiveness of the interbehavioral system, and by the scholarship of J. R. Kantor. I still am.

I assume the role of Editor of **THE INTERBEHAVIORIST** with mixed feelings. In my experience, interbehaviorists are an heterogeneous group. What some have argued in the name of interbehaviorism sounds unfamiliar to me, and what I have argued in its name has been met with disagreement. Some are tolerant of other positions, see possibilities for cooperation, while others are intolerant in principle. Some wish to be identified as interbehaviorists; others feel their impact will be greater if their identity remains ambiguous. By their contributions to this publication, it would appear that some believe its purpose to be the preservation of Kantor's thought. Others seem more inclined to see it as a sounding board for elaboration and development of the interbehavioral system. I am, as such, both honored to serve the interbehavioral community as the Editor of its newsletter, and a little afraid of the responsibility of leadership that such an honor inevitably entails. I can say only that I will take my servitude as seriously as my leadership in this capacity.

This issue has been slow to arrive as many of you have noticed. We plan to combine numbers 2 and 3 of volume 18 in a somewhat larger issue so as to achieve our target of 4 issues this year. 1990 marks the 20 year anniversary of **THE INTERBEHAVIORIST**, and we are working on a retrospective for the combined issue to be out this fall. We will begin a regular quarterly schedule in 1991. You will notice as well that this issue has a different look to it thanks to free desktop publishing assistance from Context Press.

In closing, we encourage you to make **THE INTERBEHAVIORIST** serve you -- to make it source of news and to find it an outlet for your scholarly work. We are your best audience.

Linda J. Hayes
University of Nevada, Reno

The Agora

Notes from the Field

A number of papers with an interbehavioral orientation were presented at the recent Association for Behavior Analysis convention in Nashville. Some of these are mentioned in the Special Interest Group Meeting Minutes. Some others are listed below. If you wish to receive copies, please contact the authors directly.

Sources of Conflict in Behavior Analysis - Dennis Delprato (Eastern Michigan University, Ipsilanti)

Continuities in Behavior Analytic and Behavioral Systems Methodologies - Roger Ray (Rollins College, Winter Park, FL)

Developmental Systems: A resolution to the Nature-Nurture Conflict in Behavior Analysis - Bryan Midgley (Dept of HDFL, University of Kansas, Lawrence)

Wither Behavior Analysis: Resolution of Revolution? - Edward Morris (Dept of HDFL, University of Kansas, Lawrence)

Interbehavioral Psychology: Outstanding in the Field or Out Standing in its Field? - Edward Morris (Dept of HDFL, University of Kansas, Lawrence)

An Organization for a School or for a Science and Clinical Science - Dennis Delprato (Eastern Michigan University, Ipsilanti)

Computer Based Demonstration of a Field Systems Approach to Applied Research - Tom Sharpe & Andrew Hawkins (West Virginia University, Morgantown)

Designing Interventions for Challenging Behaviors - Sidney Bijou (Dept of Special Ed., University of Arizona, Tucson)

Reality and Truth - Linda Hayes (University of Nevada, Reno)

Mora Agora

Interbehaviorists in ABA Special Interest Group Meeting Nashville, May 1990

Linda Hayes chaired the annual meeting of the SIG with approximately 15 members in attendance. The following items of business were discussed:

1. Interbehaviorists' Contributions to the ABA Program.

The SIG had been asked to organize two invited presentations for the 1990 ABA program. These were an address by Robert Wahler of the University of Tennessee entitled "Maternal surveillance in child conduct disorder", and a symposium on *Learning and Memory in Interbehavioral Perspective*, including papers by Emilio Ribes of the National Autonomous University of Mexico entitled "Are learning and memory process accounts?", Linda Hayes of the University of Nevada entitled "Learning and memory as evolving functions", and William S. Verplanck, University of Tennessee entitled "Then and Now." Hayne W. Reese of West Virginia University served as the discussant. Both sessions were well attended.

Information about the Interbehaviorists in ABA SIG and **THE INTERBEHAVIORIST** was posted during the ABA Social Hour, and at the University of Nevada hospitality suite.

A number of suggestions were made concerning the SIG's contribution to the 1991 ABA program. Dennis Delprato will organize a symposium tentatively titled "Field Behaviorism meets Radical Behaviorism," Linda Hayes will organize the SIG's now traditional session on what interbehaviorism is, and William Gardner will organize a symposium featuring empirical work from an interbehavioral perspective. Persons interested in contributing to the empirical symposium should contact Dr. Gardner at the Psychology Department, Jacksonville State University, Jacksonville, AL, 36256. Members were

also encouraged to submit papers to the ABA program committee independently.

Linda Hayes will also organize a working meeting for interbehaviorists in conjunction with the annual meeting of the SIG at the 1991 convention, to be held in Atlanta in May. Details about this meeting will be published in a subsequent issue of the newsletter.

Other suggestions for SIG contributions to the ABA program should be addressed to Linda Hayes who will be serving as the Interbehaviorists' Area Coordinator for the 1991 program.

