Experimental Analysis of Human Behavior Bulletin

Volume 1 **FALL 1983** **Number 2**

The Experimental Analysis of Human Behavior (EAHB) Special Interest Group is organized under the auspices of the Association for Behavior Analysis for the purpose of facilitating the growth of a multi-facited experimental literature that uses human subjects to analyze the relations between behavior and the variables that influence it. The EAHB Bulletin serves the special interests of this group by disseminating useful information that is customarily not published in the field's archival journals.

Contributors are encouraged to submit only those materials for consideration for publication which fall within the guidelines specified above. These materials may include but are not limited to annotated bibliographies, convention and conference notices, course syllabuses, specially prepared course materials, miscellaneous classified advertisements, research notes, i.e., information about specific procedures, anomalous and negative findings, etc. All submissions should be addressed to W. F. Buskist, Department of Psychology, Auburn University, Auburn, Alabama 36849.

Information about joining the EAHB SIG may be found inside the back cover.

Financial support from the Department of Psychology at Auburn University to EAHB SIG and the EAHB Bulletin is gratefully acknowledged.

On Investigating Human Operant Behavior

In the last three decades or so, there has been a remarkable increase in the volume and extent of research conducted into operant behavior. The increase has taken place on two fronts: (i) basic research, conducted almost entirely with animal subjects, and (ii) research into practical applications of the techniques of operant psychology. Between these, however, there remains an important area of investigation that has received less attention than it should have: the variables that affect human operant behavior have not been analyzed in any degree of detail comparable to the work conducted on animals. It is, of course, possible to hold the view, as many appear to do, that the basic behavior-environment relations observed with animals also occur, in the same way, in humans. The assertion is, however, an empirical one, dependent on empirical evidence; without such evidence it will remain at best an informed guess and at worst, mere dogma. When one turns to the existing human operant literature in search of empirical support for the assertion, one finds that the issue is substantially more complex than it may appear at first. The evidence may be summarized as follows.

When placed in an experimental situation involving simple responses and reinforcement, people produce more varied response patterns than do animals. On a given schedule of reinforcement different individuals may respond differently, and the same individual may respond differently from time to time. These variations are not, however, haphazard. They have two characteristics that are important to note. First, the variations observed on any one schedule fall into a few clearly identifiable classes. For example, on a fixed-interval (FI) schedule an individual may (a) respond at a steady rate throughout each interval, or (b) produce the pause-respond pattern characteristic of animal performance on this schedule, or (c) respond only once in each interval. Second, for a given schedule one of the several different types of response-patterns produced by people is similar to the pattern produced by animals on the same schedule.

This evidence would indicate that the variables affecting human operant behavior are orderly and amenable to experimental study; more so, perhaps, than operant researchers have previously thought. It would also suggest that in our research we should not seek similarities to animal response patterns but, rather, systematic consistencies within the particular behavioral phenomena that are being investigated.

It is vitally important to avoid, however, a fallacy that may arise at this point; namely, the false conclusion that because human and animal response patterns are different, the variables controlling them have nothing in common.

Statements of uncompromising dichotomy, i.e., saying, in the present context, either that human and animal behavior are fundamentally (sic) the same or that they are entirely different, almost always result in conceptual muddles and confusion of empirical data. I propose the following as a helpful working "hypothesis": **The variables controlling the response patterns of animals also operate on people, but the operant behavior of people is affected by other, additional variables.**

This statement has, I believe, two main implications. First, it encompasses the existing literature, both human and animal. Second, and perhaps especially important, it points to areas of investigation that can only be conducted with human subjects. Both of these assertions need to be supported by examining the existing literature and by pointing in detail to what may be the specifically human variables in question. This brief editorial is not, of course, the place to attempt all that. For the present I offer the above observations in order to emphasize that apparent differences between human and animal response patterns do not pose a critical problem for reinforcement theory, and to invite readers of this Newsletter to consider the possiblilities and intellectual promises of investigating those variables that may specifically relate to human behavior.

Peter Harzem
Auburn University

RESEARCH NOTE

An Observation on Enhancing the Effectiveness of "Token" Reinforcement in Experimental Settings

James T. Todd, Steven E. Larsen, and Edward K. Morris

University of Kansas

In the experimental analysis of nonhuman behavior, investigators typically use biologically relevant, consumable reinforcers such as food and

water. These reinforcers have several proven advantages: they are effective across many experimental sessions, and they can be delivered in controlled amounts.

In human operant research, however, investigators are rarely able to use biologically relevant, consumable reinforcers because of ethical and health-related considerations. Reinforcement in human operant research, then, consists of the presentation of "token" reinforcers—points, lights or marbles—that are delivered to subjects during the course of an experimental session and later exchanged for backup reinforcers such as small toys or money (cf. Bijou, 1958; Stella & Etzel, 1983). Although the effectiveness of token reinforcement in natural settings is well documented (see, e.g., the Journal of Applied Behavior Analysis, 1968-present), the robustness and consistency of the effects of tokens in basic research settings are often hard to demonstrate across time, subjects and settings. The reasons for this are presumably attributable to the complexities of human reinforcement histories, as well as the setting and manner in which tokens are established as conditioned reinforcers (Morris, 1980). In this light, the development of procedures that enhance the effectiveness of token reinforcement would be of benefit to investigators working with human subjects in laboratory settings. Recently, in our research on the development and extinction of complex sequential units of behavior (Larsen, Todd, & Morris, Note 1; Todd, Larsen, & Morris, Note 2), we have come upon such a possible procedure and would like to report them here for consideration of this Newsletter's readers.

Our studies have been closely modelled after those of Vogel and Annau (1973) and Schwartz (1980) with pigeons. Four normal preschool children served as subjects. Their task was to press two response keys at the base of a panel in order to move a light from the bottom right corner to the top left corner of a six-by-six matrix of lights. Presses on the right key moved the light up one space; presses on the left key moved the light left one space. When the light reached the top left corner, the children pressed a third key which delivered a marble and reset the apparatus for another trial; a sixth response on either key reset the apparatus without marble delivery. In short, a marble was delivered for five presses on each key in any order or pattern. Upon completion of each 10 min daily session, the marbles were exchanged for a small toy.

