

CH

Experimental Analysis of Human Behavior Bulletin

Volume 3

FALL 1985

Number 2

Call for Graduate Student Review Papers.....Inside Cover

Linda J. Parrott, St. Mary's University

Toward A Descriptive Analysis of Verbal Interaction.....12

Grants to EAHB SIG Members.....16

Proceedings of the EAHB SIG Group Poster Session, ABA Convention 1985..17

Alan Poling, Western Michigan University

Why Write A Column?.....23

Terje Sagvolden, University of Oslo, Norway

Research Profile.....24

**Graduate Programs in EAHB: Ball State University,
SUNY-Stony Brook, West Virginia University Professional Masters Program**....25

Announcements

1986 Dues.....15

EAHB Poster Session '86.....23

Phil's Fun Fact.....24

Survey Results Available.....27

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.

Editors

Philip N. Chase & Michael Perone,
West Virginia University

Editorial Assistants

James Joyce & Barbara Kaminski,
West Virginia University

Executive Committee

Alan Baron,
University of Wisconsin-Milwaukee

W. F. Buskist, Peter Harzem, &
James M. Johnston,
Auburn University

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

CALL FOR GRADUATE STUDENT REVIEW PAPERS

The EAHB SIG will sponsor its second annual awards contest for graduate student authors. The purpose of the contest is to foster scholarly thinking and writing in the area of the experimental analysis of human behavior.

Papers must be an integrative review of some area of operant research involving the use of human subjects, although it is acceptable to include discussions of the behavior of other organisms. Papers must be written from a historical, conceptual, theoretical, or empirical perspective. Papers will be judged according to their clarity, scholarship, conceptual rigor, and thoroughness by a panel of experimental analysts who are established in this area. Names and affiliations of the authors will not be revealed to members of the review panel.

All authors will receive detailed, written reviews of their papers. Authors

of outstanding papers will be awarded certificates of merit and receive invitations to present their papers at the next ABA convention. There will be no set number of awards or a "first prize."

Submission materials must include three copies of the review paper and a letter from the student's major advisor stating that (1) at the time of submission, the student has not completed the requirements for the doctoral degree and (2) the paper is primarily written by the student submitting the paper (although the major professor may help the student organize the paper as well as make conceptual and literary contributions).

Inquires and submissions should be addressed to R. Alan Williams, Ph.D., The John F. Kennedy Institute, Department of Behavioral Psychology, 707 North Broadway, Baltimore, MD 21205. The deadline is December 31, 1985.

TOWARD A DESCRIPTIVE ANALYSIS OF VERBAL INTERACTION

Linda J. Parrott
Saint Mary's University

EDITORS' NOTE: Dr. Parrott will be a regular contributor to the Bulletin.

The operant formulation of verbal interaction (Skinner, 1957) is articulated in accordance with a tradition of scientific inquiry which takes as its goals the prediction and control of behavior. Accordingly, the factors comprising an instance of verbal behavior and their interrelations with other co-present factors are of less concern than what the current instance suggests with respect to subsequent instances of similar activity. In other words, it is the probability of occurrence of similar events that is the focus of analysis from an operant perspective.

Given this focus, two questions arise: First, by what criteria or along what dimensions are events deemed similar for the purpose of classification? And, second, what is the meaning and significance of the concept of probability for the analysis of verbal interactions?

With regard to the issue of similarity, Skinner (1957, pp. 20-21) is careful to point out that the formal or topographical characteristics of responding do not constitute valid criteria for the classification of verbal responses. On the contrary, only those responses which occur in the presence of similar stimulus conditions and which produce similar consequent stimuli may be regarded as similar. Responses sustaining these relations with stimuli, regardless of their specific topographical features, are conceptualized as members of the same class of responses, technically called an operant. The intent here is to suggest that a verbal operant is a class of functional relations obtaining between the responding of an organism and the stimulating of an environment. Similarity, then, as it applies to verbal response events, is a functional

not a formal affair.

This same logic does not apply to the classification of stimuli, however. Stimuli are identified and described in terms of their physical characteristics (for example, see Skinner, 1957, p. 31), and similarities among them are postulated on formal as opposed to functional criteria. This means, essentially, that sources of stimulation, namely physical objects, are not being differentiated from stimulation arising from those sources. This interpretation of stimuli violates the principle of functionality and invalidates the contention that an operant class is made up of functional relations. A functional relation, at least in so far as it may be distinguished from a causal relation, is a commutative (Kantor, 1950, pp. 156-157)--involving the coordinated actions of both organisms and objects. It is the stimulating action of an object and not the object itself that enters into a relation with responding. (Note 1).

The operant interpretation of stimuli, as physical objects, may be understood as a necessary step in the wrong direction. If both responses and stimuli were functionally defined, there would be no basis upon which to group psychological events into classes, and a class concept is essential to enterprises working towards goals of prediction and control. Prediction and control depend upon the recurrence of events, that is, a concept of event similarity, and if similarity of response form is ruled out as a criterion for classification, similarity of stimulus form becomes the only other alternative.

Having described the means by which a probabilistic orientation to psychological events is made possible, we may turn now to the meaning and significance of the concept of probability for the analysis of verbal

interactions. From the outset, we must realize that probability is a verbal construction referring to a future state of affairs, and because the future has not yet occurred, it does not constitute a description of observed happenings. In other words, the events with which an observer interacts--members of a particular operant class, for example--do not embody probabilities of occurrence. They do not have the property of strength, as it is sometimes called. The terms "probability" and "strength" do not describe events of this sort. After all, events either occur or do not occur, and in either case the concept of probability is irrelevant. Instead, these terms refer to an observer's belief or prediction that a member of a particular operant class will occur under specified conditions. An observer may be quite certain that a particular event will occur, in which case his belief is strong, or he may be less certain, in which case his belief may be weak. But it is always a belief about an operant and not an operant itself that has the property of strength, and it is important to maintain this distinction.

Unfortunately, this distinction is not maintained in operant formulations of verbal interaction. For example, a particular response is described as "coming to strength" (Skinner, 1957, pp. 199-203), when actually it is an observer's belief that it will occur that is becoming strong. Likewise the nonoccurrence of a response under specified conditions is said to be a fault of inadequate stimulus control (Skinner, 1957, pp. 373-374), when actually the fault lies not with stimulus control but with the observer's expectation of a response occurrence under those conditions. Confusions of this sort, as is always the case in science, have the effect of misdirecting the scientific enterprise. In the present case, they lead investigators to focus on what might occur or why what was anticipated would occur did not occur, rather than on what did occur and the configuration of factors present at the time of its occurrence. Do we want a science of predictions and justifications for the inadequacies of

our predictions? Or do we want a science of observed happenings?