2. THE INTERBEHAVIORIST. Ed Morris has stepped down as Editor of the newsletter. The SIG expressed appreciation for Ed's good work over the past seven years. Linda Hayes has been appointed the new editor. Linda said that she would be contacting members of the Advisory Board concerning their continued participation and would appoint some new members to the board. She also announced that Volume 18 of the newsletter would be produced in 3 instead of 4 issues. She further encouraged members to submit materials in all newsletter categories on a regular basis.

3. Graduate Training Opportunities for Interbehaviorists. Linda Hayes announced the establishment of a Professional Masters' and Doctoral specialization in Behavior Analysis at the University of Nevada, Reno. Interbehaviorally-oriented students are encouraged to apply. Contact the Linda Hayes, Department of Psychology, University of Nevada, Reno, NV 89557-0062 for more information.

Graduate training opportunities are also available in Clinical Psychology at Eastern Michigan University, and in Human Development and Family Life at The University of Kansas.

Members are encouraged to submit information about training programs of interest to interbehaviorists to **THE INTERBEHAVIORIST**.

Book and Journal Notes

Noel W. Smith (1990). *Greek and Interbehavioral Psychology: Selected and Revised Papers of Noel W. Smith*. Lanham, MD: University Press of America. (341+ pages. Paperback. \$19.95. ISBN 0-8191-7738-5.)

The preface reads as follows:

When an author brings some or all of his or her papers together into a single source (or an editor does it for the author) it provides convenience for those who make use of those papers. It also often brings attention to those papers that readers might have overlooked and gives more coherence to the author's contributions-although it might also reveal the author's diversity. In this case I have selected only those papers that provide a coherent theme. The specific purposes for these papers are the following:

To draw together Greek and interbehavioral psychology that otherwise might seem quite disparate and to show their relationships.

To bring together in one place the fundamentals of interbehavioral psychology and some of its special topics.

To provide an alternative and less voluminous route for those who have found J.R. Kantor's works difficult to read and understand.

To serve a propaedeutic function to Kantor's and Aristotle's works on psychology and perhaps to supplement them.

To supplement other writers on interbehaviorism.

As for the subject matter itself, only Kantor and a few other scholars have recognized the non-dualistic nature of Pre-Greek and Hellenic Greek psychology and even fewer have understood that for Aristotle a psychological event resides not in the organism or in the object but in their relationship. It is this Greek incipient field psychology that puts it into league with interbehavioral field psychology of 2400 years later. By providing some of the details of both, I hope these papers will document that relationship and indicate some of the advantages of the interbehavioral field as an alternative to mechanism and mentalism that prevails in psychology today. Aristotle and Kantor form a continuity and progression

(although independently developed¹) in scientific theory construction of psychology that was interrupted by 2000 years of metaphysical confusion. That confusion between events and constructs continues today almost unabated.

An unconventional characteristic of this selection of writings is that I have taken the opportunity of revising them wherever that seemed advantageous. Some of these revisions are fairly minor, such as corrections of typographical errors and the re-writing of some lines that readers have found confusing. In other cases I have rewritten paragraphs or sections or added or deleted them. In the case of a paper on Egyptian psychology that addressed only the Old Kingdom I expanded it to include the whole of ancient Egypt and changed the title as well.

The Introduction attempts to tie together the separate papers as well as the topics of Greek psychology and interbehaviorism. It also fills in a few areas that the papers do not address. For example, Mesopotamia is addressed only briefly as a part of one paper. The Introduction develops that culture more extensively as an important ingredient in the beliefs and psychology of early civilizations. It also provides information on a few additional aspects of Greek psychology.

At the top of each paper is a statement describing the changes in that paper. A list of the original sources in the Table of Contents provides the means for comparisons should anyone wish to make them.

Although a complete list of the works of J.R. Kantor, who founded and developed interbehavioral psychology, may be found in this volume, the reader may find other writers on interbehaviorism also of interest. Therefore I have compiled a selected list of these authors and placed them at the end of the volume. The more important works on Greek psychology may be found in the citations of the relevant papers.

¹ Zing-Yang Kuo's epigenetic psychology is also an independently developed system which is fully compatible with interbehaviorism although it is somewhat limited in comprehensiveness (no reference to language behavior, for example) because Kuo addressed it only to non-humans. It was influenced by Chinese culture and John Watson.

Book and Journal Notes

Dennis Delprato has offered to make available copies of notes on A. D. White's (1896) *A History of the Warfare of Science with Theology in Christendom*. He reports as follows:

I finally got around to reading one of the definitive works on the history of dualism-science confrontations: A. D. White, *A History of the Warfare of Science with Theology in Christendom* (New York: D. Appleton and Company). White's account of the great conflicts between attempts to take naturalistic approaches to the world and the forces of the transcendental cultural tradition may be of interest to those who aspire to a naturalistic behavioral science. By the time of White's writing, thinkers were in the early phases of taking human behavior as non-theological. That they still are speaks to the power of cultural impediments to our contacting events. White concludes that the warfare in areas he addresses has been resolved in favor of science. Of course, he covers aspects of the world conventionally allotted to science today, e.g., events of creation (but is this resolved?), geography, astronomy, meteorology, chemistry, physics, biology, and language. It is telling that although White delves into certain classes of unusual behavior ("insanity," "hysteria") and thus contacts human psychological behavior, the following key terms for study of the naturalization (actually re-naturalization, as students of Kantor know) of human behavior are not even in the index: *Fechner, psychology, soul, Wundt*. One wonders when the chapter on human behavior will be written.