Over 15 to 20 sessions, identifiable and relatively stable response patterns were established for each child. Subjects 1, 2 and 3 responded one to two times per sec while Subject 3 responded at a slightly higher rate, about three responses per sec. Once subjects' response rates stablized, marble delivery was discontinued for three to four sessions, resulting in a considerable decrease in overall response rate and stability for Subjects 1, 2 and 4 but having little affect on Subject 3. The observation we made that is relevant to our discussion of enhancing token reinforcement occurred when we reintroduced the marbles. The overall response rate of Subjects 1, 2 and 4 increased 50-100% over levels observed in the initial token reinforcement phase. Moreover, variability decreased by about 50%. These subjects responded at approximately four responses per sec for three to four sessions afterwhich their rates and stability decreased to previous levels.

These result are, of course, a by-product of research addressing a different question. However, the quick and reliable increase in response rate and stability for the three subjects is an interesting and potentially useful observation. These increases may have occurred for at least two reasons. First, the initial phase of the experiment, in which marbles were delivered for correct responses, might have established a baseline rate of marble delivery against which a level of "marble deprivation" could be generated. The increase in response rate and stability after extinction might therefore have been the result of an enhanced reinforcing effect after several sessions of "deprivation." The subsequent return to pre-extinction responding might then be due to a type of satiation.

A second possible explanation is in terms of behavioral contrast (Reynolds, 1968a, b). Research in this area has typically found that a decrease in the rate of reinforcement in one component of a two-component multiple schedule is followed by an abrupt increase in response rate in the other, unaltered component (see Williams, 1983, for a review of this literature). The present research produced a decrease in response rates during extinction which was then followed by an increase in response rates above baseline levels when marbles were reintroduced—a possible contrast effect.

Whatever the reason for increased response rates, the effects we observed might be potentially useful in other experiments involving human subjects. If the availability of experimenter time and access to subjects permit the incorporation of

a number of sessions of token reinforcement, deprivation might enhance the effectiveness of token reinforcement. The effects we observed have not been studied in detail nor were the effects the focus of the research; obviously, more research is needed to clarify our results.

In this light, we would be interested in other researchers' observations on this finding as well as views on the problems associated with token reinforcement in general. Even if the effect we observed proves to be an artifact of our procedure, an exchange of views on the most common reinforcement procedure used in human operant research would be useful in itself.

(We would like to thank Lisa M. Johnson for her helpful comments on an earlier version of this paper).

Reference Notes

1. Larsen, S. E., Todd, J. T., & Morris, E. K. Effects of extinction on established units of behavior in preschool children. Poster presented at the meeting of the Association for Behavior Analysis, May, 1983, Milwaukee, WI.
2. Todd, J. T., Larsen, S. E., & Morris, E. K. Development of complex units of behavior by continuous reinforcement in preschool children. Poster presented at the meeting of the Association for Behavior Analysis, May, 1983, Milwaukee, WI.

References

Bijou, S. W. Operant extinction after fixed-interval schedules with young children. Journal of the Experimental Analysis of Behavior, 1958, 1, 25-29.

Morris, E. K. The differential effectiveness of social reinforcement with children in laboratory and natural settings: A conditioned reinforcement analysis. The Psychological Record, 1980, 30, 9-16.

Reynolds, G. S. Behavioral contrast. Journal of the Experimental Analysis of Behavior, 1961a, 4, 57-71.

Reynolds, G. S. Relativity of response rate and reinforcement frequency in a multiple schedule. Journal of the Experimental Analysis of Behavior, 1961b, 4, 179-181.

Schwartz, B. Development of complex, stereotyped behavior in pigeons. Journal of the Experimental Analysis of Behavior, 1980, 33, 153-166.

Stella, M. E., & Etzel, B. Effects of criterion-level probing on demonstrating newly acquired discriminative behavior. Journal of the Experimental Analysis of Behavior, 1983, 39, 479-498.

Vogel, R., & Annau, Z. An operant discrimination task allowing variability of reinforced response patterning. Journal of the Experimental Analysis of Behavior, 1973, 20, 1-6.

Williams, B. A. Another look at contrast in multiple schedules. Journal of the Experimental Analysis of Behavior, 1983, 39, 345-384.

RESEARCH PROFILES

The following descriptions are provided to inform our readers of the current research of group members. Future issues will describe other research.

DAN BERNSTEIN, University of Nebraska-Lincoln. I am observing human subjects who live in a laboratory apartment for periods of up to four weeks. One line of work is assessing the importance of patterns of behavior as a determinant of reinforcement value. Procedures force subjects to change the typical bout length or typical time of day for activities, and contingency procedures provide restoration of the original values upon completion of instrumental performance. As part of this procedure session length will be varied to find the most appropriate baseline period for a limited repertoire of activities. Subjects will have two sets of activities in the laboratory, and each set will be available for part of the day. The percentage of the day available for each set will vary to see the effect on the relative proportion of time devoted to the activities. A second line of work is looking at the effects of marijuana on human performance under schedules of reinforcement. This work is being done in collaboration with Magaret Nellis and Joe Brady. Human subjects live for three weeks in groups of three in a multi-room lab, engaging in hobbies and some work activities. During alternating periods of two days they smoke either active or placebo marijuana cigarettes, while their individual performance is regulated by contingencies arranged between pairs of activities. The patterns of performance for drug and placebo conditions are compared to check for evidence of the "amotivational syndrome" reported in the psychiatric literature. Group contingencies are also

run to check for changes in the effectivenss of social behavior as a reinforcer.

MICHAEL J. DOUGHER & JACK CROSSEN, University of New Mexico. Our current research is concerned with three major issues: (i) the identification of the factors involved in covert or imagery based conditioning and the optimal arrangement of these factors, (ii) the development of an adequate conceptual framework to account for covert conditioning, (iii) the effects of covert conditioning upon human operant behavior, especially paradigms involving preference and choice behaviors. Recently we completed a study using Cautela's operant account of covert conditioning and found it to be untenable. Currently our research is focused upon the development of a respondent conditioning account of covert conditioning wherein the conditioning procedures are seen to alter the reinforcing capacity of conditional stimuli. Specifically, we are determining the effects of covert aversive conditioning on the reinforcing properties of stimuli presented as consequences on concurrent FR schedules.