Leaving aside the answer to that question for the moment, let us consider another question: What is to be gained by approaching the study of verbal interaction probabilistically? What is it we know about verbal behavior and what is it we would like to know?

Well, according to Skinner, we know that the verbal repertoire of an individual is made up of eight very large classes of responses, or verbal operants, differentiated primarily on the basis of the formal characteristics of the stimulus conditions antecedent to their occurrence, (see, for example, the definitions of verbal behaviors under the control of verbal stimuli, in Chapter 4 of Skinner's Verbal Behavior). (Note 2) Given this knowledge, we may ascertain the relative rates of occurrence of these operants in a given individual's repertoire and should we discover that one of these operants is occurring too frequently or infrequently, according to some standard, we know how to realign these rates by way of operant conditioning procedures of one sort or another. In other words, we know how to count instances of large classes of responses without regard to response form; we know how to control their rates of occurrence; and, given the enormous size of these classes and the relatively small number of them, we know how to predict their occurrence with considerable accuracy. These are, no doubt, good things to know. But there is considerably more about verbal interactions that we might want to know, even from a probabilistic standpoint. We might, for example, want to know something about the conditions under which a response of a given topography might be expected to occur. A response-class analysis is ill-equipped to handle questions of this sort, however. I say ill-equipped because response classes are explicitly and deliberately defined without regard to response form.

This is not to suggest that Skinner and others have not addressed themselves to the issue of the probability of a single event. In fact, Skinner (1957, p.

28) argues that we must eventually move on from a study of frequencies of class occurrences to predictions of the single forthcoming event, and assumes that in making such predictions we will have to consider the way in which several variables combining at a given time contribute strength to a given instance of verbal behavior. Moreover, Chapter 9 of Verbal Behavior, "Multiple Causation", is an attempt to deal with this issue. If it were Skinner's intention in this context to suggest that we may understand the occurrence of a given response (including, of course, its topographical features) by taking note of the configuration of factors present at the time of its occurrence, I could agree that we would be moving on from a study of frequencies. But this is not his intention. On the contrary, he argues that the contributions to each factor to the forthcoming occurrence of a single response will be based on observations of frequencies alone (Skinner, 1957, p. 28). The problem is, however, that a single response occurs only once and it does so amidst a configuration of factors that are never duplicated in every detail. The contributions of co-present factors to the occurrence and form of a given response are not additive, as an object interpretation of stimuli would suggest. The contribution of each factor (i.e., its stimulatory property) is critically dependent upon the contributions of all of the factors into which it is configured. Each field of interacting factors is unique, as is each individual response. And frequency metrics are just not applicable to such occurrences.

The real problem is the stated aims of the enterprise, namely, prediction and control. Prediction and control are practical aims, not scientific ones. They implicate the motivations of observers, and articulate the nature and operations of events from the standpoint of observers. To properly understand events, however, we must attempt to articulate the nature and operations of events from the standpoint of events. We must attempt to gain knowledge not about the conditions under which a given event might occur but about the conditions

under which it does occur. In doing so, we will be aiming toward a description of events. In short, I believe that in order to come to a more complete understanding of this subject matter we must focus on the unique event as it occurs and in all of its uniqueness as our primary datum. From the study of particulars will come the general formulation and that more general formulation will constitute the only sort of explanation for verbal interactions that a science ever requires.

A descriptive approach to verbal interaction leads to a very different conception of the nature and operation of verbal events than does a probabilistic orientation, as has been adopted by Skinner and others of the behavior analytic tradition. This is not the place to discuss those differences in detail. I will say only that from a descriptive standpoint, knowledge of an event is, in large part, an enumeration of the factors participating in it and their pattern of organization, without undue emphasis on any particular factor or the means by which a particular factor is brought into play. In the case of ordinary conversational speech, for example, those factors include the responding of the speaker coordinated with stimulation arising from two sources simultaneously. One of those sources is the listener, the other the thing, event, or person spoken of. These factors, moreover, are occurring in a complex setting made up of many other factors having current as well as historic significance. The speaker's activity in such an event is effectual with respect to only one source object, namely, the listener, and its effect on this object is to bring the listener into orientational contact with the thing spoken of. This reorientation of the listener is the principle function of language from a descriptive standpoint, and the central question to be addressed in the verbal field is how and by what means the listener's action comes to be coordinated with stimulation arising from objects and events originally stimulating the speaker.

A second problem to which investigative methods may be applied

Error -
How can you know what events are important in influencing the response unless you can see them repeatedly affecting the response?
Repetition requires classification on the basis of similarity

Reorientational

arises when the things and events spoken of are not immediately present. Under these circumstances, a listener may still become oriented with respect to the things spoken of through the operations of other objects which, in the experience of a given listener, have acquired the stimulatory functions of the objects that are not present. How stimulus functions are transferred from one object to another, such as to enable us to react to things in their absence, constitutes a second important area for empirical work in the verbal field. These questions draw into analysis the verbal behavior of the listener and emphasize in a significant way the interactive nature of psychological language events, which is, after all, one of its most distinguishing features.

The methodological implications of a descriptive approach to verbal interaction include, first of all, a more thorough study of individuals' psychological histories than is typically undertaken. Opportunities for stimulus function transfer have their sources in historical circumstances, and unless these circumstances are known we shall have no basis upon which to evaluate the effects of our manipulations. The history of language acquisition and practice in a normal adult is well beyond reach however, hence I believe it will be necessary to construct individual histories of object-utterance and object-object associational responses for research purposes. In other words, it will be necessary to work with artificial or foreign languages to address the issue of how and by what means stimulus function transfer occurs. Secondly, because responding to things in their absence depends on the immediate presence of other objects with acquired functions, a descriptive orientation dictates a more detailed study of setting conditions than is normal in this field.