The book is chock full of interesting stories and themes. I found it difficult to pick out a favorite. The practice of "safe science" seems to describe today's mainstream psychology. The havoc wreaked upon humans by theologically-inspired filth is a striking commentary upon the extravagances of commitments to authority and tradition and should give pause to those who ignore hygienic practices today. And there is White himself struggling to reconcile supernaturalism and naturalism. He may, in fact, be more dangerous than any of the religious types with whom he finds fault, for he seeks a 'new improved' Christianity with the capability of exerting a very subtle influence. One might prefer the explicitness of the inquisitors; at least, they were readily identifiable.

I took 36 pages (singly-spaced) of notes on White's two volumes and would be happy to send copies to anyone interested. If you would like to add to my notes, I could send the file on a MS-DOS formatted diskette. Write to: Dennis Delprato, Department of Psychology, Eastern Mich. Univ., Ypsilanti, MI 48197.

Hayes, L. J. and Chase, P. N. (1990) *Dialogues on Verbal Behavior*. Reno: Context Press. (349 pages. Paperback. \$34.95. ISBN 1-878978-00-4.)

Current work in the analysis of verbal interactions from behavioral points of view are examined in this edited volume. Of particular interest to interbehaviorists are chapters by Emilio Ribes-Inesta entitled *Language as Contingency Substitution* and by Linda J. Hayes entitled *Substitution and Reference*. Chapters address a wide variety of topics including artificial intelligence, connectionism, memory, cognition, concept formation, rule governance, stimulus equivalence, and private events. Empirical methodologies in the behavioral tradition are explored, including the study of derived stimulus relations, and the computerized assessment of linguistic self editing. Each chapter is followed by a short commentary. The book is available from Context Press, Box 50172, Reno, NV 89513.

Call for Papers

The Interbehaviorists in ABA Special Interest Group will sponsor a symposium featuring empirical interbehavioral work at the Association for Behavior Analysis convention in Atlanta, May 24-27, 1991. If you are conducting interbehavioral research and wish to be a part of this symposium, please contact William M. Gardner, Department of Psychology, Jacksonville State University, Jacksonville, AL 36256, by October 1, 1990.

Scarborough, E., & Furumoto, L. (1987). *Untold lives: The first generation of American women psychologists*. New York: Columbia University Press.

Scarborough and Furumoto describe the trials and tribulations of five outstanding first-generation American women psychologists -- Mary Calkins, Millicent Shinn, Ethel Puffer, Margaret Floy Washburn, and Christine Ladd-Franklin -- in addition to providing cameo portraits of six others (e.g., Helen Bradford Thompson Wooley). In between, the authors offer a collective picture of these women's origins, education, careers, and contributions. Scarborough and Furumoto's "new" history of psychology (see Furumoto, 1989) brings a liveliness and reality to the research and theory of the period that most history of psychology textbooks fail to convey.

A picture caption in the chapter on Calkins (1863-1930) caught our attention:

The Agora Society, Wellesley College, 1897. A group composed of students and faculty that met to discuss social and political issues of the day. (p. 41)

The chapter title: "The Quest for Graduate Education: Mary Calkins' Contest with Harvard University" (pp. 18-51). Calkins' career exemplifies both the difficulties faced by the first generation of women psychologists and the success some of them achieved.

Calkins completed her Doctorate of Philosophy degree requirements at Harvard University under William James and Hugo Munsterberg, and passed her (informal) doctoral examination in the spring of 1895 with an impressive display of erudition and intelligence. Harvard, however, did not grant doctoral degrees to women at that time, nor would it until 1963.

This professional "inconvenience" notwithstanding, Calkins invented the paired associates method for studying verbal learning and memory (Calkins, 1894), published an influential monograph on "association psychology" (Calkins, 1900, 1908), originated the terms "radical behaviorist" and "radical behaviorism" in print to denote John B. Watson and his views (Calkins, 1921; see Schneider & Morris, 1987), and served as president of the American Psychological Association (1905) and of the American Philosophical Association (1918).

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. Likewise, if you have read a paper at a meeting of potential interest to our readers, let us know. Do you know of a conference that might be of interest? Have you had a grant to do interbehavioral research funded? Do you know of a training program for students interested in interbehavioral psychology? Keep us informed.

Mary Whiton Calkins -- outstanding in her field.
The Agora redux.

Edward K. Morris
University of Kansas

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Featured Article

Pseudotechnical Language and Conceptual Confusion in Psychology: The Cases of Learning and Memory

Emilio Ribes-Inesta

National University of Mexico - Iztacala

Behaviorism and Functionalism, as natural outgrowths of evolutionary thinking, brought learning and memory into the conceptual mainstream of experimental psychology. Learning became the central topic in behavior theory as was developed in conditioning models; while memory and its ancillary concepts were the focus of human learning theory and investigation. The incorporation of these terms has not been without problems, however. More specifically, while learning and memory refer to psychological events in ordinary language, they do not constitute technical terms; and, because psychology in general and behavior analysis in particular have adopted them as technical terms, theoretical and empirical developments in psychology have been hampered by conceptual confusion.