STEPHEN R. MENICH, University of Wisconsin-Milwaukee. My current research is concerned mainly with the well-known finding that speed of responding declines with advancing age. Although one hypothesis is that the deficit is due to changes in the central nervous system, the tack being taken in this work is that older adults do not contact contingencies that engender fast responding. The procedure, controlled by a TRS-80 microcomputer, involves matching and delayed matching to sample with visual stimuli presented on a video monitor. The subject's task is to release a telegraph key in response to the matching comparison stimulus for monetary reinforcement. In addition, time limits are placed on responding, and slow responding is not reinforced. Improvements in speeded performances of elderly subjects are substantial and suggest that with remedial procedures, performances may be as competent as those observed in younger adults. A new project entails adjusting the time limit contingency dependent upon a limited sample of behavior. Computer programs have been developed that allow rapid determination of response speeds, and adjustment of time limit contingencies, even on a trial-to-trial basis. These more complex schedules may bring elderly subjects into closer contact with environments in which emphasis is placed upon speeded responding.

HAROLD L. MILLER, Jr., Brigham Young University. In parallel with similar studies involving rat and pigeon subjects, a series of experiments uses human subjects to address the issue of whether choice in a concurrent operants procedure conforms to the matching principle or to a principle of maximization (optimization). Subjects have access to a keyboard and color terminal and are asked to play a "space wars" game in which they attempt to shoot enemy spaceships. Points are awarded for each "hit," and are subsequently exchanged for money. In actuality, the screen is divided into two sectors and the availability of enemy ships in the two sectors is determined by modified concurrent variable-interval (VI) schedules, with a changeover delay in effect as well.

The modification of the VI schedules lies in their interactive nature. Specifically, the reinforcement frequencies associated with the schedules are adjusted at regular intervals within the experimental session. The precise adjustment is a function of the subject's allocation of responses (or time spent responding) in the previous interval. Thus the schedule is in some sense "dynamic," i.e., present conditions of reinforcement are governed by past behavior.

The specific functions relating response (or time) allocation to reinforcement frequency are themselves varied to provide either sharp or shallow decreases in reinforcement as behavioral allocation varies from a preestablished value. In order to test the primacy of matching versus maximization, this value is set at the indifference point, i.e., at that value where the allocation is equivalent. It is at this point that the overall frequency of reinforcement is maximized.

The tendency of subjects to adhere to the matching principle can be assesseed by varying the relative rates of reinforcement associated with the two alternatives while maintaining the maximum overall rate of reinforcement at the indifference point. In these circumstances, deviations from indifference in the direction of relative reinforcement frequency will result in lower overall reinforcement frequency, i.e., there is a cost associated with matching.

In addition to variations in the shapes of the feedback function, the experiments also vary the duration of the interval within the session over which behavior is sampled prior to a new

adjustment of reinforcement frequencies. In this way, the properties of temporal discrimination which figure in behavioral allocation can also be assessed.

DAVID R. SCHMITT, University of Washington. Cooperative, competitive and individual contingencies are viable alternatives for motivating behavior in small groups when the task requires little or no collaboration among participants (i.e., low task means interdependence). Few studies have compared these contingencies under this very common condition, and none has addressed some major issues with which practitioners are often concerned. These are cost effectiveness, longitudinal effects, contingency combinations and group size. The research addresses the first three issues using a simple laboratory task for which motivation and performance appear to be positively related. Performance of pairs of subjects will be investigated under cooperative, competitive, individual and combined individual and competitive contingencies. Subjects will have a choice of tasks: one of the four contingencies and a lower paying alternative. Each of the contingencies will be favored over the alternative task by an identical amount of reward (money). The issue of cost effectivenss will be addressed by ascertaining how much behavior can be obtained from each contingency by this reward difference. The design will include both intra-subject and inter-group comparisons with an emphasis on both the transitional and steady-state effects of the contingencies. Various processes relating to characteristics of the participants, task and group predict that performances in these two states will often be very different.

MURIEL VOGEL-SPROTT, University of Waterloo. This research program investigates the development of behavioral tolerance to low doses of alcohol (.65 gm/Kg) in male social drinkers (19-63 years of age). The procedure entails a drug-free training period to establish a stable baseline level of performance on a psychomotor task, followed by repeated weekly drinking sessions where the same dose is administered and the task is performed. Drug effects are measured by the difference between the drug-free baseline and performance under the drug. The first dose of alcohol impairs task performance and the development of drug-compensatory behavior (i.e., tolerance) is measured by the reduction in impairment when the dose is repeatedly administered.

Several studies have examined tolerance development when the consequences of drug-compensatory task performance are manipulated. Evidence to date indicates that when groups have identical exposure and task practice under the drug, those reinforced (e.g., 25 cents) for displaying drug-compensatory behavior develop tolerance more swiftly than those without such reinforcement. The efficacy of this reinforcement also appears to depend upon the schedule employed, and tolerance developed via reinforced task practice appears to "extinguish" when reinforcement is subsequently withheld.

Reseach currently underway examines: (a) the development and transfer of tolerance as a function of other types of training procedures which are known to facilitate the acquisition of instrumental responses; (b) whether the tolerance-facilitating effect of reinforced task practice depends upon when it occurs during the drug dose; and (c) subject characteristics which may predict individual differences in the development of tolerance. These investigations are designed to explore basic research questions about the nature of the drug-compensatory response and the factors which influence it. However, since the experimental paradigm (spaced administration of low alcohol doses to humans) bears some analogy to the social use of alcohol, the findings may also shed some light on the natural development of alcohol tolerance in social drinkers.

BEHAVIOR ANALYSIS PROGRAMS

The following descriptions are provided to inform students and other interested persons of the specific emphases, outstanding features and research facilities of particular graduate programs associated with the experimental analysis of behavior.

