Experimental Analysis of Human Behavior Bulletin

Volume 4 **SPRING 1986** **Number 1**

Patrons of the EAHB SIG ..... Inside Cover

Dawn Delaney and Alan Poling, Western Michigan University
Automated Programming Equipment in the Experimental Analysis of Behavior: Changes Over Time 1

Grants to EAHB SIG Members 5

Linda J. Parrott, St. Mary's University
Practices of Description and the Definition of Behavior 6

Recent and Forthcoming Publications in the Experimental Analysis of Human Behavior 9

Barbara J. Kaminski and James H. Joyce, West Virginia University
Planning Your First (or Maybe Not First) ABA Convention 12

Award-Winning Graduate Student Review Papers, Thomas S. Critchfield, Ann Higgins Hains, Kirk Lockwood and Darryn M. Sikora 15

Aaron J. Brownstein 1932-1986 16

Announcements

Call for Comments 11
About the **EAHB SIG** ..... Inside Cover

THE EXPERIMENTAL ANALYSIS OF HUMAN BEHAVIOR BULLETIN

The EAHB Bulletin is published twice yearly, in the Spring and Fall, by the Experimental Analysis of Human Behavior Special Interest Group (EAHB SIG), a group organized under the auspices of the Association for Behavior Analysis (ABA). See the inside back cover for information about joining the SIG and contributing to the Bulletin.

The cost of publishing the Bulletin is paid by the dues of SIG members and by the Department of Psychology of West Virginia University.

PATRONS OF THE EAHB SIG

The following 47 SIG members added a contribution of $2 to $20 to their 1986 dues. Their support is greatly appreciated.

Alan Baron
Beatrice H. Barrett
Kim D. Blakeslee
William F. Buskist
A. Charles Catania
Philip N. Chase
David A. Coleman, Jr.
C. William Deckner
Hikaru Deguchi
Teresa F. Doyle
Barbara C. Etzel
Steve Fedorko
Tsutomu Fujita
Mark Galizio
Sigrid S. Glenn
Robert P. Hawkins
Steven C. Hayes
Nancy Hemmes
Stephen T. Higgins
Philip N. Hineline
Cloyd Hyten
James M. Johnston
Thomas H. Kelly
Victor G. Laties
Kennon A. Lattal
Judith M. LeBlanc
Jan LeFrancois
Sam Leigland
Barry Lowenkron
Werner Matthys
Stephen R. Menich
Edward K. Morris
H. McIlvaine Parsons
Blaine F. Peden
Michael Perone
W. David Pierce
Alan Poling
Claire L. Poulson
Wayne Robb
Herman H. Samson
Laura Schreibman
Julie Schweitzer
Joseph R. Scotti
Esther Shafer
Murray Sidman
Henry A. Tenenbaum
Robert D. Zettle

AUTOMATED PROGRAMMING EQUIPMENT IN THE EXPERIMENTAL ANALYSIS OF BEHAVIOR: CHANGES OVER TIME

Dawn Delaney and Alan Poling
Western Michigan University

Good experimental science involves at minimum accurate assessment of dependent variables and precise manipulation of independent variables. The use of machines to manipulate independent variables and record data allows for precision in experimentation and is commonplace in science, including the experimental analysis of behavior. Moreover, the availability of relatively sophisticated programming and recording apparatus has freed behavior analysts from the tedious one-trial procedures commonly used early in the present century, and has led directly to the fruitful development of free-operant analyses (Skinner, 1956).

Programming and recording equipment used in the experimental analysis of behavior can be divided into three general catagories. In chronological order of appearance, these are (1) electromechanical devices, (2) solid state modules, and (3) computers. Equipment from each of these catagories has been used, and is being used currently, to program contingencies and collect data in behavioral experiments. However, the relative frequency with which various types of programming and data recording equipment are employed in the experimental analysis of behavior, and whether this has changed over time, has not been reported. To provide this information, we determined the kind of programming and data recording equipment employed in each empirical article published in the Journal of the Experimental Analysis of Behavior (JEAB) from the journal's inception in 1958 through the last volume of 1984. This determination involved reading the "apparatus" section of each empirical article in which automated equipment was used, then recording whether the programming and data recording apparatus involved electromechanical devices, solid state modules, or integrated computers. Whenever a study was scored as involving a computer, the kind of machine was recorded. If the apparatus was not described with sufficient clarity and detail to allow for unambiguous assignment to one of the three catagories, it was scored as "unspecified". Articles published in Volumes 1, 15, and 30 were scored independently by two observers; interobserver agreement (articles where the two rating agreed/total articles x 100%) exceeded 90% for each of these volumes.

Figure 1 shows the results. Three features of the data merit comment. First, the proportion of articles scored as employing unspecified equipment declined steadily with time. Second, in every block of three years, electromechanical equipment was used in a greater proportion of studies than solid state modules or computers, and in every block of three years save 1982-1984 (i.e., Volumes 37-42), computers were used in fewer studies than solid state or electromechanical equipment. Third, the proportion of studies employing computers increased greatly during the final years surveyed, increasing from .16 for volumes 31-36 to .34 for Volumes 37-42.

Early in JEAB's history, one could safely assume that all automated studies used electromechanical equipment, for nothing else was available. This may account for the fact that, prior to Volume 25, the kind of programming and data recording equipment used in over half of all empirical articles was not clearly specified. Whether this dimension of an experiment merits full description in a study is debatable. In many instances, no reason exists to believe that the type of equipment used to arrange contingencies and collect data could influence obtained results. In some cases, however, equipment may affect the accuracy of data and the precision of data analysis. For example, collecting interresponse time (IRT) data with electromechanical data is difficult

and, because of stepper reset times, potentially inaccurate when IRTs are very low. Since full description of programming equipment takes little space, can do no harm, and increases the ease with which studies can be replicated, there seems to be no reason to fail to provide such a description. Of course this has been done in the vast majority of JEAB studies published in the present decade.

Electromechanical devices and solid state modules have long been employed by behavioral psychologists, have been in place in many productive labs since their inception, and are familiar to many operant researchers. Such equipment can be purchased commercially or constructed with relative ease, and is capable of controlling quite complex experiments. In view of these factors, one suspects that electromechanical and solid state equipment will continue to play a role in the experimental anlaysis of behavior at least through the end of the current century. Nonetheless, we are told this is the age of the computer, and it appears to be so. By the end of 1983, over 13 million computers had been sold worldwide, at a cost of roughly 200 billion dollars. The number of computers in existence doubled again from 1982 to 1983 (Rochester & Gantz, 1983). This rate of growth was not evident in JEAB articles, although the proportion of articles in which computers were employed did double from 1979-1981 (Volumes 31-36) to 1982-1984 (Volumes 37-42).