In this paper, I shall try to clarify the difference between ordinary and technical language terms, to show why learning and memory do not constitute technical terms so defined, and to address the implications of this confusion for a natural science of psychology.

Ordinary and Technical Language

Although others (Wittgenstein, 1953; Ryle, 1964; Mundle, 1970) have discussed the distinction between ordinary and technical language, I shall allow myself to establish their differences in the following way: While words and expressions in ordinary language *make sense*, in technical language, they have particular and unequivocal *meanings*.

Ordinary language has to do with standard usages of words and expressions in particular contexts. The essential feature of ordinary language is that it makes sense in relation to the behavior and situation where it takes place, as part of a conventional practice. Ordinary language is as such multivocal, which is to say, the sense it makes depends on the context in which it occurs. For this reason, it is not a useful language for describing objects and events -- al-

though objects and events are routinely named in ordinary language. Further, terms that come from technical languages such as those of engineering and science, are often incorporated into ordinary language, while the reverse is rarely true.

Technical language, on the contrary, is a descriptive and denotative language. It is used both to name and to describe operations, outcomes, objects and events. To be useful for this purpose it must be univocal. Technical languages normally do not incorporate ordinary language terms and expressions as technical units, since the latter, being multivocal do not fulfill the requirements set up by the need of univocal denotation and description.

In discussing the difference between ordinary language and technical language, Wittgenstein (1953) introduces the concept of "language games". The concept of a game is suggested by the observation that words and phrases, interlocked with particular activities, make sense or are appropriate in particular contexts according to *practical* social rules.

Language games correspond to what Ryle calls the logical geography of ordinary language. According to Ryle (1964) ordinary language terms and expressions obey multiple logics corresponding to the multiple contexts in which they are used. When terms and expressions are used to denote logical dimensions or categories different from those to which they normally pertain, a species-invasion or categorical mistake is made (Ryle, 1949). In such cases, terms and expressions are used *as if* they pertained to a different set of uses and contexts -- to a different logical category. This phenomenon, normally descriptive of metaphor (Turbayne, 1974), is not a categorical mistake when done consciously and the *as if* relations between terms and their referents is explicitly acknowledged. The categorical error occurs when expressions and terms are used as though they *actually did* pertain to different logical dimensions or, in Wittgenstein's terms, to different language games.

Both Ryle (1949) and Wittgenstein (1953, 1980), contend that psychological terms are not technical terms but, rather, ordinary language terms posing as technical terms. According to Wittgenstein (1980):

"Psychological concepts are just everyday concepts. They are not concepts newly fashioned by science for its own purpose, as are the concepts of physics and chemistry. Psychological concepts are related to those of the exact sciences as the concepts of the sciences of medicine are to those of old women who spend their time nursing the sick" (p.12, paragraph 62.)

In other words, most so-called technical psychological terms are unintentional metaphors, drawn from ordinary language and from technical languages associated with other disciplines. They are used as if they were descriptions of processes, actions, or entities, when in actuality they have a multivocal reference to conventional practices related to tendencies to behave or to specific kinds of relations in particular contexts. When scientific terms are derived from ordinary language in this manner, not only do they not gain univocal meaning in the process but they also lose their practical social meanings. They become mere logical illusions. The result has been that unexamined and unintentional metaphors have come to masquerade as descriptions of nonexistent occurrences. Learning and memory are two such terms, to which we now turn.

Learning and Memory as Conceptual Confusions

I shall examine the logic of the terms learning and memory in ordinary language in order to provide evidence that these terms do not refer to the type of events that psychologists assume they do, and show that their use as technical terms has led to conceptual confusion.

Learning

Learning is the central concept of formulations spawned by evolutionary thinking and conditioning theories. Although the identification of learning as an essential feature of psychological behavior represents a step forward, the concept of learning divorced from its ordinary meaning, has given rise to serious conceptual confusions and theoretical blind-alleys.

As a concept, learning comes from the metaphor of acquisition of knowledge through experience. Locke (1690, 1956 Spanish translation) in his *Essay Concerning Human Understanding*, asserted that all human knowledge comes from experience, either by sensation or by reflection on sensations. Although the mind was conceived by Locke as a set of operations, these were operations in *potence*, and only through the contact with the actions of objects in the external world, did they become *actual* actions providing knowledge. In other words, the mind is interpreted as operations with respect to objects in the external world. Its content -- including its awareness of itself -- comes from experience.

As the mechanical thinking of the time dictated, the mind was held by Locke to depend upon the workings of the brain. Nonetheless, the mind as experience is a mental construction. Psychological activity, as distinct from biological activity, consisted in acquisition of knowledge by experience, that is, by learning. It is in this sense that learning and psychological behavior are synonymous. And it is here that the term becomes a source of conceptual confusion: If learning is considered a special process or category of behavior, then it stands to reason that there must be an opposite, alternative, or additional category, namely unlearned behavior and the processes that work independently of experience and individual interactions with the world. The recurrent nature-nurture controversy about the determination of behavior exemplifies this categorical mistake.