Temple University

Our program in behavior analysis is not a separate administrative entity; indeed, it lies within a formal program that covers the traditional areas of experimental psychology, and is part of a large department that is unusual for its balanced diversity. The key features that make ours a viable program in behavior analysis are twofold. One is the lively community within and surrounding the

research lab. Individual research projects — listed for undergraduate honors credit, or for supervised graduate research credits — provide but sketchy formal evidence of the teaching, learning and researching that proceed on a virtually continual basis. There are typically one or two informal reading groups that meet weekly to discuss articles relating to particular themes. Technical skills — in relay, solid state, and in computer programming — are taught as much through peer interaction as through faculty effort. The second key feature relates to a constructive tension with colleagues of other viewpoints within the Department. By our view, training in behavior analysis must include the development of repertoires of constructive interaction with the unconvinced, to understand the nature of our disagreements with them, as well as to disabuse them of common misconceptions regarding the behavior-analytic approach. (Too often, behavior analysts tend to label others' positions as misguided or stupid, which is not the effective way to change their behavior). In our program, we have a tradition of fairly constructive interaction; in several cases, support for behavior-analytic views can be found within other programs within the Department; in other cases, there is an uninformed, generally respectful agreement to disagree.

Formally our program lies within the Division of Experimental Psychology. Departmental course requirements include four core courses — two inside and two outside one's Division — and two statistics courses. The balance of the requirements are the direct prerogative of the Experimental Division, and include topical seminars as well as research and readings courses. Our policy is to provide financial support to all Ph.D. students for at least four years, through research assistantships and a graduated set of teaching assistantships that progresses from assisting with a laboratory course to solo teaching at the undergraduate level.

For more detailed information, contact **Philip N. Hineline, Department of Psychology, Temple University, Philadelphia, PA. 19122.**

University of North Carolina-Greensboro

The Department of Psychology at the University of North Carolina at Greensboro offers graduate training leading to the degrees of Master of Arts and Doctor of Philosophy. The department emphasizes scholarship and research, but students are also supplied with sufficient practical, and/or clinical skills to function in a variety of academic, research and service settings.

The graduate program has an experimental orientation with six major areas of concentration: (i) Clinical includes training in clinical research and practice with a variety of populations and settings; (ii) Experimental analysis of behavior includes basic research in operant and respondent processes, the history of ideas within psychology and current behavior theory; (iii) Learning-memory and cognition includes basic research in human memory and cognition, and current cognitive theory; (iv) Developmental includes basic research in the cognitive and social development of infants, adolescents and adults; (v) Personality-social includes basic research in personality and social variables leading to consistencies and individual differences in behavior; and (vi) Physiological-sensory-perception-comparative includes basic research in physiological mechanisms, sensory and perceptual events and the behavior of other species including systematic research and theory on the ecology of learning processes. The EAB area will be elaborated below.

At the doctoral level, each area of concentration requires 24 semester hours of coursework within that area, 24 semester hours of coursework outside that area, 24 semester hours of research training and 9 semester hours of research "tool" courses (e.g., statistics) or passing a foreign language examination. Courses taken toward the Master's degree are included in these doctoral requirements. Clinical students are required to take 6 additional semester hours of practicum and 12 semester hours of internship training. A Master's thesis is required of all students. A preliminary examination (taken when coursework is nearing completion) and a Ph.D. dissertation and its oral defense is required of all students completing the Ph.D. program. Students should be able to complete the M.A. program in 2 1/2 years (if the student enters with a bachelor's degree in psychology) and the Ph.D. program in 5-6 years.

Full-time students who are interested in doctoral level training in psychology are encouraged to apply. Graduate training begins in the fall semester. To be considered for fall admission, completed application materials must be received by 1 February of the same calendar year. Students are accepted for graduate training in one of the six areas of concentration. Applications for admission, accompanied by academic transcripts, GRE scores, letters of recommendation, and statement of purpose, are filed by the applicant in

the office of the Graduate School. An Applicant Information Form is filed in the Department of Psychology. Application materials may be secured from and returned to: **Vice Chancellor of the Graduate School, 240 Mossman Building, University of North Carolina at Greensboro, Greensboro, NC 27412.**

The Psychology Department occupies a 58,000 square foot building, opened in the fall of 1977. Space is devoted to classrooms, research laboratories, the Psychology clinic, shops (electronic, photographic, wood), faculty, student, and secretarial offices, a computer room, a library and lounge. Active research laboratories in each speciality area contain a variety of specialized research equipment, for example, pigeon and rat test chambers with supporting controls as well as apparatus for research in operant behavior, videotape studies and polygraphs to assess psychophysiological responding. The services of the University Computer Center are available to faculty members and graduate students involved in research. The holdings of the University library include the major books and journals having relevance for graduate training in psychology.

Historically, all graduate students in the second through fifth years of training have received financial support through departmental resources, i.e., through teaching or research assistantships, fellowships, grant funds, or community internships. Stipends range from $2000 to $5000 annually.

Experimental Analysis of Behavior

At the core of this area is the philosophical position of Radical Behaviorism. Course work is designed to explore the general implications of this view and the manner in which it interfaces with other approaches to the study of psychology.

Theoretical and experimental interests are present in the basic mechanisms of operant and respondent conditioning and the involvement of these processes in more complex animal and human functioning. These interests are reflected in the following selected list of recent M.A. and Ph.D. work: "Deviations from optimal choice: Skilled performance, feedback and Bayesian decision making", "Choice between fixed-ratio schedules: Effects of absolute size", "Response strength in fixed and variable-interval schedules: An examination of resistance-to-change in multiple chains", and "Immediacy of reinforcement in autoshaping with pigeons".

Recent seminar topics have included "Cognitive and behavioral interpretations of animal learning", "Autoshaping and conditioning theory" and "Verbal behavior". Laboratory meetings and the monthly meeting of the "Beer and Behaviorism" group are additional occasions for lively and productive discussion.

Aaron Brownstein (learning theory and operant conditioning, concurrent and multiple schedules of reinforcement, Pavlovian factors in operant conditioning and human operant conditioning) and Richard Shull (learning theory and operant conditioning, choice, delay of reinforcement and conditioned reinforcement) are associated with the Experimental Analysis of Behavior area. In additon, students with an interest in human operant behavior often share common interests with Steve Hayes, a member of our clinical sub group. Among his interests in human operant behavior are the theoretical and empirical analysis of rule-governed behavior and its effect on direct contingency control. More specifically he has been interested in identifying functional units of rule-governed behavior, in the social basis of rules, and in the role of self-rules. Students working on these problems could include either basic operant students or clinical students and preparations range from traditional human operant tasks to clinical interventions.

Conclusion

While different aspects of psychology are emphasized by the different training areas within the Psychology Department, cross-fertilization across areas is possible and encouraged. For example, many students conduct significant research with faculty members outside their immediate concentration area. Thus, if a student is interested in EAB at the doctoral level, he or she is encouraged to apply to the Psychology Department of the University of North Carolina-Greensboro.