In actuality, however, published articles do not reflect research practices at the time of their appearance, but rather practices at an earlier time. For example, empirical articles published in the September, 1984, JEAB were on the average initially submitted 13 months earlier; the range across articles was 7 to 20 months. If

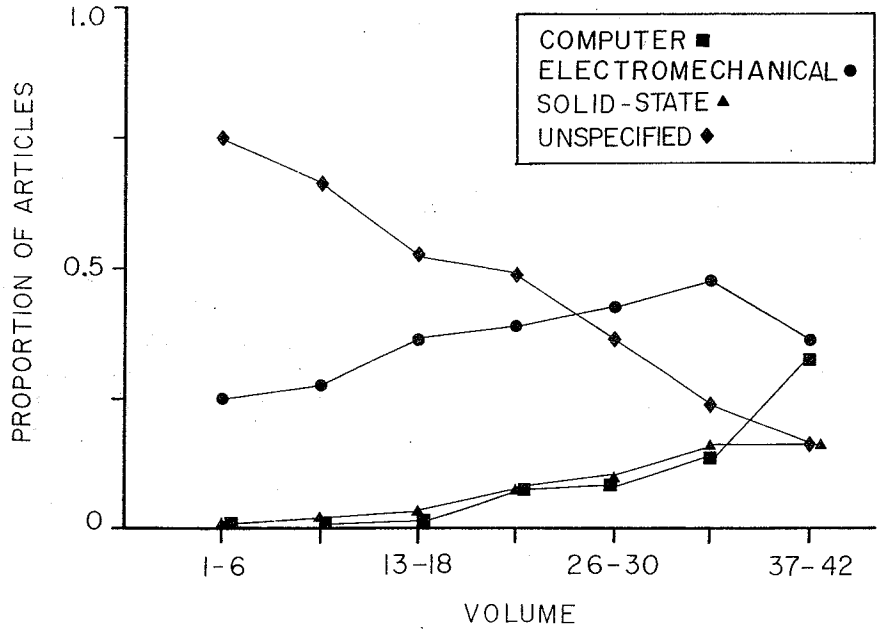

Figure 1. Proportion of empirical articles published in JEAB according to the type of programming and data recording equipment employed. Data are grouped in six-volume, or three-year, blocks. Volumes 1-6 appeared in 1958-1960, Volumes 37-42 in 1982-1984. Summing across the four catagories occasionally yields a total proportion of greater than 1.0, which reflects the fact that two different kinds of equipment were employed in some studies.

one adds to this the time required to conduct the research, and to write an initial draft of the manuscript, it appears that many studies published in the September, 1984, JEAB actually were begun no later than early 1982.

The fact that publication data do not reflect current research practices may account for the fact that personal computers, such as the APPLE II and the TRS-80, were rarely used in research published in JEAB. Such computers have burgeoned in popularity only in the past few years (Walddrop, 1985). Thus it is not surprising that APPLE II and TRS-80 computers were used in less than 10% of the computer- controlled studies published in JEAB from 1979 through 1984, nor that none of these studies involved the IBM PC, the APPLE MACINTOSH, or the DEC RAINBOW.

Far and away the computers most used in JEAB research are members of the PDP 8 family, originally introduced by Digital Equipment Corporation in 1964. Versions of the PDP 8 (8/a, 8/e, 8/f, 8/1) were used un nearly half of the computer-controlled studies published in JEAB from 1979 through 1984. PDP 9 and 12 computers also were relatively popular in articles published during this period, as were NOVA 2 and 3 machines, although none of these was used in over 6% of the computer-controlled studies.

Art Snapper undoubtly has contributed much to the popularity of PDP computers in operant research. Snapper's SKED computer interfacing and software (copyright State Systems Inc., Kalamazoo, MI) was originally developed in 1966 for a 4K PDP paper tape system. SKED has been improving over time, and provides a simple and powerful means of employing the PDP series of computers in behavioral research. (see Snapper & Inglis, 1979).

A brief glance at the pages of JEAB, the current issue of which contains 11 equipment ads, all making mention of computers, will convince one that interfacing which allows other computers (e.g. the APPLE II, TRS 80, and IBM PC) to interact with operant chambers, and software packages designed to allow these machines to be used readily in behavioral research, are now commercially available. A number of authors have discussed the use of microcomputers in behavioral research (e.g. Dillon, Millman, Tombough, Ferguson, & Bezanson, 1979; Thompson, 1979; Tombough, Dillon, Millman, & Bezanson, 1979). Microcomputer-controlled behavioral laboratories (1) can be used to conduct many kinds of sophisticated behavioral experiments; (2) can be established relatively cheaply; and (3) can be operated by individuals lacking sophisticated knowledge of computer hardware or computer programming. Given these advantages, and the fact the ever more scientists are employing microcomputers outside the lab, for example in word processing, and are thereby growing familiar with them, it appears certain that the use of such computers to control behavioral research will increase.

How the increasing use of computers will affect the analysis of behavior is unclear. On-line computers offer rich opportunities to arrange complex and rapidly changing contingecies, which may prove useful in the analysis of human behavior. A scientist interested in the effects of a drug on punished responding in human could, for example, easily arrange a computer-controlled video game in which a particular response - perhaps blasting foreign invaders with the left-hand laser - could be punished during particular intervals, but not during others. Or a researcher positing that shock-maintained responding may involve the punishment of long interresponse times (IRTs) can readily arrange contingencies for testing this notion, as Galbicka and Platt (1984) have done.

Computers also allow for the simulation of important real life environments, and the analysis of behavior appropriate to these environments. Flight simulators are, for instance, commonly used in training pilots, and radar simulators in training air traffic controllers. Given current concerns with air safety, it would appear perfectly reasonable to employ simulations to analyze the effects of cocaine and other abused drugs on the performance of pilots and air traffic

controllers, or to determine how such individuals can best be trained. Certainly this approach is more simple, and less dangerous, than the alternative of actual on-the-job analysis.

Computers are useful in arranging contingencies, even to the point of simulating complex environments, but this is not the extent of their worth. The devices approach the miraculous in their potential for collecting, storing, and analyzing data. Several dimensions of behavior can be recorded simultaneously in the computer-controlled lab, and their relation to one another and to independent variables ascertained. Such multidimensional analyses can prove interesting. This occurred in a study from our laboratory, the results of which indicated that choice, rate, and latency measures of pigeons' automaintained keypecking often did not covary, and that choice was the most sensitive of these measures (Picker & Poling, 1982).

The ability of computers to control complex contingencies and to record and process masses of data undoubtably is a boon to the experimental analysis of behavior. Nonetheless, the unwary researcher can unwittingly succumb to the temptation to design unnecessarily complex experiments, to collect superfluous data having no bearing on the experimental question, or to attempt sophisticated quantitative analyses that bear more relation tjo the behaviors of numbers that that of organisms. One can only speculate how often such errors occur. Too often, one surmises- judging from the fact that many recent JEAB articles read like calculus books and say essentially nothing about behavior outside two-key chambers with concurrent schedules and changeover delays. But that's another issue, for which the computer is not to blame....