In summary, if we are to understand the psychological aspects of language, we must take instances of its actual occurrence as our primary datum, and attempt to describe those instances in terms of all of the historical and current circumstances attending them. In

short, it is my feeling that we will register more progress in our understanding of verbal interaction by attempting to describe and explain it than by attempting to predict and control it. Prediction and control will still have their place in this field. They are the proper aims of applied science, and they will come into play as practical problems of verbal interaction suggest themselves for solution.

Notes

An earlier version of this paper was presented at the American Psychological Association conference in Toronto, Ontario, 1984.

1. Behaviorists seem to have some difficulty with the notion of stimulating action. Why this should present a problem is unclear to me given that behaviorists commonly use the verb "elicit" to refer to such actions and further acknowledge the fact that a given stimulus object may have "more than one function." Properly conceived, the latter phrase implies that a stimulus may act in more than one way.
2. The mand, and to a lesser extent, the autoclitic, are exceptions.

References

- Kantor, J.R. (1950). Psychology and logic (Vol. II). Chicago, IL: The Principia Press.
- Kantor, J.R. (1977). Psychological linguistics. Chicago, IL: The Principia Press.
- Skinner, B.F. (1957). Verbal Behavior. New York, New York.

1986 DUES

THIS ISSUE OF THE BULLETIN MARKS THE END OF ANOTHER YEAR OF SIG ACTIVITIES. PLEASE CONTINUE YOUR SUPPORT BY SENDING YOUR 1986 DUES AS SOON AS POSSIBLE. SEE THE INSIDE BACK COVER FOR DETAILS.

GRANTS TO EAHB SIG MEMBERS

To encourage SIG members to obtain research grants, Jim Johnston (Auburn University) and Dave Grey (National Institute of Child Health and Development) have suggested that the Bulletin publicize members' efforts and successes in this area. Particular interest is in learning about the agencies and programs that are receptive to EAHB proposals, the kinds of research that tend to be awarded funds, and the program officers to contact for further information. Future issues will provide this information for three categories: (1) proposals, (2) newly-funded grants, and (3) grants-in-progress. The first items in the series, by A. W. Logue (SUNY-Stony Brook) and P. N. Chase (West Virginia University), provide a model. Similar information will be requested from other SIG members in a survey to be mailed early in 1986.

New Grants

TITLE: "Quantitative Models of Choice in Human Self-Control;" INVESTIGATOR: A. W. Logue, State University of New York at Stony Brook; DATES: 2-1-85 through 1-31-87; AMOUNT: \$81,244; AGENCY, PROGRAM, & OFFICER: National Science Foundation, Psychobiology Program, Fred Stollnitz, Program Director, Phone (202) 357-7949.

ABSTRACT: Humans and animals must frequently choose between reinforcers of varying sizes and delays. When a larger, more-delayed reinforcer is chosen over a smaller, less-delayed reinforcer, that choice may be defined as self-control. Self-control may vary depending on the species and on the experience of the subject. Two quantitative approaches, the matching law and maximization, have been used to describe some of these variations. Previous research suggests that under certain conditions pigeons tend to follow the matching law, which frequently results in impulsive behavior, while adult humans, under

similar conditions, tend to maximize the total amount of received reinforcement, which frequently results in self-control. In addition, previous research has suggested that maximization in adult humans is dependent on their verbal behavior. Therefore the present proposal describes several experiments that will examine the choices of adult human subjects under a variety of conditions, particularly as affected by the subjects' verbal behavior. Children's choices will also be examined. The present proposal uses techniques and theory previously developed primarily with animal subjects to quantify human subjects' choices. The overall purpose of these experiments is to further develop quantitative models of choice and, more specifically of self-control, in which choice need not be a direct function of the physical values of the reinforcers.

TITLE: "Research and Development of Instructional Design Strategies for Management Software;" INVESTIGATOR: P. N. Chase; AMOUNT: \$44,600; AGENCY: Enabling Technologies, Inc., Chicago, Illinois.

ABSTRACT: The purpose of this grant is to investigate instructional design strategies for training managerial skills via microcomputer software. In cooperation with programmers at Enabling Technologies, the investigator and three graduate students will design text documentation and on-line tutorials. A behavioral instruction model will be used to create the training materials. A series of achievement tests will be used to determine which components of the training materials are necessary for users to learn both how to use the programs to assist them on managerial problems and how to solve the kinds of problems addressed by each program. The grant will last one year with a possible extension to a second year. The grant is primarily for salaries.

PROCEEDINGS OF THE EAHB SIG GROUP POSTER SESSION
ABA CONVENTION, 1985

Twenty-one posters were presented at the second annual Experimental Analysis of Human Behavior Poster Session held at ABA on May, 25, 1985 from 8:00 pm to 9:30 pm. The session was well attended and stimulated much discussion. The following experiments were among those presented. We regret that a late call from the editors prohibited our receiving the abstracts from all of the participants. To encourage further correspondence, we have also included the name of a contact person at the end of each abstract.

RESPONSE BIAS AND SENSITIVITY WHEN THERE
IS LIMITED TIME TO RESPOND:
COMPARISONS OF OLDER AND YOUNGER MEN

S. R. Menich, W. R. Mattila,
T. Doolittle, & A. Baron
University of Wisconsin-Milwaukee

A signal detection analysis was conducted of performances of younger (18-20 yrs) and older (65-76 yrs) men. Following presentation of a series of stimuli (either 1, 2, or 3 pairs), the man indicated whether or not a test stimulus had appeared within the list. During some sessions time limits were placed on the choice response. The analysis indicated that sensitivity was greatest when there was an unlimited time in which to respond, and that sensitivity decreased progressively with increases in the severity of the time limit. Sensitivity also declined as the number of stimulus pairs was increased from one to two or three. In the majority of cases, the older men showed increased false alarms under the time limit conditions (more liberal response criteria), particularly as the limits became more severe. The results indicate that exposure to procedures which reinforce fast responding may be a way of altering style of responding in older subjects.

Contact: Alan Baron or Stephen Menich,
Department of Psychology, University of
Wisconsin-Milwaukee, Milwaukee, WI 53201

HUMANS FORAGING AMONG PUSHBUTTONS

B. A. Wanchisen, T. A. Tatham,
& P. N. Hineline
Temple University

This experiment addressed issues on "awareness" and suggested that radical behaviorists can study this and other cognitively-oriented issues, if they are operationally defined. The experiment attempted to assess the role of verbal behavior and "awareness" on operant schedule performance through the use of verbal reports. The experiment involved choices between an FR 20, 60 and 120, and a PR 20 (progressive ratio). The optimal strategy for gaining reinforcers is not obvious and, in fact, counter-intuitive to most human subjects which produced interesting verbal reports. The results of this experiment suggests that verbal behavior can intrude upon more intuitive behavior if it results in the forming of precise rules which override environmental contingencies.