Utah State University

The Department of Psychology at Utah State University offers the Ph.D. degree in two graduate areas: An APA accredited Professional-Scientific program and, an Analysis of Behavior program. The AOB program at USU began in the late 1960's when John Mabry, Peter Wolf and Marvin Daley created the experimental analysis laboratory. Following their departure, four operant conditioners (Cheney,

Crossman, Osborne and Powers) who had trained at Arizona State University with Michael, Goldiamond, Verhave, Keller, Meyerson, Falk, Sherman, Staats, Pliskoff, Bachrach and others joined the staff. Several years later additional faculty with backgrounds in the experimental analysis of behavior came from North Carolina (Ascione, who had trained with Ferster and Birnbrauer) and Kansas (Striefel, who had trained with Baer, Risley and Wolfe).

The AOB philosophy has expanded across the USU campus and now involves other faculty and academic departments. At present the AOB staff and students enjoy close affiliations with individuals in Philosophy, Special Education, Family and Human Development, Sociology, the Exceptional Child Center, Biology, Wildlife Science, and Nutrition.

Research facilities for staff and students in AOB include a well-equipped animal laboratory, child and human laboratories, a special child population at the ECC, semi-field facilities and wild animals, a public school network, and psychological service centers.

Current faculty research interests include: educational variables and boomtown growth (Osborne), stimulus equivalence (Osborne), establishing stimuli (Osborne); foraging and choice (Cheney), time allocation (Cheney); conditioned reinforcement (Crossman), schedule control (Crossman); social simulation (Powers), programmmed instruction (Powers); biofeedback (Striefel), strategies for training disabled children (Striefel), generalization (Striefel); cooperation and sharing (Ascione), TV effects, and prosocial behavior (Ascione).

Degree requirements in the AOB program are formulated along coursework and apprenticeship-type research and scholarly writing experiences. Stipends and assistantships are available. Interested students should contact **Dr. Frank Ascione, Utah State University, Logan, UT, 84322.**

SPECIALIZED BIBLIOGRAPHIES

Free-Operant Avoidance and Escape Behavior

Stephen T. Higgins and Edward K. Morris

University of Kansas

Ader, R. & Seibetta, J. Temporal parameters in the acquisition of a free-operant avoidance response in human subjects. Psychonomic Science, 1964, 1, 385-386.

Badia, P., Culbertson, S. A., & Harsh, J. Relative aversiveness of signalled vs. unsignalled avoidable and escapable shock situations in humans. Journal of Comparative and Physiological Psychology, 1974, 87, 338-346.

Fischman, M. W., Smith, R. C., & Schuster, C. R. The effects of chlorpromazine on avoidance and escape responding in humans. Pharmacology, Biochemistry and Behavior, 1976, 4, 111-114.

Hefferline, R. F., Keenan, B., & Hartford, R. A. Escape and avoidance conditioning in human subjects without their observation of the response. Science, 1959, 130, 1338-1339.

Higgins, S. J. & Morris, E. K. A review of the generality of free-operant avoidance conditioning to human behavior. Psychological Bulletin, in press.

Kaufman, A., & Baron, A. Discrimination of periods of avoidance-extinction by human subjects. Psychonomic Monograph Supplements, 1969, 3, 53-60.

Baer, D. M. A technique for the study of social reinforcement in young children: Behavior avoiding reinforcement withdrawal. Child Development, 1962, 33, 847-858.

Cook, L. Effects of drugs on operant conditioning. In H. Steinberg, A. V. S. deReuck, and J. Knight (Eds.), Ciba foundation symposium. London: J. A. Churchill Ltd. 1964.

Davison, M. C., & Kirkwood, B. J. Response cost and the control of verbal behavior under free-operant avoidance schedules. Journal of the Experimental Analysis of Behavior, 1968, 11, 173-176.

Fischman, M. F., & Schuster, C. R. The effects of chlorpromazine and pentobarbital on behavior maintained by electric shock and point loss avoidance in humans. Psychopharmacology, 1979, 66, 3-11.

O'Leary, S. G. Children's avoidance responses to three probabilities of threatened consequences. Journal of Experimental Child Psychology, 1974, 17, 507-518.

Ruddle, H. V., Bradshaw, C. M. & Szabadi, E. Performance of humans in variable-interval avoidance schedules programmed singly, and concurrently with variable-interval schedules of positive reinforcement. Quarterly Journal of Experimental Psychology, 1981, 33, 213-226.

Ruddle, H. V., Bradshaw, C. M., Szabadi, E., & Foster, T. M. Performance of humans in concurrent avoidance/positive-reinforcement schedules. Journal of the Experimental Analysis of Behavior, 1982, 38, 51-61.

Stone, G. C. Nondiscriminated avoidance behavior in human subjects. Science, 1961, 133, 641-642.

(A complete listing of research dealing with escape and avoidance behavior with human subjects is found in Buskist & Miller, The Psychological Record, 1982, 32, 249-268).

Conditioned Reinforcement Research with Humans

Edward K. Morris, Stephen T. Higgins and Robert W. Sharkey

University of Kansas

The following reference list includes studies and commentaries specific to the topic, but not restricted to methodology, (i.e., single-subject or group designs) or interpretation (e.g., behavior analytic or cognitive). The experimental analyses that are most closely aligned with the scientific practices of behavior analysis are Birnbrauer (1971), Favell and Favell (1972), Lovaas, Freitag, Kinder, Rubenstein, Schaeffer, and Simmons (1965), Lovaas, Schaeffer, and Simmons (1965), Ribes-Inesta, Duran, Evans, Felix, Rivera, and Sanchez (1973), and Steinman (1968). A brief, critical review of conditioned reinforcement research with children has previously been presented by Higgins, Sharkey, and Morris (Note 1).

Reference Note

Higgins, S. T., Sharkey, R. W., & Morris, E. K. Conditioned reinforcement with children: A critical review. Poster presented at the Association for Behavior Analysis, Dearborn, MI, May, 1980.

Bibliography

Arenson, S. J. Vicarious conditioned reinforcement in children. Journal of Psychology, 1976, 94, 65-71.