The distinction between learned and unlearned behavior has been based on the amenability of change of the former as opposed to the fixedness of the latter. Technically, learning had been identified with the processes responsible for change in behavior and, as such, is regarded as an explanatory concept in the analysis of psychological behavior. But to what do we ordinarily refer when we speak of learning or of behavior as having been learned? Do we refer to a special process taking place within the individual which results in a change of behavior?

Ordinary expressions about learning are used in two ways. First, the concept is used to identify achievements or outcomes, in terms of particular morphologies of behavior or their effects on the environment. Second, learning is a modal or capac-

ity term, describing the tendency to engage in certain behaviors given their occurrence in the past under similar circumstances. Both meanings refer to tendencies or achievements. Neither refers to special activities, changes in the individual, or processes conceived as special kinds of changes and activities. In ordinary language, to learn means to fulfil criteria in terms of the effects, outcomes or achievements of behavior, and to be able to behave in similar ways to produce similar effects or achievements in the future.

If learning does refer to achievements and capabilities (as a dispositional term), it is misleading to use the term technically to refer to effects on the organism (i.e., the *what* that is learned), or assumed processes involving unobserved activities and neural workings (i.e., the *how* of learning.) These misconceptions have dominated psychological theory, orienting research towards the analysis of different "types" of learning (stimulus-bound, response-bound, representation-bound, etc.), or to search for special kinds of correlations between biological functioning and behavior acquisition and maintenance.

It is nonetheless still reasonable to speak of a "process" of learning. It is not a process occurring within the behaving organism however. Learning as a process consists in the techniques arranged by teachers in order to facilitate the occurrence of certain ways of behaving on the parts of learners so as to achieve particular outcomes. The processes of learning are the processes shared by any behavior (being learned or already learned). The difference lies not in the behavior of the learner but in the behavior of those setting up the conditions for the acquisition of new functions of behavior, or the development of potential morphologies as effective behavior in particular situations. Learning is a technological issue, not a fundamental psychological category or process.

Memory

Memory is a concept intimately attached to learning within psychological tradition. On one hand, because of the organocentric conception of learning as a change taking place *in* the organism, memory has been advocated as a process complementary to learning, dealing with the storage of changes in behavior and with their retention and retrieval for effective performance at a later time. On the other hand, since learning has been identified with know-

ing about something as different from performing in some way (i.e., knowing *that* determining knowing *how*), memory has been postulated as a complex representational system where performance in a situation is encoded, stored, recognized and decoded for future successful action. Memory is the storage of representations, while perception and imagination are the external and internal factories of such cognitive entities consisting in *what* is learned. Because of this tradition of dividing thought from action, many contemporary memory researchers view their work as focused on the actual core of learning: Its content as representation, and its role in the repeated occurrence of acquired performance.

To speak about memory is to ask about where representations are stored, how they are stored, how many representation may be stored and how are they are retrieved. Memory as a cognitive process or capacity is conceived as remembering or recalling, recognizing or evoking, and reminding behaviors or situations as a repeated experience (reminiscence). All of these processes imply present action with respect to past events existing in the form of internal activities or representations. They signify a revived past as internal present. Wittgenstein (1980) comments on this conceptual confusion when he says: "But if memory shows us the past, how does it show us that it is the past? It does *not* show us the past. Any more than our senses shows us the present" (p. 103, paragraph 593.)

When we refer to remembering or memory in ordinary language, our expressions correspond to different types of facts. In one case, remembering is synonymous with knowing. Memory as knowing means that the individual has learned to do or to say something, and to know what has been learned is not to forget it. It is not possible to say that something is known if it has been forgotten, and it would be absurd to suggest that a person learns to forget. When something is remembered as an exercise of knowing there is no repetition of a past event. To remember, as knowing, is to be in the same circumstances in which the original learning took place. This is why memory, in this sense, does not mean a retrieval from the past. Memory is not a source of knowledge; it is rather the evidence of knowledge. In this sense of the term, memory is a modal concept.

In another sense, to remember, as in recalling or evoking, is a circumstance concept. To remember in this sense means to do or to say something in circum-

stances previously projected. There is no repetition of actions or circumstances in this case. Memory does not involve internal storage of what will eventually be done in the future. It rather consists in organizing in the present those conditions in which the behavior will have to occur in the future. Because of this, in this kind of remembering there is no identity or similarity between the circumstance in which an event is remembered and the circumstance which is remembered. In this case, remembering is not a hidden and mysterious activity but rather everything that the individual says, does or recognizes with respect to the projected circumstance in order to act accordingly at a particular future time. To remember is to act in accordance with a projection; it does not mean to re-encounter or to search for the past. It is acting based upon a projected or anticipated future.