Contact: Barbara Wanchisen, Ph.D.,
Department of Psychology,
Baldwin-Wallace College, Berea, OH 44017

ESTABLISHING STIMULUS EQUIVALENCES WITH
COMPLEX CONCEPTUAL BEHAVIOR

Philip N. Chase
West Virginia University

Complex, conceptual behavior has been defined by the following features: (1) the occurrence of a variety of functionally different kinds of behavior, and (2) these behaviors occur in the presence of a class of stimuli, but not in the presence of other stimuli. Research on complex, conceptual behavior indicated that training on any one type of behavior was not sufficient to guarantee that other behaviors will occur and that training on a variety of kinds of behavior made it more likely that a particular kind of behavior will

occur. So far, however, the research has not uncovered any general rules for which kinds of behavior should be included in the variety that are trained. Recent developments in the use of stimulus equivalences suggest some general rules. Thus, the present research investigated the establishment of stimulus equivalences among the stimuli that control verbal responses that were considered complex, conceptual behavior. Subjects were taught two sets of conceptual relations. One set taught subjects to identify examples in the presence of a concept name. A second set taught subjects to identify definitions in the presence of a concept name. After training on each teaching set, subjects were asked to identify examples in the presence of definitions, identify definitions in the presence of examples, write the concept names in the presence of definitions as well as complete novel instances of the relations taught in the training sets. The data indicated that the first training set led to accurate performance only on the relation trained and its symmetrical equivalent, writing concept names in the presence of examples. The second training set led to accurate performance on the two relations trained, their symmetrical equivalents and their transitive equivalents. These data were consistent with the stimulus equivalence model. Contact: Philip Chase, P.O. Box 6040, Department of Psychology, West Virginia University, Morgantown, WV 26506-6040

ACUTE DRUG EFFECTS IN HUMANS ON
THE ACQUISITION AND PERFORMANCE OF
RESPONSE CHAINS

S. T. Higgins, W. K. Bickel,
& D. K. O'Leary
John Hopkins University
School of Medicine

A multiple schedule was used to examine the acute effects of orally administered ethanol on the acquisition and performance of ten-link response chains in 7 adult nonalcoholic human subjects. For 6 of the 7 subjects, errors increased above placebo levels in the acquisition component at lower doses than

were necessary to increase errors in the performance component. Decreases in response rates generally occurred only at the highest doses and were similar across the two schedule components. Time-course data suggested that recovery to placebo levels may be more rapid in the performance component than in the acquisition component. The results obtained in this study are consistent with findings from previous studies conducted with nonhumans examining the effects of CNS depressants in analogous experimental arrangements. Contact: Stephen T. Higgins, Box 5180, Addiction Research Center/NIDA, 4940 Eastern Ave, Baltimore, MD 21224

ADJUSTING DELAY TO REINFORCEMENT IN A
CHOICE PROCEDURE WITH HUMAN SUBJECTS

M. L. Rodriguez & A. W. Logue
SUNY-Stony Brook

Mazur's (in press) adjusting procedure was used in a choice situation with four female college students to test the indifference functions predicted by the matching-law equation, Mazur's hyperbolic equation, and a modified hyperbolic equation. As with pigeons, the modified hyperbolic equation provided the best description of the data.

Contact: Monica L. Rodriguez, Department of Psychology, Columbia University, 46 Schermerhorn Hall, New York, NY 10027

HUMAN-FIXED INTERVAL PERFORMANCE:
EFFECTS OF ORIENTING INSTRUCTIONS AND
RESPONSE DEMONSTRATION

D. J. Terrell, R. Bennett
Auburn University
R. A. Williams
Wesleyan University

The effects of "orienting" instructions--those instructions usually given to human subjects to acquaint them with the experimental task and contextual stimuli prior to the start of an operant experiment--on human fixed interval performance were investigated in two experiments. In the first experiment

each of four groups of subjects were exposed to one and only one set of the following instructions: (i) instructions which described the apparatus but not the response manipulandum; (ii) same as (i) but with a description of the response manipulandum; (iii) same as (ii) but a demonstration of the response; and (iv) same as (iii) but with an additional instruction to maximize reinforcement. Each of the instructional sets affected responding between groups differentially, with instruction (i) producing the lowest response rates and instruction (iv) producing the highest. In the second experiment new subjects were exposed to instructions (i), (iii), and (iv) in succession. For most of these subjects, each presentation of a new instruction was followed by an immediate but temporary increase in response rate. For some subjects, instructions (iii) and (iv) produced higher response rates than instruction (i), but overall response rates during these conditions were much lower than the equivalent conditions of Experiment 1. The results from these experiments demonstrate that different orienting instructions, as discriminative stimuli, do not set equivalent occasions for responding (Experiment 1). However, extended contact with contingencies, as in Experiment 2, served to reduce the effects of new instructions on response rate.

Contact: Dudley J. Terrell, Psychology Department, Auburn University, Auburn, AL 36849

ACQUISITION AND RETENTION OF COMPLEX BEHAVIORAL CHAINS

J. Danforth, P. Chase, & M. Dolan
West Virginia University

Four college students were taught 9-component chains using the repeated acquisition design. A Commodore 64 was used to regulate the experiment. Learning and test sessions were conducted each day. In one learning condition, the subject's performance was • aided by a specific instructional stimulus. In a second learning condition

subjects were contingently shaped. In the first phase instructed and contingent learning conditions alternated daily. Results showed that subjects had a high number of test errors after instructed learning, but as sessions progressed test errors dropped to a level comparable to those that followed contingent learning. Data also show that the highest rate of responding was in the instructed learning condition. Thus, instructional stimuli allowed the subjects to learn the chains in less time without having an adverse effect on subsequent test performance. In phase two differential consequences for correct and incorrect responding were removed from the test sessions. As a result test errors following contingent learning increased substantially. It seems that subjects under contingency control were dependent on differential consequences during testing whereas when under instructional control they were not. The data were analyzed within the framework of contingency-shaped versus rule-governed behavior.