References

Dillon, R. G., Millman, B., Tombough, J. W., Ferguson, W. R., & Bezanson, W. R. (1979). A microcomputer-controlled laboratory: Hardware. Behavior Research Methods and Instrumentation, 11, 293-300.

Galbicka, G., & Platt, J. R. (1984). Interresponse-time punishment: A basis for shock-maintained behavior. Journal of the Experimental Analysis of Behavior, 41, 291-308.

Picker, M., & Poling, A. (1982). Choice as a dependent measure in autoshaping: Sensitivity to frequency and duration of food presentation. Journal of the Experimental Analysis of Behavior, 37, 393-406.

Rochester, J. B., & Gantz, J. (1983). The naked computer. New York: William Morrow and Company.

Skinner, B. F. (1956). A case history in scientific method. American Psychologist, 11, 221-233.

Snapper, A. G., & Inglis, G. (1979). SUPERSKED. Kalamazoo, MI: State Systems.

Thompson, G. C. (1979). Behavioral programming with the APPLE II computer. Behavior Research Methods and Instrumentation, 11, 585-588.

Tombough, J. W., Dillon, R. F., Millman, B., & Bezanson, W. R. (1979). A microcomputer-controlled laboratory: Software. Behavior Research Methods and Instrumentation, 11, 301-310.

Waldrop, M. M. (1985). Personal computers on campus. Science, 228, 438-444.

PHIL'S FUN FACT

What two significant behavior analytic events occurred in 1938?

Keller's appointment at Columbia.
Skinner's publication of Behavior of Organisms.

GRANTS TO EAHB SIG MEMBERS

Several SIG members wrote us to report on their efforts to obtain research grants. Awards were received in the last year by Sidney W. Bijou and John Umbreit (University of Arizona), Edmund Fantino (University of California, San Diego), James M. Johnston (Auburn University), and Laura Schreibman (University of California, San Diego) and Robert L. Koegel (University of California, Santa Barbara). Information on some of these grants is presented below, as space permits. Information on others will be presented in a later issue.

Seven SIG members reported on proposals that are currently under review; we hope to report on their success soon.

Philip N. Hineline (Temple University) and Stephen T. Higgins (National Institute on Drug Abuse) wrote to encourage SIG members to seek support from the National Science Foundation and the National Institute on Drug Abuse. Of NFS, Phil said that "the Psychobiology Panel clearly is willing to consider research on human behavior, if it is presented from a biological perspective." The NSF program officer to contact is Fred Stollnitz, (202) 357-7949. Of NIDA, Steve noted that the Institute is "a good funding source for EAHB research relevant to drug dependence," and noted that a number of our colleagues receive "a great deal of support" from NIDA for such research.

TITLE: "Experimental Analysis and Treatment of Rumination;" INVESTIGATOR: James M. Johnston, Auburn University; DATES: 4-1-86 to 3-31-89; AMOUNT: $334,647 (direct costs); AGENCY, PROGRAM, & OFFICER: National Institute of Child Health and Development, Behavior and Learning Branch, Dr. Peter Vietze, (301) 496-1383.

ABSTRACT: Rumination is the chronic regurgitation of previously injested food and is a behavior pattern that can sometimes lead to death. The mortality rate attributed to chronic rumination in institutionalized mentally retarded individuals ranges from 12 to 20 percent (Kanner, 1957; Gaddini & Gaddini, 1959; and Sajwaj, Libet, & Agras, 1974). The rumination literature largely focuses on practical procedures for managing the behavior. While it suggests that these methods can be effective when appropriately administered, they are not reliably successful and must often be used on a chronic basis (Kohlenberg, 1970). Furthermore, their applicability is constrained by legal, regulatory, and logistical restrictions.

A new direction for rumination research was established by Rast, Johnston, Drum, and Conrin (1981) when they reported that the quantity of food injested at the meal was inversely related to the amount of post-meal ruminating. Further research parametrically clarified this relation (Rast, Johnston, & Drum, 1984) and isolated some of the properties of the food that effect this relation (Rast, Johnston, Allen, & Drum, 1984). This grant application proposes a project whose long-term objectives are to identify the variables responsible for the development and maintenance of ruminatinf and to construct with those variables practical procedures for treating rumination. The identification of the variables controlling ruminative behavior will be pursued through a series of four experiments examining the consistency of the diet, the role of liquids, and the inter-meal interval. The application of these and existing findings to the formulation of a treatment program will begin by collating a set of parameters of client characteristics that guide the individualized selection of a sequence of program components. Then each subject will be exposed to a formal sequence of program components. Then each subject will be exposed to a formal sequence jof component procedures designed to clarify component interactions and to provide long-term treatment for the subject. In addition, the research program will have a substantial physiological component designed to assess the role of structural, functional, and metabolic factors through a series of medical tests both before and after the behavioral studies.

PRACTICES OF DESCRIPTION AND THE DEFINITION OF VERBAL BEHAVIOR

Linda J. Parrott
Saint Mary's University

In Chapter 18 of Verbal Behavior, Skinner discussed the practices of description maintained by the scientific community. From this and other discussion of this topic (Kantor, 1953), two rules of effective scientific discription may be derived. First, descriptions of events must not include reference to factors not found among the events themselves. And, secondly, all factors actually found among events must be included in their descriptions. The first rule prevents the imposition of intangible and invisible entities and processes in discriptions of events; the second fosters more complete descriptions. Together these rule insure that descriptions of events are both comprehensive and arise from the events themselves, thereby guarding against the inevitable misunderstanding of events that occurs when these conditions do not prevail.

Traditional, as well as many contemporary accounts of psycho-linguistic events show flagrant disregard for these rules of effective scientific discription. A common practice of psycholinguists is to insinuate the participation of things and events in linguistic circumstances that are not confrontable in those circumstances. Linguistic events are said to involve the participation of entities and processes, variously conceived as thought, feeling, or desire, which cause bodily action or are caused be it. Traditional psycholinguistic descriptions of events are also notoriously incomplete. Analyses of linguistic events proceed on the basis of the stimulus products of such events, as available in audio-records, transcriptions or samples of written work, with little consideration of the circumstances under which the events resulting in those products actually occurred. Both practices lead to confused and misleading descripitions of linguistic events. (Incidentally, these two practices of ineffective description tend to accompany one another for when all factors are not considered, their places and roles are invented in the guise of other factors.)