Ayllon, T., & Azrin, N. H. Punishment as a discriminative and conditioned reinforcer with humans. Journal of the Experimental Analysis of Behavior, 1966, 9, 411-419.

Birnbrauer, J. S. Effects of pairing stimuli with reinforcement on multiple schedule performance with children. Journal of the Experimental Analysis of Behavior, 1971, 16, 355-365.

Caulfield, J. B., & Martin, R. B. Establishment of praise as a reinforcer in chronic schizophrenics. Journal of Consulting and Clinical Psychology, 1976, 44, 61-67.

Dorow, L. G. Conditioning music and approval as new reinforcers for imitative behavior with the severely retarded. Journal of Music Therapy, 1975, 12, 30-39.

Fantino, E., & Case, D. Human observing: Maintained by stimuli correlated with reinforcement but not extinction. Journal of the Experimental Analysis of Behavior, 1983, 40, 193-200.

Fantino, E., Case, D., & Altus, D. Observing reward-informative and -uninformative stimuli by normal children of different ages. Journal of Experimental Child Psychology, 1983, in press.

Favell, J. E., & Favell, J. E. Control of preference in children by conditioned positive reinforcement. Journal of the Experimental Analysis of Behavior, 1972, 18, 107-112.

Fort, J. G. Secondary reinforcement with preschool children. Child Development, 1961, 32, 755-764.

Fort, J. G. Discrimination based on secondary reinforcement. Child Development, 1965, 36, 481-490.

Girardeau, F. The effect of secondary reinforcement on the operant behavior of mental defectives. American Journal of Mental Deficiency, 1962, 67, 441-449.

Kass, N., Breadsall, A., & Wilson, H. The effects of schedules of training upon the development of conditioned reinforcers. Psychonomic Science, 1966, 66, 183-184.

Kass, N., & Wilson, H. Resistance to extinction as a function of percentage reinforcement, number of training trials, and conditioned reinforcement. Journal of Experimental Psychology, 1966, 71, 355-357.

Lauten, M. H., & Birnbrauer, J. S. The efficacy of "right" as a function of its relationship with reinforcement. Journal of Experimental Child Psychology, 1974, 18, 159-166.

Leiman, A. J. Myers, J. L., & Myers, N. A. Secondary reinforcement in a discrimination problem with children. Child Development, 1961, 32, 349-352.

Longstreth, L. E. Incentive stimuli as determinants of instrumental response strength in children.

Journal of Comparative and Physiological Psychology, 1962, 55, 398-401.

Longstreth, L. E. Frustration and secondary reinforcement concepts as applied to human conditioning and extinction. Psychological Monographs, 1966a, 80(619).

Longstreth, L. E. Frustration rather than reinforcement effects in children. Psychonomic Science, 1966b, 66, 425-426.

Longstreth, L. E. Motivation. In H. W. Reese & L. P. Lipsett (Eds.), Experimental child psychology. New York: Academic Press, 1970.

Longstreth, L. E. A cognitive interpretation of secondary reinforcement. In J. K. Cole (Ed.), Nebraska symposium on motivation. Lincoln: University of Nebraska Press, 1971.

Longstreth, L. E., & Bailey, D. A. Reasoning and secondary reinforcement in 6-7 year-olds and 9-10 year-olds. Developmental Psychology, 1977, 13, 401-407.

Lovaas, O. I., Freitag, G., Kinder, M. I., Rubinstein, B. D., Schaeffer, B., & Simmons, J. Q. Establishment of social reinforcement in two schizophrenic children on the basis of food. Journal of Experimental Child Psychology, 1966, 4, 109-125.

Lovaas, O. I., Schaeffer, B., & Simmons, J. Q. Building social behavior in young children by the use of electric shock. Journal of Experimental Research in Personality, 1965, 1, 99-109.

Lu, E. G. Early conditioning of perceptual performance. Child Development, 1967, 38, 415-423.

McGinley, H. The development of a conditioned reinforcer through direct and vicarious reinforcement. Journal of Experimental Social Psychology, 1970, 6, 364-377.

Miller, P. M., & Drennen, W. T. Establishment of social reinforcement as effective modifier of verbal behavior in chronic schizophrenics. Journal of Abnormal Psychology, 1970, 76, 392-395.

Mitrano, A. J. Principles of conditioning in human goal behavior. Psychological Monographs, 1939, 51, (Whole No. 230).

Myers, J. L., & Myers, N. A. Effects of schedules of primary and secondary reinforcement on extinction behavior. Child Development, 1963a, 34, 1057-1063.

Myers, J. L., & Myers, N. A. Secondary reinforcement in children as a function of conditionng associations, extinction percentages and stimulus types. Journal of Experimental Psychology, 1963b, 65, 455-459

Myers, J. L., & Myers, N. A. Secondary reinforcement in children as a function of conditioning associations and extinction percentages. Journal of Experimental Psychology, 1964, 68, 611-612.

Myers, N. A. Extinction following partial and continuous primary and secondary reinforcement. Journal of Experimental Psychology, 1960, 60, 172-179.

Myers, N. A., Craig, G.J., & Myers, J. L. Secondary reinforcement as a function of the number of reinforced trials. Child Development, 1961, 32, 765-772.

Myers, N. A., & Morningstar, M. The role of the approach response in secondary reinforcement. Psychonomic Science, 1968, 10, 77-78.

Myers, N. A., & Myers, J. L. Effects of secondary reinforcement schedules in extinction on children's responding. Journal of Experimental Psychology, 1962, 64, 586-588.

Myers, N. A., & Myers, J. L. A test of a discrimination hypothesis of secondary reinforcement. Journal of Experimental Psychology, 1965, 70, 98-101.

Myers, N. A., & Myers, J. L. Secondary reinforcement as a function of training and testing schedules. Child Development, 1966, 37, 645-652.

Ribes-Inesta, E., Duran, L., Evans, B., Felix, G., Rivera, G., & Sanchez-Sosa, J. An experimental evaluation of tokens as conditioned reinforcers in retarded children. Behavior Research and Therapy, 1973, 11, 125-128.

Sidowski, J. B., Kass, N., & Wilson, H. Cue and secondary reinforcement effects with children. Journal of Experimental Psychology, 1965, 69, 340-342.