Contact: Jeffrey Danforth, P.O. Box 6040, Department of Psychology, West Virginia University, Morgantown, WV 26506-6040

DIVIDED ATTENTION IN OLDER ADULTS: EFFECTS OF TIME LIMITS AND NUMBER OF STIMULUS ELEMENTS

W. R. Mattila, S. R. Menich,
T. Doolittle, & A. Baron
University of Wisconsin-Milwaukee

Younger (18-20 yrs) and older (65-76 yrs) men indicated whether a test stimulus was contained within a previously presented series by lifting one of two keys. The series contained 1, 2, or 3 visual items either presented singly (undivided condition), or together with a second visual or auditory series (divided attention). Response speeds decreased as the number of stimuli increased, and responding generally was slower when series contained pairs rather than single elements (divided attention). Imposition of temporal contingencies led to increased response

speeds, and improvements were maintained when the time limits were subsequently removed. With regard to age differences, the older men were slower across the various conditions of the experiment, but age differences were reduced somewhat under the time limit and terminal baseline conditions. The younger and older men did not differ, however, in the extent to which responding slowed under the divided condition. Although age differences in response speed continued to the end of the experiment, the results showed that slow responding of older adults on a task requiring divided attention can be improved through procedures containing contingencies for rapid responding.

Contact: Alan Baron or Stephen Menich, Department of Psychology, University of Wisconsin-Milwaukee, Milwaukee, WI 53201

A CHOICE PROCEDURE TO ASSESS THE RELATIVE REINFORCING PROPERTIES OF METHADONE IN HUMANS

W. K. Bickel, S. T. Higgins,
M. L. Stitzer, G. E. Bigelow,
& I. A. Liebson

John Hopkins University School of
Medicine and Francis Scott Key
Medical Center

A choice procedure was used in an outpatient methadone maintenance clinic to examine the relative reinforcing properties of different double-blind methadone-dose increases (labeled with letter codes) in five male patients. In Experiment 1, the subjects chose between 50 mg vs 50 mg, 60 mg, 75 mg, and 100 mg of methadone. In the 50 mg vs 50 mg condition, the average percent selection (n=5) showed no preference, while the percent selection of the higher doses (60, 75, and 100 mg) increased in a dose-related fashion. If the behavior of individual subjects from the 50 mg vs 50 mg condition are examined, however, then the no preference finding is shown to have occurred as a result of averaging data across subjects; four subjects showed clear response bias (exclusive selection of one of the two equivalent alternatives). In Experiment 2, this bias was manipulated by paying subjects 0, 1, and 5 dollars to alternate their

selection between the two equivalent alternatives. The results showed that bias could be reduced via an additional contingency for alternation.

Contact: Warren K. Bickel, Division of Substance Abuse, Department of Psychiatry, Albert Einstein College of Medicine, Bronx Psychiatric Center, 1500 Waters Place, Bronx, NY 10461

INSTRUCTED AVOIDANCE OF A NONAVERSIVE AUDITORY STIMULUS IN HUMANS: A PRELIMINARY STUDY

D. T. Cerutti & P. N. Hineline
Temple University

Button pressing in college students was instructed to prevent a nonaversive tone. Students served in either a Sidman (1953) avoidance schedule (tone-tone = 15 s; response-tone = 30 s), a modification in which tones were preceded by a 5 s warning light, or a Sidman & Boren (1957) schedule (response-tone = 30 s and response-tone = 15 s). Students on the Sidman schedule responded either very rapidly or very slowly; all of those in the modified procedure responded after the warning; and those on the Sidman & Boren procedure did not produce any consistent pattern of avoidance. These preliminary data demonstrate the suitability of the procedure for the analysis of purely rule-governed avoidance.

Contact: Daniel T. Cerrutti, Department of Psychology, Temple University, Philadelphia, PA 19122

STIMULUS EQUIVALENCE AND THE ACQUISITION OF MEANING

S. C. Hayes, A. J. Brownstein,
J. M. Devany, B. Kohlenberg, & J. Shelby
University of North Carolina
at Greensboro

Three adult subjects were trained to match arbitrary stimuli (nonsense syllables) according to the following pattern: A to B, A to C, D to E, and D to F. After this training, two equivalence classes had been formed, as demonstrated by the fact that subjects

matched B to C and E to F without explicit training. One member of each class (B and E) were then each given a discriminative function over distinct behaviors (clapping and waving). When tested, other members of the same class (C and F) had also acquired the same function, without explicit training. This may be a model for control by verbal stimuli such as rules.

Contact: Steven C. Hayes, Department of Psychology, University of Maryland-Baltimore County, Catonsville, MD 21228

THE EFFECTS OF DIFFERENT KINDS OF FEEDBACK ON ORDERING PERFORMANCE

A. D. Lawrence, P. C. Quinn,
L. D. Frederick, L. Brasher, & S. Deitz
Georgia State University

Sixty-eight college undergraduates were presented 7 abstract stimuli in arbitrarily predetermined "correct" orders for four unique sets of problems. For each set, the 7 stimuli were presented horizontally on a TRS-80 Model III microcomputer in a different random order on each trial. Selections were made by touching a lightpen to the screen. Incorrect selections led to a loss of the display, followed by presentation in a new random order for the next trial. Correct selection resulted in the presentation of feedback on a row above the display row, with continuation of the trial. One of three types of feedback for correct responding was presented: No feedback (NF) resulted in no addition to the display. Selection feedback (SF) produced a "+" above the correctly selected symbol. Order feedback (OF) presented a copy of the symbol on a row above the display in the position corresponding to the order in which the symbol was selected--first, second, etc. Feedback for correct selections was shown to be necessary for acquisition, with order feedback resulting in more rapid acquisition and fewer errors than with selection feedback. Differences by type of feedback were seen in Phase 1 only, with subjects doing equally well on the remaining problems. The exception was among those receiving no feedback on

alternate problems: the failure to acquire the order without feedback for correct selections occurred even when subjects had received feedback on the previous problem and acquired that order.