In contrast to these approaches to description are the rules of scientific practice. From a scientific perspective, a field of linguistic interaction is effectively described by references solely to the factors making up that field, and inclusive of all of them. Among those factors are the confrontable activities of an individual and the equally confrontable stimulational conditions related to and surrounding such activities, including the presence and actions of other individuals. The relations between responding and stimulating must be understood as a point in the continuous development of such actions on the part of that individual with respect to those stimuli. Likewise, the actions of other individuals involved in a linguistic event must be understood in terms of their specific histories. All psychological events have this evolutionary character. They can be understood only in terms of their origin and development.

Skinner's definition of verbal behavior (1957, p. 224) constitutes an attempt to provide a description of linguistic events solely in terms of the factors participating in them, inclusive of all such factors. The general definition makes reference to the confrontable behaviors of speakers and listeners, as well as the potentially confrontable conditioning histories of listeners through which their current actions may be understood. The stimulus conditions with respect to which speakers' behaviors are occurring are not mentioned in the general definition. However, these events are identified in his descriptions of the various subdivisions of this repertoire (i.e., the mand, tact, etc.). Included also at the level of the subdivisions are more

specific descriptions of the confrontable activites of both speakers and listeners.

Despite Skinner's good intentions in this regard, the definintions he has constructed are not entirely satisfactory. The general definition leaves too much out of the account on one hand, and on the other, lacks clarity of scope. As previously mentioned, the stimulus conditions coordinated with verbal responding are not included in the definition. While it is true that these conditions are mentioned in descriptions of the subdivisions of the repertoire, and further that their nature depends on the specific operant in questions, they are also aspects of the general circumstances of linguistic action and to neglect their mention in a general formulation is to provide an incomplete description of linguistic events. Among the other factors confronted in linguistic circumstances, that are omitted from the general definition of verbal behavior, are conditions affecting the responding organism, such as deprivation, and conditions making up the setting in which such actions occur, including the listener as a audience variable. Both are discussed in more specific contexts, but both also participate in all instances of verbal behavior, at least indirectly, and thereby deserve mention in the general formulation. In summary, what appears to be missing from the general definition is the context in which such actions are occurring. What is missing is a concept of field.

A second problem with the general definition is clarity of scope. Specifically, the definition includes reference to the listener's conditioning history but not also to the conditioning history of the speaker. One is no more relevant to the definition of verbal behavior than the other. Thus, the definition could be improved in either of two ways. By deleting reference to the conditioning history of the listener, or by including reference to the conditioning history of the speaker. (In a future column it will be argued that the former is advisable because not all forms of verbal behavior include the type of explicit conditioning of the listener that Skinner describes.)

A different set of problems arises when the definitions of specific verbal operants are considered. The definitions all include references to the actions of the listener in providing generalized conditioned reinforcement and imply the physical presence of a listener in the circumstances of occurrence of these operants. Echoic, textual, dictation, and copying operants, however, often do not require the presence of a listener at the time of response occurrence, and cannot therefore participate as an agent of generalized conditioned reinforcement. Moreover, the absense of a listener is the typical circumstance of occurrence of these operants after their initial acquisition. One may, upon occasion, read stories to a child or be called upon to recite in class, but more often textual behavior occurs in the absence of participating listeners. Likewise, after learning how to copy text or take dictation as a child, these operants occur more often in the absence than in the presence of an agent of generalized conditioned reinforcement. Hence, to implicate the participation of these consequences and their agents in events of these types is to add something to the description of events that is not typically found among them. And the situation is not improved by appeal to a speaker's "history of responding in the presence of a listener" unless the concept of history can be described as a feature of the current situation, which is not attempted in Verbal Behavior.

I do not mean to imply that the absence of a listener as an object in a linguistic situation means that the function of a listener is necessarily absent. On the contrary, the stimulus functions of a listener, as both audience and agent of reinforcement, may be participating in a situation that does not involve the physical presence of a listener. To make this argument effectively depends on a distinction between stimulus objects and their functions, however, and this distinction has never been formulated by Skinner with any clarity or certainty. What is missing is a concept of substitution,

and an analysis of stimulus function transfer. It is by these means that an individual's history may be understood as a confrontable participant in linguistic circumstances.

A second problem with Skinner's definitions of echoic, textual, dictation and copying, concerns the circumstances in which these responses occur. These circumstances typically make probable the occurrence of other operants under the control of the stimulus products of responding, and these other operants are not mentioned in Skinner's descriptions. For example, one tends to engage in self-textual behavior in the context of copying text or taking dictation, as it is by visual contact with the products of such responding that standard patterns of writing are maintained. The importance of these products is made clear by distorting them in some way, such as by making them available in mirror image. In such a case, difficulties in the execution of writing responses are observed. Likewise, self-echoic behavior is a probable event in the context of echoic and textual responding, and when access to the auditory products of such responding is prevented or delayed, disruptions in the execution of vocal responses are observed. In summary, it is an unusual circumstance when one does not have access to the stimulus products of responding. In the typical occurrence of copying text or taking dictation, a self-textual response constitutes a participating factor and a self-echoic participates in the typical occurrence of echoic and textual behavior.

It could be argued that these self-echoics and self-textual responses are subsequent occurrences -- participants in subsequent events -- and not factors making up the occurrence of echoic, textual, dictation, and copying per se. By this logic, however, one is led to question the inclusion of the listener's action as a factor participating in these operants. If it makes sense to include the reinforcement operation in the definitions of these events it should also make sense to include these self-textual and self-echoic occurrences. They are not included, though, and for this reason, we may conclude that Skinner's definitions of echoic, textual, dictation, and copying are incomplete. In more general terms, what is missing in the definitions of these operants is reference to various kinds of subtle action engendered by them and participating in them. In short, echoic, textual, dictation and copying are more complex than Skinner's definitions of them suggest. The less obvious participants are, moreover, significant factors in these events. They constitute the means by which transfer of stimulus functions take place and they are relevant to the subsequent occurrence of these response forms as intraverbals.

In summary, both the general and more specific definitions of linguistic events, as presented by Skinner in the book Verbal Behavior, are subject to improvement from the standpoint of effective practices of scientific description. Both are incomplete, and the specific definitions of several of the subdivisions of the repetoire also include references to factors not typically found among the events from which they were derived. Improvements may result from further consideration of the larger class of action to which both verbal reponding and responding to verbal stimulation belong; and by more systematic discussions of the concepts of "field of interaction", "stimulus substitution", "psychological history", and "subtle forms of action" -- the topics of future columns.

References

Kantor, J. R. (1953). The logic of modern science. Chicago: The Principia Press.

Kantor, J. R. (1982). Cultural psychology. Chicago: The Principia Press.

Skinner, B. F. (1957). Verbal Behavior. New York: Appleton-Century-Crofts.

PHIL'S FUN FACT

Who wrote: "Ordinary and scientific speech behavior can be distinguished by the amount of metaphor"?

J. R. Kantor

RECENT AND FORTHCOMING PUBLICATIONS IN THE EXPERIMENTAL ANALYSIS OF HUMAN BEHAVIOR

The experimental analysis of human behavior is alive and well! Our inquiry last February produced the following list of over 50 new articles, chapters, and books by SIG members.