There is a third meaning of remembering: To remember something as a re-experience of a situation. To remember in this sense, however, is not to live in the past as a kind of imagining. To remember as a reminiscence is to repeat a situation, or to repeat or recognize the effect of an action in a similar circumstance. It is to re-act in a situation. It is not to imagine, since the re-action is not planned or regulated by the individual. It is a consequence of doing or saying something in the same way in a particular current circumstance as one had done in a past circumstance. It is to feel one situation as though it were another. Memory, as reminiscence, is to be described as both an effect and a circumstance concept.

In contrast to imagining, in remembering as reminiscence the circumstance is not modified; the circumstance is rather perceived as a circumstance similar to another in the past. It is not an exercise of knowing because it is senseless to say that it is known that it is being felt. It is a fact related to the effects of acting in a particular circumstance. It is to recognize without knowing, and to act without imagining.

A Final Note

Wittgenstein (1953) pointed out that: "...in psychology there are experimental methods and conceptual confusions" (p. 232, paragraph XIV.) The use of ordinary language terms and expressions referring to psychological relations and dispositions (in Ryle's sense) as evidence of internal activities and processes is an example of this confusion. By

way of it, ordinary language terms are reduced to pseudotechnical concepts with assumed univocal reference to hidden entities and actions. Conceptual analysis allows for the undoing of logical mistakes such as this and permits the recovery of authentic meanings of psychological expressions as those used in ordinary language. A different task is that related to the construction of a technical language with univocal references to *abstracted* facts corresponding to the multiplicity of psychological events and phenomena described and represented by ordinary language practices.

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Comments

Habits: The Cinderella of Psychology Let's Get Her Out of the Kitchen

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One of the most promising but now recently neglected areas of psychology is that of habit. The irony of this is that up until the early 1900's habits not only received considerable attention from a number of writers (Kantor, 1924, pp. 463-464), but were also probably the best known and most frequently quoted topic discussed by William James (1890). It may, in fact, have been partially due to James' thoroughness that subsequent writers, with

the exception of J. R. Kantor (1924), have omitted the topic from their textbooks altogether.

James, with his emphasis on the nervous system as the foundation of psychology in general, explained habits in terms of the functioning of this system. This overall approach is consistent with that of today's mainstream psychology which, having nothing new to add to his discussion, has long since ceased quoting from his rightly famous chapter.

This contrasts with the approach and contribution of Kantor (1924) who, as the founder of interbehavioral psychology, considered habit from an altogether different point of view. Although Kantor did leave habit until the 15th chapter of his work, he emphasized its importance not only as encompassing a large portion of all behavior, but as an excellent example of the relevance of interbehavioral principles to understanding the psychology of oneself and others.

Unfortunately, not only have Kantor's *Principles* (1924) been read only by relatively few psychologists, but his chapter on habit (pp. 440-464), although containing virtually everything that needed to be said, was not as clearly written as might have been desired. Two attempts to simplify this chapter (Mahan, 1968, 1970) were only partially successful and both were intended for the instruction of the writer's students only. As far as I know, except for Kantor's work itself, no other attempt has been made to present the topic of habit from the interbehavioral perspective -- this in spite of the publication of three interbehaviorally oriented introductory textbooks (Kantor, 1933; Kantor & Smith, 1975; Pronko, 1980). All of these mentioned habit briefly, but only as one of the many facets of personality or as an aspect of the learning process (Kantor, 1933). Since all of these texts are now out of print, the point is moot, but their omission of any significant treatment of habit was noted when they first appeared -- a disappointing omission.

Space does not permit more than a brief outline of the interbehavioral approach to habit interactions, but calling attention to its need for and ease of elaboration may encourage its choice as a term paper assignment and as a suitable topic for papers to be written for widely circulated publications.

First of all, two widely held misconceptions of habit interactions should be dispensed with. The first of these is that the locus of habits is inside of the reacting individual; the second one is that a criterion of habit is the frequency of the act's occurrence.

Interbehavioral psychology rejects both of these approaches, and defines habit in terms of the relationship between the stimulatory and responding aspects of the act and the strength of the relationship which integrates these two aspects into a single unitary interaction.

This definition requires that habits be divided into two types: routine habits and dynamic habits, with the former being performed frequently with little or no compulsion from the relationship itself and the latter, although perhaps infrequent in performance, being compelling by its nature. Of course, some routine habits, particularly those which are personal in nature, may become compelling over a period of time.

Defining habits in terms of the strength of a relationship emphasizes the importance of the stimulating agent and the context in which the act occurs, and permits options to various techniques for controlling habits, whether desirable, undesirable, or neutral. Such options are not possible when habits are considered to be centered in the person.

In the past, habits have often been thought to be limited to overt actions but, actually, any interactions can become habitual no matter what its nature. Some of the most characteristic habits are intellectual, affective, or motivational in nature. Habits can be classified in many different ways, with the system being used depending upon the problem. Examples are health habits, work habits, recreational habits, affective habits, belief habits, and many others. There are categories to fit any occasion which might give rise to the need for information regarding any individual. Everyone has to answer questions regarding his or her habits on some occasion or another.