Contact: Andrea D. Lawrence, 1194 Clearview Drive, Atlanta, GA 30319

OPERANT RELATIONS AFFECTING BLOOD PRESSURE OF TYPE A AND TYPE B INDIVIDUALS

Philip W. Hurst
Auburn University

Adult humans were studied under various conditions of lever-pressing in order to determine relations between response requirement and time to complete the response requirement and cardiovascular response in Type A and Type B individuals. To identify Type A and Type B individuals, subjects were given the student version of the Jenkins Activity Survey. The extent to which behavioral contingencies affect blood pressure of Type A and Type B individuals was then investigated under six conditions. The subject's task consisted of pressing a lever which incremented points on a counter under a FR 100 schedule of reinforcement. During Condition 1, baseline measures of blood pressure and response rate were obtained. Under Conditions 2-5, subjects were instructed to exceed a target score, i.e. a minimum number of points displayed before the subjects. During successive trials and sessions, the target score was increased, the maximum amount of time to earn the points was decreased, or both were manipulated. During Condition 6, the effects of competition between subjects were examined. Response rates of Type B subjects were higher than those of Type A subjects during the baseline condition. However, blood pressure of both groups of subjects remained the same as during the initial period of adaptation. During Conditions 2-6, response rates of both groups of subjects increased above baseline. When a subject's point score was substantially higher than the target score, there was no correlated effect on

blood pressure. When the target score was high and a lower number of points was accumulated, systolic blood pressure increased for both Type A and Type B individuals. Under Condition 6, systolic blood pressure for both personality types was affected by competition. Results indicated that differences occurred between Type A and Type B subjects as a consequence of manipulating contingencies.

Contact: Philip W. Hurst, Department of Psychology, Georgia Southern College, Landrum Box 8041, Statesboro, Georgia 30460

SENSITIVITY TO PROBLEM-SOLVING CONTINGENCIES AS A FUNCTION OF INSTRUCTED VERSUS SHAPED RULES

Carol Pilgrim
University of Florida

Instructed problem-solving rules were compared to rules shaped as verbal operants on a series of concurrently available pairs of problems (i.e., a marker had to transverse a grid in a specific pattern to earn points). Rules were instructed for one member of each pair, shaped for the other, and each individual problem served once as the instructed and once as the shaped member, in different pairs. When the two versions of the same problem were compared all three subjects earned a greater number of points on the problems with shaped rules. Choice performance revealed a preference for the shaped rule option in most instances.

Contact: Carol Pilgrim, Box 70, Psychology Department, University of Florida, Gainesville, FL 32611

REINFORCED PRACTICE OF ELEMENTS AND PERFORMANCE OF A THREE-ELEMENT SEQUENCE

K. D. Blakeslee, B. H. Barrett,
& G. Buchman
Northeastern University

A reversal design was used to investigate the effect of reinforced element practice on the performance rate and accuracy of a three-element sequence. Two male subjects with mental illness, retardation, and finger

dexterity handicaps participated. Each manipulated a three key-press sequence on a Commodore 64 microcomputer using designated fingers on his non-preferred hand. After obtaining stable sequence rates, subjects practiced a single key-press with Fixed Ratio or Conjugate reinforcement in addition to performing the sequence. Reversals consisted of removing and reintroducing reinforced practice of each element. Rate and accuracy of sequence performance with and without reinforced element practice were analyzed. Median correct element rates of one subject's sequence performance were higher during reinforced element practice than during corresponding baseline conditions. The second subject's sequence rates were variable across both conditions. Given the paucity of systematic literature in this area, further research is needed with more advanced, fully automated equipment.

Contact: Kim D. Blakeslee, Center for Mental Health and Retardation Services, 372 Main Street, Watertown, MA 02172

SCHEDULE PERFORMANCE AND VERBAL BEHAVIOR UNDER SOCIAL AND SOLITARY TRAINING CONDITIONS

R. Alan Williams
Wesleyan College

In each of three conditions, human subjects could press a lever producing points displayed on a console according to a DRL 5 s and an FR 38 reinforcement schedule. For half the subjects the DRL preceded the FR and for the other half the sequence was reversed. The 18 subjects in Condition 1 were tested alone. In Condition 2, 9 pairs of subjects were seated together in the same experimental cubicle. The members of each pair of 18 subjects in Condition 3 were seated individually in adjacent cubicles and were allowed to communicate verbally throughout the session. The subjects in Conditions 2 and 3 (social) were instructed to respond "as a team". By several measures, the subjects in social settings were more effective in completing and adjusting to change in the schedule tasks (FR to DRL or DRL to

FR) and were, generally, reinforced at higher rates. Changes in patterns of manipulative behavior and the relative degree of control over responding by the schedule contingencies were reflected in the types of verbal statements made by the subjects. Effective schedule performance was accompanied by accurate contingency descriptions, whereas infrequently reinforced responding was associated with inaccurate statements. Changes in response patterns were accompanied by shifts in the types of verbal statements made by the subjects. Contact: R. Alan Williams, John F. Kennedy Institute, Division of

Behavioral Psychology, 707 N. Broadway,
Baltimore, MD 21205

EAHB POSTER SESSION '86

The EAHB SIG will hold its third annual poster session at the 1986 ABA Convention in Milwaukee. If you would like to include a poster in this session, please send the title of the poster and the authors' names and affiliations to Dudley J. Terrell, Department of Psychology, Auburn University, Auburn, Alabama 36849. The late deadline for the receipt of this information is March 1, 1986.

WHY WRITE A COLUMN?

Alan Poling
Western Michigan University

EDITORS' NOTE: Dr. Poling will be a regular contributor to the Bulletin.

Stephen Jay Gould is the best known, and probably the best, living natural historian. Gould is a talented writer, thinker, and teacher, a scholar any academic could benefit from emulating. Unfortunately, my scholarly efforts to date have resembled his in one aspect only: We're both baseball fans. I learned of Gould's fondness for the sport through his column, "This View of Life," which appears monthly in Natural History. Gould, I'm sure, knows nothing of me. I doubt that this reflects the fact that I have never written a column, but it may, for indeed my writings have appeared in fits and starts, never with the confident regularity that a column demands. All that is now past and done for the honor of preparing a regular contribution to the EAHB Bulletin is now mine, thanks to Phil Chase and Mike Perone. An honor it is, and a pleasure as well. I enjoy writing and, the shame to tell, saying to myself "Both you and Stephen Jay Gould have columns...."