Silverstein, A. Secondary reinforcement in infants. Journal of Experimental Child Psychology, 1972, 13, 138-144.

Silverstein, A., & Lipsitt, L. P. The role of instrumental responding and contiguity of stimuli in the development of infant secondary reinforcement. Journal of Experimental Child Psychology, 1974, 17, 322-331.

Smith, T. D. Development of tokens as secondary reinforcers. Journal of Experimental Child Psychology, 1972, 14, 133-138.

Staats, C. K., & Staats, A. K. Meaning established by classical conditioning. Journal of Experimental Psycholgy, 1957, 54, 74-80.

Stahl, J. R., Thompson, L. E., Leitenberg, H., & Hasazi, E. Establishment of praise as a conditioned reinforcer in socially unresponsive

psychiatric patients. Journal of Abnormal Psychology, 1974, 83, 488-496.

Steinman, W. M. The strengthening of verbal approval in retardates by discrimination training. Journal of Experimental Child Psychology, 1968, 6, 100-112.

Stimulus Overselectivity

Laura Schreibman

Claremont McKenna College

Dunlap, G., Koegel, R. L., & Burke, J. C. Educational implications of stimulus overselectivity in autistic children. Exceptional Education Quarterly, 1981, 2, 37-49.

Eimas, P. Multiple-cue discrimination learning in children. The Psychological Record, 1969, 19, 417-424.

Feeny, S. Breadth of cue utilization and ability to attend selectively in schizophrenics and normals. Doctoral dissertation, University of California, Los Angeles, 1971. Dissertations Abstracts International, 1972, 32, 4208B. (University Microfilms No. 72-2810)

Koegel, R. L. Selective attention to prompt stimuli by autistic and normal children. Ph.D. dissertation, University of California, Los Angeles, 1971.

Koegel, R. L., & Rincover, A. Some detrimental effects of using extra stimuli to guide responding in autistic and normal children. Journal of Abnormal Child Psychology, 1976, 4, 59-71.

Koegel, R. L., & Schreibman, L. Identification of consistent responding to auditory stimuli by a functionally "deaf" autistic child. Journal of Autism and Childhood Schizophrenia, 1976, 6, 147-156.

Koegel, R. L., & Schreibman, L. Teaching autistic children to respond to simultaneous multiple cues. Journal of Experimental Child Psychology, 1977, 24, 299-311.

Koegel, R. L., Schreibman, L., Britten, K., & Laitinen, R. Effects of reinforcement schedule on stimulus overselectivity in autistic children. Journal of Autism and Developmental Disorders, 1979, 9, 383-397.

Koegel, R. L., & Wilhelm, H. Selective responding to the components of multiple visual cues by autistic children. Journal of Experimental Child Psychology, 1973, 15, 442-453.

Lovaas, O. I., Koegel, R. L., & Schreibman, L. Stimulus overselectivity in autism: A review of research. Psychological Bulletin, 1979, 86, 1236-1254.

Lovaas, O. I., & Schreibman, L. Stimulus overselectivity of autistic children in a two stimulus situation. Behavior Research and Therapy, 1971, 9, 305-310.

Lovaas, O. I., Schreibman, L., Koegel, R. L., & Rehm, R. Selective responding by austistic children to multiple sensory input. Journal of Abnormal Psychology, 1971, 77, 211-222.

Reynolds, B. S., Newscom, C. D., & Lovaas, O. I. Auditory overselectivity in autistic children. Journal of Abnormal Child Psychology, 1974, 2, 253-263.

Rincover, A. Variables affecting stimulus fading and discriminative responding in psychotic children. Journal of Abnormal Psychology, 1978, 87, 541-553.

Rincover, A., & Koegel, R. L. Setting generality and stimulus control in autistic children. Journal of Applied Behavior Analysis, 1975, 8, 235-246.

Russo, D. C. Variables influencing transfer from prompt to training stimuli in autistic children: Difficulty of the discrimination. Unpublished manuscript, 1976. (Available from D. C. Russo, Department of Psychiatry, Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Massachusetts 02115).

Schover, L. R., & Newscom, C. D. Overselectivity, developmental level, and overtraining in autistic and normal children. Journal of Abnormal Child psycholgy, 1976, 4, 289-298.

Schreibman, L. Effects of within-stimulus and extra-stimulus prompting on discrimination learning in autistic children. Journal of Applied Behavior Analysis, 1975, 8, 91-112.

Schreibman, L., & Charlop, M. H. S+ versus S- fading prompting procedures with autistic children. Journal of Experimental Child Psychology, 1981, 31, 508-520.

Schreibman, L., Charlop, M. H., & Koegel, R. L. Teaching autistic children to use extra-stimulus prompts. Journal of Experimental Child Psychology, 1982, 33, 475-491.

Schreibman, L., Koegel, R. L., & Craig, M. S. Reducing stimulus overselectivity in autistic children. Journal of Abnormal Child Psychology, 1977, 5, 425-436.

Schreibman, L., & Lovaas, O. I. Overselective response to social stimuli by autistic children. Journal of Abnormal Child Psychology, 1973, 1, 152-168.

Siverstein, B. Overselectivity, mental age and behavioral development: A comparison of normal and autistic children. Doctoral dissertation, University of California, Los Angeles, 1976. Dissertation Abstracts International, 1976, 37, 2562B. (University Microfilm No. 76-242).

Varni, J. W., Lovaas, O. I., Koegel, R. L., & Everett, N. L. An analysis of observational learning in autistic and normal children. Journal of Abnormal Child Psychology, 1979, 7, 31-43.

Wilhem, H., & Lovaas, O. I. Stimulus overselectivity: A common feature in autism and mental retardation. American Journal of Mental Deficiency, 1976, 81, 227-241.

Human Operant Behavior Research Published in the Mexican Journal of Behavior Analysis

Emilio Ribes

National University of Mexico at Iztacala

The Mexican Journal of Behavior Analysis was founded in 1975 and it is the scientific publication of the Mexican Society for Behavior Analysis. The journal publishes articles in both English and Spanish covering a broad scope of areas and interests in the field: experimental studies on animal and human behavior, theoretical articles, applied studies, technical and clinical reports, as well as special panels or invited papers.