In summary, the point of this commentary is that habits are important aspects of behavior and that they have been neglected by psychology. Practical knowledge regarding them is part of popular psychology, but it is in the formulation of general principles and their application that science is important. In the case of those principles with which psychology is concerned in the case of habit, it can be said that science is deductive and the principles are there ready to be tried. It must be remembered that in applications of psychology we are always using principles, whether formulated or not. The contextual principles of interbehavioral psychology are certainly as good as those we have been using. Using the deductive method, we at least know what are doing and if the principles do not apply they can be

modified. When principles have not been formulated, as is the case at present with most applications, they cannot be modified or changed without affronting beliefs which may go back to folklore or tradition.

Although it may require some effort, every psychologist; and not just behaviorists and interbehaviorists, should master Kantor's habit chapter (1924, pp. 440-464) and should incorporate its powerful insights into his or her nature as a fully trained professional.

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Needed: History and Systems of Scientific Psychology

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The longer I am around the fascinating area of psychology the more convinced I become that progress in the discipline requires, above all else, greater dissemination of what is known about psychology's role in the big picture. The big picture, of course, is comprised of the general scientific matrices and especially the general cultural matrices that have

provided the contexts for thinking about human behavior over the centuries. The mega-problem is that in the modern era psychology took on a subject matter that remains the final gasp and hope of the most influential view of things and the most powerful institutions the world has ever known. We continue to be bombarded with claims that psychology is the study of mind (and perhaps behavior as well in some cases), and erudite scholars and researchers continue to fabricate munchausen tales concerning the role of mental structures and processes in human affairs. I am led to believe that an infinitesimally small number of people have more than a superficial appreciation for what mind is all about, despite virtually a century of formal behavioristic literature.

It might be expected that I would not have to spell out for readers of this newsletter the connection between continued resistance to beginning psychological science without mind and the evolution of our culture, but I will do so briefly nonetheless. Human beings are the last stronghold of the transcendental cultural tradition that verbally removed humans from the natural world in the first place. The escapist dualistic material-spiritual split, evolving under naturalistic conditions, involved the invention of another world--an invisible nonspatio-temporal one, and it made humans the repository in the natural world of a part of the verbally-created mysterious spiritual realm known only by revelation to special humans (and transmitted by words). What amounted to a synonym for "life" with purely naturalistic referents was transformed to where the construct--soul--was given supernaturalistic referents and placed inside humans. As conditions of living began changing, critical thinkers gradually altered the referents of soul to where psychological functions were said to be taken over more and more by mind and consciousness. The movement from soul to mind, consciousness, and experience has been a naturalistic one, but progress in the renaturalization process has been excruciatingly slow, and characterized by much gnashing of teeth and auto-shooting of feet. We have had dynamic psychiatry and later behaviorism, but these movements remained too close to the material-spiritual cultural tradition that remains the dominant force in our present society. Furthermore, no science can completely step outside of the cultural matrix that provides its origins and development. But there is reason to believe that it is now possible for those

who undergo particular developmental histories to forge ahead with an approach to humans that is novel in the modern era. This approach renaturalizes humans by recapturing them from the realm of the supernatural and making possible a policy of humans for humans.

The complete re-naturalization of humans would complete the final step of the secularization of society that had its beginnings around the 11th century of the modern era in Western civilization. Such a re-naturalization would require a total revamping of those still powerful institutions whose existence, support, and operation rest on their supposed role in securing the salvation of humans' nonspatiotemporal souls. Certainly, holders of cultural tradition readily detected the threat to their interests posed by dynamic psychiatry and behaviorism, as evidenced by their attacks on these early naturalization movements. However, for various reasons and in various ways, the mental world has persisted to the present day. Mind, in whatever form and by whomever advocated--white-coat wearer or not--is the final stratagem for the perpetuation of the most influential collection of institutions of the modern era. The two-world view has lost all of the other concrete subject matters. Only human behavior, taken as a manifestation of the nonspatiotemporal soul-mind stuff, remains to buttress the forces of spirit.

As I have mentioned, the behavioristic movement unquestionably represents an attempt to re-naturalize humans, and one can find in this literature indications that behaviorists have at least some understanding of the conditions under which mind was invented. Unfortunately, the understanding invariably is superficial. It is sad to see sincere, bright, and well-credentialed thinkers spend all or virtually all of their careers arguing against mentalism and vigorously and valiantly defending human behavior as completely subject to scientific understanding *who do not understand the big picture*. They simply give no indication that they appreciate the gravity of what they propose. For example, we are told in order to save the world we must let mind go and concentrate on behavior. How hopelessly naive--well intentioned, but naive--to expect such strident appeals by themselves to have any effect whatsoever when people still believe that the way to save that which is important to save is by relying on the transnatural, not what the spatiotemporal world has to offer. Coping with a foe as formidable as that posed by transcendental institutions requires much