Actually, if truth be told, the column will rarely be written by me alone. Most of my best work has been done by students, and I am sure that they will play a role in much of what

appears here. But what is that to be? Polemics mostly, perhaps an occasional inflammatory remark, now and again a (hopefully) scholarly commentary. Two rules will guide preparation of the column. The first is that topics will relate, however obliquely, to the experimental analysis of human behavior. The second is that topics will invite reader response. I plead only that respondents avoid the argumentum ad hominem; I'll do the same.

The experimental analysis of human behavior is in its infancy, but some commendable work surely has appeared. Unfortunately, good summaries of that work are not available in a single source. I'm not sure, but it appears that an edited text dealing solely with the experimental analysis of human behavior might be valuable, and I've briefly discussed such a project with publishers. If any reader would be interested in contributing a chapter to such a book, please let me know (my address is: Department of Psychology, Western Michigan University, Kalamazoo, MI 49008). The project may not come to fruition, but it could be worth the price of a stamp.

So much for my first column. I wonder if Gould can throw a knuckleball....

RESEARCH PROFILE

Terje Sagvolden
University of Oslo, Norway

My training is both within neuroscience and psychology. My basic interest is to establish comparative research programs where model experiments are performed on animals and the results of these experiments are tested clinically.

When studying the behavior of persons with a specific brain damage or brain dysfunction, several problems emerge which may be reduced by using animal models: (1) it is difficult to find enough persons with closely similar and verified brain damage or brain dysfunction to get an experimental group of sufficient size for statistical analysis, (2) it is even harder to find proper control groups, (3) it is difficult to conduct the investigations ethically, e.g., when testing behavioral effects of various doses of a drug, and (4) the patients and their controls are usually available for a limited time. The usual problems of generalizing from animal behavior to human may be reduced by using methods from the experimental analysis of behavior.

At present, our most active research is related to effects of central stimulants on ADD(H), Attention Deficit Disorder with Hyperactivity. For these studies we cooperate with pediatricians and clinical neuropsychologists. In order to test our clients, we have designed video games that require minimal instructional control. In addition, the Spontaneously Hypertensive Rat is used as an animal model. This strain is both hyperactive and has attentional dysfunctions of various kinds. These animals are tested with schedules of reinforcement similar to the ones used by the video games with the ADD(H) and control children. In these studies we try to separate activity and attention processes by conducting parametric operant analyses.

Besides work with ADD(H), we are studying the behavioral effects of dysfunctions of the brain's limbic structures. Such dysfunctions may be more common in humans than previously

assumed since it is now realized that aneurisms in the anterior communicating artery interfere with the functioning of these structures. These aneurisms cause 25 percent of all intracranial cardiovascular accidents, "strokes". The effects of these "strokes" include various behavioral disorders and some learning disabilities.

Our institute is a fully equipped modern neuroscience facility. Experiments are run by microcomputer systems. Data is sent via inter-computer networks to mainframe computers (DEC-10/VAX) for statistical analysis and graphical representations. Other facilities include word processors, surgery, histology, mechanical, electronic, and photography shops.

We organize regular meetings in neurosciences, clinical and experimental neuropsychology, and the experimental analysis of behavior. The other groups at the Institute of Neurophysiology work on the neurophysiology of hippocampal slices, the neurophysiology of the visual system, reinnervation of skeletal muscles, and reinnervation following cutting sympathetic fibers. Visiting scientists from many parts of the world are working at our institute. At present there are visitors from Mainland China, Israel, and Canada.

For more information contact:
Dr. Terje Sagvolden, Institute of
Neurophysiology, Karl Johan gt. 47,
N-0162 Oslo 1, Norway

PHIL'S FUN FACT

What two behavior scientists had articles in both JEAB, 1, (1) and JABA, 1, (1)?

Fred Keller and Ogden Lindzey

GRADUATE PROGRAMS IN EAHB

Ball State University

Ball State University's Master's program in Behavior Analysis (GPBA) is a cooperative interdepartmental program that incorporates relevant coursework and internships from the Departments of Educational Psychology, Psychological Science and Special Education. A unique feature of the program is that Master's degrees are offered with a major in Behavior Analysis.

Degree requirements include an approved program of study consisting of a minimum of 45 graduate quarter hours. These hours include coursework, a thesis and a supervised behavior analysis practicum. Both Master of Arts (MA) and Master of Arts in Education (MAE) degrees are offered.

Curriculum requirements consist of courses from a core curriculum, a selected practicum course and content electives. The required core curriculum includes; The Experimental Analysis of Behavior (4 hours), Behavior Analysis in Education (4 hours), Applied Behavior Analysis With Exceptional Children (4 hours), Systems of Psychology (4 hours), Theories of Learning (4 hours) and the Thesis (8 hours). In addition, two of the following three courses must be taken; Programmed Instruction (4 hours), Psychological Basis of Behavior Modification (3 hours), and Behavior Consultation Techniques for Special Education Teachers (4 hours). The practicum course requirement is met by completion of one of the following courses; Practicum in Educational and Psychological Research (4 hours), Practicum in Applied Behavior Analysis (4 hours), or Practicum in Special Education (4 hours). The remaining courses to complete the degree are selected by the student with advice and approval of a three-member advisory committee comprised of one appointed member from each cooperating department.

Several competitive graduate assistantships are awarded to student scholars for the academic year.

Assistantship duties include participating in research activities and assisting with classroom instruction. Graduate assistants receive a stipend of \$2,000 to \$4,000 for the academic year. Recipients of graduate assistantships receive a partial fee remission and a waiver of out-of-state fees.

Faculty who participate in the Master's Program in Behavior Analysis include:

Carson M. Bennett, Ph.D. (University of Michigan, 1956), Professor of Educational Psychology.

Kevin P. Burns, Ph.D. (Auburn University, 1984), Assistant Professor of Psychology.

Gary F. Meunier, Ph.D. (Oklahoma State University, 1970), Professor of Psychology.

Michael S. Rosenberg, Ph.D. (The Pennsylvania State University, 1982), Assistant Professor of Special Education.

Frank J. Sparzo, Ph.D. (John Hopkins University, 1971), Professor of Educational Psychology.

Jerome D. Ulman, Ph.D. (Southern Illinois University, 1972), Professor of Special Education.