Baron, A. & Menich, S. R. (1985). Reaction times of younger and older men: Effects of compound samples and a prechoice signal on delayed matching-to-sample performances. Journal of the Experimental Analysis of Behavior, 44, 1-14.

Baron, A., & Menich, S. R. (1985). Age-related effects of temporal contingencies on reponse speed and memory: An operant analysis. Journal of Gerontology, 40, 60-70.

Bickel, W. K., & Etzel, B. C. (1985). The quantal nature of controlling stimulus-response relations in tests of stimulus generalization. Journal of the Experimental Analysis of Behavior, 44, 245-270.

Bickel, W. K., Higgins, S. T., & Stitzer, M. L. (in press). Reinforcing effects of methadone dose increases in humans. Drug and Alcohol Dependence.

Bickel, W. K., Richmond, G., Bell, J., & Brown, K. (in press). A microanalysis of the controlling stimulus-response relations engendered during assessment of stimulus overselectivity. The Psychological Record.

Bickel, W. K., Preston, K. L., Bigelow, G. E., & Liebson, I. A. (1986). Three-way drug discrimination in post addict volunteers: Hydromorphene, pentuzacine, and saline. In L. S. Harris (Ed.), Problems of Drug Dependence, National Institute of Drug Abuse Research Monograph.

Bijou, S. W., Umbreit, J., Ghezzi, P. M., & Chao, C. C. (in press). Psychological linguistics: A natural science approach to the study of language interaction. The Analysis of Verbal Behavior.

Buskist, W. F., & Miller, H. L., Jr. (1986). Interaction between rules and contingencies in the control of human fixed-interval performance. The Psychological Record, 36, 109-116.

Buskist, W. F., & Morgan, D. (in press). Method and theory in the study of human competition. In G. Davey (Ed.), Conditioning in Humans. Chichester, England: Wiley.

Case, D. A., Fantino, E., & Wixted, J. (1985). Human observing: Maintained by negative informative stimuli only if correlated with improvement in response efficiency. Journal of the Experimental Analysis of Behavior, 43, 289-300.

Cavallaro, C. C., & Poulson, C. L. (in press). Teaching language to handicapped children in natural settings. Education and Treatment of Children.

Charlop, M. H., Schreibman, L., & Thibodeau, (1985). Increasing spontaneous verbal responding in autistic children using a time delay procedure. Journal of Applied Behavior Analysis, 18, 155-166.

Chase, P. N. (1985). Designing courseware: Prompts from behavioral instruction. The Behavior Analyst, 8, 65-76.

Chase, P. N., Sulzer-Azaroff, B., & Johnson, K. (1985). Verbal relations within instruction: Are there subclasses of the intraverbal? Journal of the Experimental Analysis of Behavior, 43, 301-313.

Correa, V. I., Poulson, C. L., & Salzberg, C. L. (1984). Training and generalization of reach-grasp behavior in blind, severely/profoundly mentally retarded young children. Journal of Applied Behavior Analysis, 17, 57-69.

Deitz, S. M., Friedrick, L. D., Quinn, P. C., & Brasher, L. D. (in press). Comparing two correction procedures on human acquistion of ordering behavior. Journal of the Experimental Analysis of Behavior.

Dougher, M. J., Crossen, J. R., & Garland, R. J. (in press). A test of Cautela's operant account of covert conditioning. Behavioral Psychotherapy.

Doyle, T. F., & Samson, H. H. (1985). Schedule-induced drinking in humans: A potential factor in excessive alcohol

use. Drug and Alcohol Dependence, 16, 117-132.

Galizio, M. (1985). Human peak shift: Analysis of the effects of three-stimulus discrimination training. Learning and Motiviation, 16, 478-494.

Goetz, E. M., & Etzel, B. C. (in press). An individual analysis of acquisition, maintenance, and generalization by three reading procedures on preschool children. Behavior Modification.

Hayes, S. C., Brownstein, A. J., Zettle, R. D., Rosenfarb, I., & Korn, Z. (in press). Rule-governed behavior and sensitivity to changing contingencies. Journal of the Experimental Analysis of Behavior.

Higgins, S. T., & Stitzer, M. L. (in press). Acute marijuana effects on social conversation. Psychopharmacology.

Higgins, S. T., Stitzer, M. L., Bigelow, G. E., & Liebson, I. A. (1985). Contingent methadone dose increases as a method for incresing illicit opiate use by detoxification patients. NIDA Research Monograph, Problems of Drug Dependence, 1984, Proceedings of the 46th Annual Scientific Meeting, Committee on Problems of Drug Dependence, Inc., pp. 178-184.

Higgins, S. T., Stitzer, M. L., Bigelow, G. E., & Liebson, I. A. (in press). Contingent methadone delivery: Effects on illicit opiate use. Drug and Alochol Dependence.

Higgins, S. T., Stitzer, M. L., McCaul, M. E., Bigelow, G. E., & Liebson, I. A. (1985). Pupillary response to a methadone challenge in chronic heroin users. Clinical Pharmacology and Therapeutics, 37, 460-463.

Hyten, C., & Burns, R. (in press). Social relations and social behavior. In H. W. Reese and L. J. Parrott (Eds.), Behavior science: Philosophical, methodological and empirical advances. Hillsdale, NJ: Lawrence Erlbaum.

Iversen, I. H., Sidman, M., & Carrigan, P. (in press). Stimulus definition in conditional discriminations. Journal of the Experimental Analysis of Behavior.

LeBlanc, J. M., Hoko, J. A., Aangeenbrug, M. A., & Etzel, B. C. (1985). Microcomputers and stimulus control: From the laboratory to the classroom. Journal of Special Education Technology, 7, 23-30.

Perone, M. (1985). On the impact of human operant research: Asymmetrical patterns of cross-citation between human and nonhuman research. The Behavior Analyst, 8, 185-189.

Peterson, S. K., & Tenenbaum, H. A. (in press). Behavior management strategies. Chicago, IL: University Press.

Poling, A. (in press). A primer of human behavioral pharmacology. New York: Plenum Press.

Poulson, C. L. (1984). An operant theory and methodology in infant vocal conditioning. Journal of Experimental Child Psychology, 38, 103-113.

Poulson, C. L. (in press). Operant conditioning of vocalization rate in Down's Syndrome infants. The American Journal of Mental Deficiency.

Rast, J., Ellinger-Allen, J. A., & Johnston, J. M. (1985). Dietary management of rumination: Four case studies. American Journal of Clinical Nutrition, 42, 95-101.

Rast, J., & Johnston, J. M. (1986). Social versus dietary control of ruminating in mentally retarded persons. American Journal of Mental Deficiency.