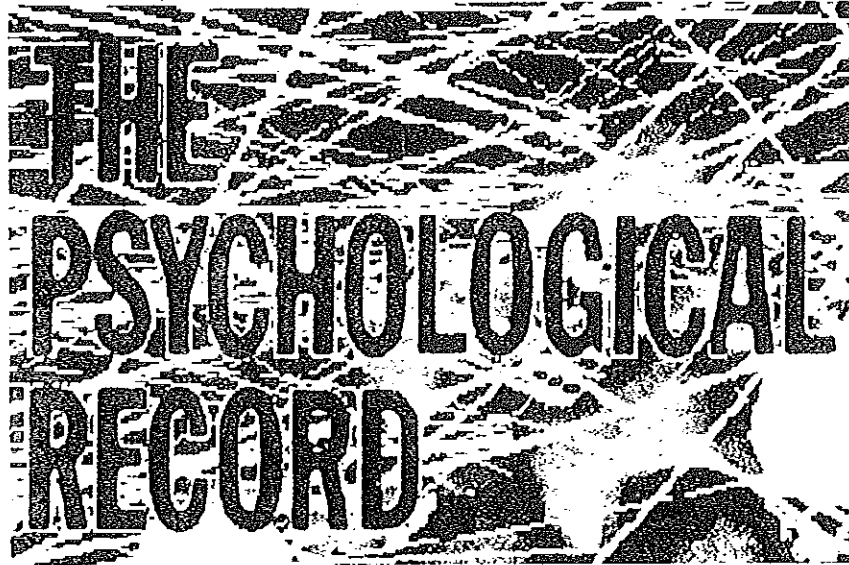
more than additional laboratory data and forceful writing. The problem is not one that can be addressed by what we ordinarily treat as data. One can talk about the ineptness of "cognitive internalization," "mental causes," "storing pieces of the environment," "dogs associating bells with food," "retrieving encoded copies," and the like and how mounds of research point to alternatives to these ways of describing behavior until one is either blue in the face or dead. However, do not expect to impress many beyond those already committed to the rejection of these absurdities. I submit that what is lacking in naturalization attempts to date is a deep understanding of the full history of thinking about human behavior and its cultural matrices. We will have more than a minuscule amount of naturalistic thinking about human behavior only when we bring to bear on the problem data *and* application of what is known about the development and present context of soul-mind doctrine.

Demonstrating that it is likely that few of us know all that is relevant to our activities, one proponent of the behavioristic naturalization of humans has made the statement that as of a few years ago, at least, there was no history of psychology written from a behavioristic perspective. If behaviorism, above all else, does not represent an attempt to take a scientific approach to human behavior, I do not know what it represents. Thus, I arrive at the title of this little note: "Needed: History and Systems of Scientific Psychology." The major source for the views expressed herein is, of course, Kantor's enormous *Scientific Evolution of Psychology* (1963, 1969), and, given these views, it seems reasonable for me to suggest that this work is *must* reading for those committed to an authentic scientific approach to human behavior.

Now I delve further into the reason I prepared this note in the first place. Usually, at least once a year, I teach an undergraduate course entitled "History and Systems of Psychology." I use Kantor's two-volume set and carefully pare down the reading to an amount reasonable for a one-term course and to allow readings of pertinent material not covered by Kantor. Given that many departments continue to offer courses in the history of psychology, systems of psychology, or combined versions such as my Department, I suggest that one could make a valuable contribution by abridging Kantor's *Scientific Evolution* and supplementing it to cover more of the developments closer to recent times (e.g., neobehav-

iorism, "third-force" attempts, radical behaviorism, certainly the cognitive movement) in such a way that this new book would be reasonable for a one-term course in history or history and systems of psychology, and perhaps even systems of psychology. My suggestion is based, in part, on the fact that we cannot wait around for mature workers to study *The*

Scientific Evolution of Psychology, rather this material needs to be made more accessible to students and the many instructors who are not specialists in the history of psychology, but who teach the course on the basis of an appreciation for history. In other works, Kantor could not have seriously considered his tome to be a serious contender for adoptions in



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- In Which Procrustean Bed Does the Sea Lion Sleep Tonight?** Louis M. Herman.
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undergraduate (or graduate, for that matter) courses. *Scientific Evolution* is a serious scholarly work, not a textbook, and it is not often that the twain meet.

Possibly the most difficult aspect of the task I propose is to prepare the text so as not to jar the reader as a result of variations in writing style. I say this because, in my opinion, *Scientific Evolution* represents some of the most adept and beautiful writing I have ever seen. It is the best written of Kantor's work. Despite some claims of the obscurity of Kantor's writing, I find that undergraduates follow what he is saying in *Scientific Evolution* -- provided they are warned to use a dictionary! But I handle Kantor's use of rare words by at the beginning demonstrating to students that when Kantor uses a rare word, he is not being ostentatious. When he uses a rare word, it is the one best word that could

have been used to get across the point being made. Kantor's exemplary use of the English language in *Scientific Evolution* makes it desirable that an abridged revision follow to some extent the original style.

A text such as I describe would be a usable text that addressed psychology in the big picture. Users would have a much more important understanding of what the history of psychology is all about than they do from current mainstream works. They would be much better prepared to handle claims that psychology's subject matter is mind and behavior, that cognitions cause behavior, that depression causes crying, and the like. Some might even go so far as to take on the role of 21st-century behaviorists.

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