For additional information about the Master's Program in Behavior Analysis at Ball State University, please contact: Dr. Michael S. Rosenberg, Director-Graduate Program in Behavior Analysis, Department of Special Education, TC 722, Ball State University, Muncie, IN 47306 (317) 285-7641 or (317) 285-6771

State University of New York at Stony Brook

The Department of Psychology at the State University of New York at Stony Brook has embraced the behavioral approach to psychology since the founding of the department in 1966. The Department of Psychology is the largest

graduate department at Stony Brook, with approximately 40 full-time faculty and 150 full-time graduate students. Students are admitted to one of five educational programs: Biopsychology, Clinical Psychology, Developmental Psychology, Experimental Psychology, or Social Psychology. The precise requirements of each of these programs vary; however, each entails both courses within the program of admission and more general courses, as well as a strong emphasis on research. All full-time students in the Ph.D. program (including foreign students) receive a \$5600 academic-year stipend as well as a tuition waiver. Additional support is available.

Facilities for research are excellent. Many individual laboratories are equipped with micro- and/or minicomputers, in addition to solid-state and electromechanical programming equipment. There are also departmental microcomputers for general use, including word processing. Terminals throughout the department are connected to the central campus computer. Current animal colonies include pigeons, rats, tree shrews, and marmosets. There are also facilities for operant conditioning research with both adult humans and children.

The Psychological Center, which provides psychological services to members of the community on a sliding-scale fee basis, is available for research as part of service delivery. The Point of Woods Laboratory School is a research and teaching facility for second and third grade attention-deficit disorder/hyperactive children. The University Preschool is another teaching/research facility sponsored by the department. The Preschool enrolls children from approximately 18 months to 5 years of age. Research opportunities are also available at the University Marital Clinic and the Suffolk Child Development Center (a private, nonprofit school for autistic, retarded, aphasic, and developmentally delayed children). All of these centers are located on campus.

Some of the faculty with a strong interest in the experimental analysis of

behavior are listed below.

Edward G. Carr, Ph.D. (University of California, San Diego, 1973), Professor.
R. Lorraine Collins, Ph.D. (Rutgers University, 1980), Assistant Professor.
Marvin Goldfried, Ph.D. (State University of New York at Buffalo, 1961), Professor.
Leonard Krasner, Ph.D. (Columbia University, 1950), Professor.
Robert M. Liebert, Ph.D. (Stanford University, 1966), Professor.
Alexandra W. Logue, Ph.D. (Harvard University, 1978), Associate Professor.
Emil Menzel, Ph.D. (Vanderbilt University, 1958), Professor.
K. Daniel O'Leary, Ph.D. (University of Illinois, 1967), Professor.
Susan G. O'Leary, Ph.D. (SUNY at Stony Brook, 1972), Associate Professor.
David Pomeranz, Ph.D. (University of Rochester, 1963), Associate Professor and Director of the Psychological Center.
Howard Rachlin, Ph.D. (Harvard University, 1965), Professor.
Alan O. Ross, Ph.D. (Yale University, 1953), Professor.
Grover Whitehurst, Ph.D. (University of Illinois, 1970), Professor.
Everett Wyers, Ph.D. (University of California, Berkeley, 1955), Professor.

For additional information contact:
Dr. H. William Morrison, Director of
Graduate Studies, Department of
Psychology, State University of New York
at Stony Brook, Stony Brook, NY 11794
(516) 246-6180

West Virginia University Professional Masters in Clinical Psychology

The Professional Masters Program in Clinical Psychology was initiated at West Virginia University as a response to the need for mental health services in Appalachia. Because of the generally depressed salaries in the area, there has traditionally been a shortage of doctoral level practitioners in community and institutional settings. In addition, many of the types of

professional activities preferred by many Ph.D.'s, such as research and one-to-one psychotherapy, are not particularly appropriate in a rural region where the delivery of services is hindered by geographic isolation.

The PMA program is designed to train clinical psychologists in the delivery, evaluation, and administration of human services in community mental health centers, medical facilities, mental health and mental retardation institutions, and school systems. Special emphasis is placed on developing skills in designing intervention strategies for children, for the developmentally disabled, and for institutionalized populations. Applied behavior analysis provides the basis for the PMA program. While students may come into contact with alternative methodologies, it is expected that they will learn to conceptualize clinical problems and intervention strategies from the behavior analytic perspective. The development of research and teaching skills, an important component of the doctoral program in clinical psychology, is deemphasized. Two years of full-time study are required for the PMA degree. During the first year, the following courses are required:

Fall

Behavioral Assessment I (3 hours)
Behavior Analysis I (3 hours)
Introduction to Clinical Psychology (2 hours)
Child Behavior Modification (3 Hours)
Clinical Practicum (2 days per week)

Spring

Behavioral Assessment II (3 hours)
Adult Behavior Modification (3 hours)
Ethical and Legal Issues (2 hours)
Behavior Pathology (4 hours)
Clinical Practicum (2 days per week)

During the second year, students are on campus either fall or spring semester, during which time they are required to enroll in three content courses and a clinical practicum. The alternate semester is part of a full-time six-month clinical internship.

A thesis, providing up to 6 credit hours, is optional.

Practicum placements involve 2 days of work in an approved agency or institution. Community mental health centers, state mental hospitals, and the school system are available for student placements. The interests and backgrounds of each student are considered in making practicum assignments.

The internship is a critical component of our training program. Students have interned at the John F. Kennedy Institute for Handicapped Children in Baltimore, the Department of Behavioral Medicine and Psychiatry at WVU's Medical Center, and the May Institute for Autistic Children in Chatham, Mass. In addition, various state mental hospitals, residential treatment centers for retarded children, and community health centers are available for placement throughout the state.

For additional information contact: Bill Redmon, PMA Director, Department of Psychology, P.O. Box 6040, West Virginia University, Morgantown, WV 26506-6040

SURVEY RESULTS AVAILABLE

Fifty-six SIG members responded last winter to a survey on selecting human research subjects by Edward K. Morris, Lisa K. Johnson and James T. Todd (University of Kansas), and Stephen T. Higgins (John Hopkins School of Medicine). A report of the results was presented at ABA last May. A manuscript based on the presentation, entitled "Selecting Subject Characteristics (And Finding Subjects That Exhibit Them)," may be obtained from Edward K. Morris, Department of Human Development, University of Kansas, Lawrence, KS 66045.

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 correspondance 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

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