Rast, J., Johnston, J. M., Allen, J. E., & Drum, C. (1985). Effects of nutritional and mechanical properties of food on ruminative behavior. Journal of the Experimental Analysis of Behavior, 44, 195-206.

Rogers-Warren, A. K., & Poulson, C. L. (1984). Perspectives on early childhood education. In E. L. Meyen (Ed.), Mental retardation: Topics of today, issues of tommorrow. Monograph of the Council for Exceptional Children, The Division on Mental Retardation, 1, (Serial No. 1).

Rousseau, M. K., Poulson, C. L., & Salzberg, C. L. (1984). Naturalistic procedures for increasing homework participation by inner-city middle-school students. Education and Treatment of Children, 7, 1-15.

Runco, M. A., Charlop, M. H., & Schreibman, L. (in press). The ocurrence of autistic self-stimulation

as a function of novel versus familiar setting, persons, and tasks. Journal of Autism and Developmental Disorders.

Runco, M. A., & Schreibman. L. (in press). Socially validating behavioral objectives in the treatment of autistic children. Journal of Autism and Developmental Disorders.

Samson, H. H., & Fromme, K. (1984). Social drinking in a simulated tavern: An experimental analysis. Drug and Alcohol Dependence, 14, 141-163.

Schreibman, L., & Charlop, M. H. (in press). Autism. In V. B. VanHasselt and M. Hersen (Eds.), Psychological evaluation of the developmentally and physically disabled. New York: Grune Stratton.

Schreibman, L., Kohlenberg, B. S., & Britten, K. R. (in press). Differential responding to content and intonation components of a complex auditory stimulus by nonverbal and echolalic autistic children. Analysis and Intervention in Developmental Disabilities.

Schreibman, L., Mills, D. M., & Stanley, A. E. (in press). Operant assessment of attentional deficit in autistic children: Defining and measuring a behavioral phenotype. In D. Gray, J. Johnston, & R. Plomin (Eds.), Proceedings of the NICHD Behavioral Genetics and Learning Conference.

Schreibman, L., Stanley, A. E., & Mills, D. L. (1985). Autism. In M. Hersen & C. G. Last (Eds.), Behavior therapy casebook. New York: Springer. pp 271-286.

Shimoff, E., Matthews, B. A., & Catania, A. C. (in press). Human operant performance: Sensitivity and pseudosensitivity to contingencies. Journal of the Experimental Analysis of Behavior.

Sidman, M. (in press). Errorless learning and its significance for teaching the mentally handicapped. Psicologia.

Sidman, M. (in press). Functional analysis of emergent verbal classes. In T. Thompson & M. D. Zeiler (Eds.), Analysis and integration of behavioral units. Hillsdale, NJ: Erlbaum.

Sidman, M. (in press). The measurement of behavioral development. In N. A. Krasnegor, T. Thompson, & D. B. Gray (Eds.), Advances in behavioral pharmacology, vol. 6: Developmental behavioral pharmacology. Hillsdale, NJ: Erlbaum.

Sidman, M., Kirk, B., & Willson-Morris, M. (1985). Six-member stimulus classes generated by conditional discrimination procedures. Journal of the Experimental Analysis of Behavior, 43, 21-42.

Sidman, M., Willson-Morris, M., & Kirk, B. (in press). Matching-to-sample procedures and the development of equivalence relations: The role of naming. Analysis and Intervention in Developmental Disabilities.

Stella, M. E., & Etzel, B. C. (in press). Stimulus control of eye orientation: Shaping S+ only versus shaping S- only. Analysis and Intervention in Developmental Disabilities.

Tenenbaum, H. A., & Peterson, S. K. (1985). Celeration and ritalin. Journal of Precision Teaching.

CALL FOR COMMENTS

The editors would like to encourage commentary by and dialogue arousing the readers of the EAHB Bulletin. Therefore, do not hestitate to send us comments. We would particularly like substantive comments concerning our featured articles, and suggestions for improvements of the Bulletin.

PLANNING YOUR FIRST (OR MAYBE NOT FIRST) ABA CONVENTION

Barbara J. Kaminski and James H. Joyce
West Virginia University

One new experience for many graduate students is attending major conferences. Conferences are valuable environments for advancing a student's exposure to the subject matter of the discipline and its politics. However, like many pursuits, a conference can be frustrating, confusing, and potentially overwhelming if adequate preparation is not made. This article is designed to help the new conference attendee prepare for the upcoming A.B.A. conference in Milwaukee, although the advice given may benefit veteran conference-goers as well.

The primary theme of this advice is simple; have a plan. (One wouldn't go on a vacation without an itinerary, nor would we begin an experiment without some plan of what we are going to do). Unfortunately, we are usually much less careful in planning our conference behaviors in advance, and often arrive without any notion of what to do next.

Naturally, an important part of this planning is the arrangement for food, clothing, and shelter. Though obvious, these details often escape completion by even veteran travelers. Before leaving your home cage, be sure you have reservations at the right hotel. The convention will be held at the Hyatt Regency-Milwaukee (333 West Kilbourne Ave., Milwaukee, WI 53203), with accomodations available at the hotel. Students may also be interested in staying at the Milwaukee Downtown YMCA (414-276-5077), which is much cheaper and within walking distance to the Hyatt. Of course, you will also need to eat. Milwaukee has many fine restaurants; spanning the culinary spectrum. Some of us may want to live on the wild side and try a restaurant that "looks good" (there are many in the downtown area). In keeping with convention planning, however, it would be a good idea to do a little detective work before you venture into the beyond, especially if you have specific dietary needs or preferences. Most large cities have convention and visitor's bureaus to help in this endeavor. The Milwaukee Convention and Visitor's Bureau (414-277-7250) can provide information about dining and entertainment in downtown Milwaukee. Finally, before leaving home, make sure you have enough cash or traveler's checks, and that you have the right types of clothing (the weather in Milwaukee is extremely variable in May, so bring an umbrella and a coat, just in case). A checklist is always a good idea in such matters.

The A.B.A. conference provides the unique opportunity for interacting with the leaders of Behavior Analysis from all over the world. Not only can you hear important presentations of the latest researach findings, you can interact socially with persons whose works form the basis of your educational pursuits. Prior to arriving at the conference, determine which of the accomplished persons likely to attend the conference you would like to meet (a quick look at the A.B.A. convention program will indicate who will be there). Even more important is to determine what question you will ask when the opportunity presents itself. You will avoid the punishment of an awkward pause if you've planned what to say after "I've always wanted to meet you, Dr. Sidman".

The value of attending social hours, and hospitality-suite functions cannot be overestimated. Not only are primary reinforcers plentiful, so are the opportunities for casual and informative conversations with your scientific mentors. Also, don't forget that conventions are an excellent means for contacting possible employers, especially during social functions.

Obviously, it is also important to be in the right place to meet the right people, and to hear the presentations of interest. Having an agenda of the presentations you want to hear will be of extreme assistance, especially at A.B.A. with its rich schedule of

concurrent sessions. The convention booklet provides a "personal schedule" form that can help you organize your own convention schedule. The remainder of this article will be devoted to providing an example of such an agenda, which may be particularly useful for both the student and the EAHB-SIG member. It will outline some major presentations and functions that relate to human research. We've starred (*) those functions that are listed under the specialty heading of EAHB. This schedule will not be suitable for everyone, but hopefully it will provide a stable baseline from which to begin your planning.

Thursday, May 22, 1986

Session #203: 10:00 to 12:50 West Octagon 1	Introduction and Overview of Behavior Analysis. This session promises to be of the highest quality, based on its presentors, and should be of particular interest to students. Presentors: W. Scott Wood, Jack Michael, Philip N. Hineline, Brian A. Iwata, George Graham, & Edward K. Morris.
* Session #305 2:00 to 2:50 Mecca: West 7	Compound Stimuli and Arbitrary Matching by Humans. Presentor: Robert Stromer. Chairperson: Mark T. Rushing.
* Session #324 3:00 to 4:50 Mecca: West 9	An Analysis of the Development of Stimulus Equivalence in Nine-Member Classes in Developmentally Disabled Adolescents. Presentors: Richard R. Saunders, Joseph E. Spradlin, & Judith A. Wachter. Chairperson: Joseph E. Spradlin.
* Session #340 5:50 to 5:50 Mecca: East 8	Experimental Analysis of Human Behavior Special Interest Group (meeting). Chairpersons: William F. Buskist & James M. Johnston.
Session #348 6:00 to 6:50 Mecca: East 8	Student Committee Business Meeting. Chairpersons: Jill E. McGrale & Lisa M. Johnson.
Session #352 7:00 to 9:00 Regency Ballroom	Graduate Training Poster Session. Posters presented by Auburn U.; California State U., Stanilaus-Turlock; Southern Illinois U.; U. of Kansas; Eastern Michigan U.; Mankato State U.; Queens College of CUNY; Temple U.; U. of Utah; Marshall U.; & West Virginia U.

Friday, May 23, 1986

Session #413 9:00 to 10:50 East Octagon 5	Building a First Course in Behavior Analysis: A Professional Development Symposium Sponsored by the Student Committee. Presentors: B. L. Hopkins, Edward K. Morris, James M. Johnston, William K. Redmon, Kennon A. Lattal, & Jack Michael. Chairpersons: Lisa M. Johnson, & Jill E. McGrale.
Session #436 11:00 to 11:50 Mecca: West 6	Directions of Control in Speech-Action Interactions. Presentor: Peter Harzem. Chairperson: Paul Whitley.

Session #507 12:00 to 12:50 Mecca: West 8	Infant "Verbal Behavior" from Sounds to Linguistic Behavior: A Case Study. Presentor: Dan Hursh. Chairperson: Mark Sundberg.
* Session #511 12:00 to 1:30 Regency Ballroom	Third Annual Experimental Analysis of Human Behavior Special Interest Group Poster Session. Multiple Presentors.
Session #545 2:00 to 3:50 Hyatt: Lakeshore B	Certification of Behavior Analysis. Panel Discussion. Chairperson: Henry Slucki.

Saturday, May 24, 1986

Session #607 9:00 to 9:50 East Octagon 5	The Role of Verbal Behavior in the Emergence of Equivalence Classes. Presentor: C. Fergus Lowe. Chairperson: A. Charles Catania.
Session #630 10:30 to 10:50 Mecca: East 10	The Experimental Analysis of Private Events. Presentor: James T. Todd.
* Session #642 11:00 to 12:50 Mecca: West 10	Recent Advances in the Experimental Analysis of Human Behavior. Presentors: Laura D. Frederick, Samuel M. Deitz, A. C. Catania, E. H. Shimoff, B. A. Matthews, D. Cerutti, Ellen P. Reese, Daniel J. Bernstein, Dean Williams, & James M. Johnston. Chairperson: Samuel M. Deitz.
* Session #716 1:00 to 1:20 Mecca: West 10	A Behavioral Analysis of Vicarious Reinforcement in Young Children. Presentors: Hikaru Deguchi, Tsutomu Fujita, & Masaya Sato.
Session #726 1:30 to 1:50 Mecca: West 8	On Method: Behavioral Phenomenology. Presentor: Sam Leigland.
Session #750 3:30 to 3:50 Mecca: West 8	Trends in Behavior Modification: Where Have We Been, and Where Are We Going? Presentors: Robert G. Sewell, & Todd R. Risley.
Session #757 5:00 to 5:50 Mecca: East 6	Journal of the Experimental Analysis of Behavior (meeting). Chairperson: Philip N. Hineline.

Sunday, May 25, 1986

* Session #807 9:00 to 10:50 Mecca: West 8	Second Annual Experimental Analysis of Human Behavior Special Interest Group Symposium for Graduate Student Researchers. Chairperson and Discussant: R. Alan Williams.
Session #902 12:00 to 12:20 Mecca: West 6	Toward a Technology of Verbal Behavior. Presentor: James Kopp. Chairperson: Kathleen M. Wright.
Session #906 1:00 to 1:50 West Octagon 1	We Happy Few. Presentor: B. F. Skinner. Chairperson: Vicki Lee.

AWARD-WINNING GRADUATE STUDENT REVIEW PAPERS

The SIG's second annual contest for graduate student review papers attracted seven entries, four of which were selected for awards. The titles, authors, and abstracts of the winning papers are presented below.

Each paper was examined by at least two members of the judging panel, and detailed written reviews were sent to the authors. The contest was directed by Alan Williams (John F. Kennedy Institute). The judges were Robert H. Bennett, Aaron Brownstein, William F. Buskist, Michael Cataldo, Karen Feniello, Frances M. Hunt, Philip Hurst, Robert Kissel, William McIlvane, Terry Page, John Parrish, Lynn Pelco, and Eliot Shimoff.

The winners will present their papers at the Association for Behavior Analysis Convention in Milwaukee on Sunday, May 25, from 9:00 a.m. to 10:50 p.m. in MECCA West 8. Alan Williams will present the authors with plaques at that time.

CONDITIONED REINFORCEMENT OF HUMAN BEHAVIOR: A REVIEW AND EVALUATION OF OBSERVING EXPERIMENTS

Thomas S. Critchfield
West Virginia University

Studies of conditioned reinforcement using human subjects and observing response procedures derived from Wyckoff (1952; 1969) are reviewed. The review concludes that because most human studies do not use control procedures employed in non-human studies, it is difficult to speculate about trends in the human data or their implications for conditioned reinforcement theory based largely on non-human data. However, the one series of studies which employes relatively comparable experimental procedures (Perone & Baron, 1980) suggests that for human subjects negative discriminative stimuli (S-) may serve as conditioned reinforcers. Such an effect appears to be at odds with Pavlovian hypotheses about conditioned reinforcement (which are overwhelmingly supported in the animal literature), and compatible with the predictions of information hypotheses (which have not been supported in animal research). This paradox is seen as a challenge for future research addressing general theoretical questions about conditioned reinforcement as well as the special conditioning histories humans bring to experiments. Toward this end, recommendations are made for standardizing procedures, and a suggestion is made concerning the type of conditioning history, consistent with Pavlovian hypotheses of conditioned reinforcement, which might render S- reinforcing.

INTERACTION EFFECTS IN MULTI-ELEMENT DESIGNS: UNMENTIONED, UNEXAMINED OR UNKNOWN?

Ann Higgins Hains
University of Kansas

The single-subject designs most often used to compare the effectiveness of two or more independent variables (or treatment programs) are the multi-element, alternating-treatments, and simultaneous-treatments designs. These designs approximate the concurrent comparison of the effects of two or more variables by programming the variables in rapid alternation, typically across daily sessions. In addition, these designs are capable of displaying interaction effects, or multiple treatment interference. These effects refer to the influence of one treatment on an adjacent treatment and raise the issue: Will the results of Treatment B in a multi-element design, where it is alternated with Treatment C, be the same as when Treatment B is the only treatment used? In other words, could Treatment C somehow change the current or later effects of Treatment B? Despite their capability to show interaction effects, most multi-element designs have been used to compare treatments without examining possible interactions. This paper reviews a sample of such studies, analyzes the possible interaction effects, and points to ways in which designs could display interactive effects to the benefit of future research and application.

STIMULUS EQUIVALENCE: AN EMERGENT RESEARCH AREA

Kirk Lockwood
West Virginia University

This paper reviews key studies in the stimulus equivalence literature published between 1971 and 1985. It discusses the requisite relationships between a given pair of stimuli that make them equivalent and the possible mechanisms by which classes of equivalent stimuli are formed. The possible role of stimulus equivalence in determining behavior that has no apparent reinforcement history, such as "generative" grammar and syntax, is also discussed. The paper suggests future directions for stimulus equivalence research, such as identifying the necessary conditions for establishing reflexive, symmetric, and transitive relations, establishing the possible role of equivalence relationships in determining novel behavior, and applying stimlulus equivalence paradigms to instructional technology.

APPROACHING A FUNCTIONAL ANALYSIS OF DREAMING

Darryn M. Sikora
West Virginia University

Historically, radical behaviorists have little emphasized dreaming. However, there are both strong theoretical reasons for and practical interest in understanding covert behavior such as dreaming. Traditional theories postulate that dreams are manifestations of unconscious desires or possibly problem solving strategies of the ego. Dreams are conceptualized here as private events. A physiological function of dreaming, a process of natural selection, may be distinguished from dream content, which is operantly controlled by environmental contingencies. The content of each dream is independent from the preceeding and following dreams. A comparison can be made between Skinner's concept of "conditioned seeing" and the genesis of a dream. Once the dream begins, it is maintained by the complex interactions between deprivation, discriminative stimuli, conditioned stimuli, reinforcers and conditioned reinforcers. In addition, the concept of stimulus salience and the similarity between various response classes may also explain differing dream content. Certain dream characteristics can also be functionally analyzed. Autoclitics, which account for the logical order of verbal behavior, may be absent during sleep. This absence of autoclitics and the verbal community in general may account for the illogical sequencing and increased visual imagery often found in dreams. In further developing a functional analysis of dreaming, an emphasis should be placed on the practical considerations of controlling dreams under experimental conditions.

AARON J. BROWNSTEIN 1932-1986

Aaron J. Brownstein died unexpectedly on Sunday, April 13, at the age of 53. Aaron earned his Ph.D. in experimental psychology at the University of Missouri at Columbia in 1961. He was an assistant professor at Florida State University until 1964, when he joined the faculty at Arizona State University as an associate professor. In 1968 he became a full professor at the University of North Carolina at Greensboro.

Aaron was an active member of our SIG, as well as the founding president of the Southeastern Association for Behavior Analysis and the Editor-Elect of The Behavior Analyst. His recent research was concerned with rule-governed behavior, an area in which he made both theoretical (Brownstein & Shull, 1985) and empirical (Hayes, Brownstein, & Zettle, in press) contributions.

References

Brownstein, A. J., & Shull, R. L. (1985). A rule for the use of the term, "rule-governed behavior." The Behavior Analyst, 8, 265-267.

Hayes, S. C., Brownstein, A. J., & Zettle, R. D. (in press). Rule-governed behavior and sensitivity to changing consequences of responding. Journal of the Experimental Analysis of Behavior.

ABOUT THE EAHB SIG

The Experimental Analysis of Human Behavior Special Interest Group (EAHB SIG) consists of over 110 members of the Association for Behavior Analysis (ABA). The group is organized to facilitate the growth of a multi-faceted experimental literature using human subjects to analyze the relations between behavior and the variables influencing it. The EAHB Bulletin serves the SIG by disseminating information that customarily is not published in the archival journals of behavior analysis.

CONTRIBUTORS are encouraged to submit materials such as articles about EAHB as a specialty area; research notes, e.g., information about specific procedures, anomolous findings, etc.; annotated bibliographies; research profiles; convention and conference notices; course materials; and job announcements and other news of interest to SIG members (see recent issues for examples). Submissions should be sent to the EAHB Bulletin at the address given below.

NEW MEMBERS may join the EAHB SIG by completing the membership form and sending it, along with a check for dues (see below), to the Bulletin.

CONTINUING MEMBERS may renew their membership for 1986 by sending their name and a check for dues (see below) to the Bulletin. Please write "Renewal" in the memo section of your check. Send the membership form only if you wish to report a change of address or interests.

DUES for 1986 are $5. Despite rising costs, the SIG has been able to hold dues at this level for several years because (1) mailing and administrative costs have been subsidized by Auburn University and, recently, West Virginia University, and (2) approximately 35% of our members have generously added a voluntary contribution of $2, $5, or more, to their dues. Unless this support continues, the SIG may have to cut back on its activities. If you can afford an extra $2, please send it--the SIG will put it to good use in promoting the experimental analysis of human behavior.

ADDRESS all correspondence to: EAHB Bulletin, Department of Psychology, West Virginia University, P. O. Box 6040, Morgantown, WV 26506-6040.

Circle one: New Member New Address New Interests

Circle amount enclosed (payable to EAHB SIG): $5 $7 $10 $_____

Name_____

Department_____

Box or Street_____

City_____ State_____ Zip_____

Phone ( ) _____ Interests_____

_____

Cloyd Hyten
Department of Psychology
West Virginia University
P. O. Box 6040
Morgantown WV 26506-6040