Since 1975 (Vol. 1) to 1982 (Vol. 8) the Mexican Journal of Behavior Analysis has published 44 papers dealing with human behavior. They have been classified according to six general categories. From the overall publication, 28 of the papers are concerned with concepts or data relevant to basic issues in behavior theory and 16 are related to empirical, theoretical or methodological problems of the application of behavior analysis. (All entries in the bibliography below are in chronological order).

Theoretical

(Conceptual Analysis)

Kantor, J. R. Psychological linguistics. 1975, 1, 249-268.

Julià, P. On the functional analysis of verbal behavior. 1975, 1, 269-284.

Kantor, J. R. Perceiving as science and as traditional dogma. 1980, 6, 3-16.

Hinojosa, G. Some theoretical considerations on concept formation. 1981, 7, 69-82.

Kantor, J. R. Reflections on speech and language. 1981, 7, 91-106.

Ribes, E. Reflections on the concept of intelligence and its development. 1981, 7, 107-116.

Kantor, J. R. Objectivity and subjectivity in science—psychology. 1982, 8, 3-10.

Ribes, E. Private Events: A problem for behavior Theory? 1982, 8, 11-30.

Alcaráz, V. M. Subjectivity as internal life and as physiological reaction. 1982, 8, 31-38.

Kantor, J. R. Reflections on the nature of human nature. 1982, 8, in press.

(Theoretical Proposals)

Bijou, S. W. Moral development in the preschool years: A functional analysis. 1975, 1, 11-30.

Segal, E. Where behavioral psychology and cognitive psychology meet. 1978, 4, 203-216.

Development and Acquistion

Garcia, V., Lugo, G., & Lovitt, T. C. Experimental analysis of response generalization on arithmetic problems. 1976, 2, 54-67.

Schoenfeld, W. N., & Sussman, D. M. Observations on early mathematical behavior among children: "Counting". 1976, 2, 176-189.

García, V., & Rayek, E. Experimental analysis of arithmetic behavior: Components of two response classes in addition problems. 1978, 4, 41-58.

Backhoff, E., Lovitt, T. C., Larrazolo, N., & Romano, H. Acquisition, generalization and maintenance of addition, subtraction and multiplication problems. 1980, 6, 39-58.

Díaz, D., & Garcia, V. Descriptive analysis of counting behavior in preschool children. 1980, 6, 59-72.

Language

Galván, E., Lopez, F., Ribes, E. Effects of the size of the verbal unit in the acquisition of reading behavior. 1975, 1, 285-297.

Ribes, E., Garcia, V., Botero, M., & Cantu, E. Generalization of reinforcement effects on the "syntactic" behavior of school children. 1977, 3, 169-180.

Ribes, E., & Cantu, E. Effects of reinforcing fragmentary responses on the "usage" of article's gender in preschoolers. 1978, 4, 29-40.

Ribes, E., & Cantu, E. Effects of prompting on the generative "usage" of grammatical particles: Acquisition or maintenance? 1978, 4, 59-66.

Ribes, E. The development of grammatical language in children: A Theoretical and experimental analysis. 1979, 5, 83-112.

Social Behavior

Redd, W. H. Effects and side-effects of adult reaction to children: An experimental analysis. 1976, 2, 33-41.

Lupercio, L., & Ribes, E. Comparative effects of extinction and timeout from reinforcement in generalized imitation. 1976, 2, 67-92.

Mithaug, D. E., & Wolfe, M. S. The development of peer influence effects in dyads. 1978, 4, 42-53.

Johnson, T. J., Goetz, E. M., Baer, D. M., & Green, D. R. The effects of an experimental game on the classroom cooperative play of a preschool isolate. 1981, 7, 37-48.

Reinforcement schedules

Gonzalez, M., & Ribes, E. The reversibility of the reinforcement-punishment function in children. 1975, 1, 55-68.

Santoyo, C., & Espinosa, M. C. Effects of multiple and concurrent FR-DRL schedules on children's performance. 1978, 4, 155-174.

Applications

(Empirical Reports)

Bornstein, P, H. Innovation in technique: A group-based induced anxiety. 1975, 1, 299-302.

Hermann, J., Semb, G., & Hopkins, B. L. Effects of formal "Grammar" and "Direct Method" training in the number of errors in compositions written by sixth graders. 1976, 2, 68-84.

Rosen, H. S. Promoting recreation skills in severely retarded children. 1976, 2, 85-89.

Parsons, J. A. Conditioning precurrent (problem-solving) behavior of children. 1976, 2, 190-206.

Reiber, J. L., Goetz, E. M., Baer, D. M., & Green, D. R. Increasing a Down's child attending behavior with attention from teachers and normal preschool children. 1977, 3, 75-86.

Sánchez-Sosa, J. J., Semb, G., & Spencer, R. Using study guides to promote generalization performance in university instruction. 1978, 4, 175-190.

Backhoff, E., & Lovitt, T. C. Behavioral treatment of the reversal of the letters b and d in learning disabled children. 1979, 5, 75-82.

Sánchez-Sosa, J. J. The effects of instructions and contingent points on the novelty of the test answers by college students. 1979, 5, 195-214.

Flores Alarcón, L. E. Infantile asthma as a psychosomatic disorder and its treatment by behavior therapy techniques. 1980, 6, 73-86.

(Reviews)

Hernández, L. A review of the literature on peer reinforcement. 1978, 4, 93-100.

Ehrlich, M. I. Parental involvement in education: A review and synthesis of the literature. 1981, 7, 49-68.

(Theoretical and methodological)

Sánchez-Sosa, J. J. Methodological evaluation of current research on complex academic responses in university instruction: Part one. 1976, 2, 207-219.

Sánchez-Sosa, J. J. Methodological evaluation of current research on complex academic responses on university instruction: Part two. 1977, 3, 87-101.

Ribes, E. Methodological and professional reflections on applied behavioral analysis. 1980, 6, 89-102.

Ribes, E. Reflections on a professional characterization of the clinical applications of behavior analysis. 1982, 8, in press.

Sánchez-Sosa, J. J. Behavior analysis in marriage counseling: A methodological review of the research literature. 1982, 8, in press.

ADDITIONAL ITEMS

Update on the Cambridge Center

In December of 1981 a group of individuals with a strong interest in behaviorism took steps to found a permanent center for behaviorism in all of its aspects. Since then 89 distinquished scholars, scientists, and businessmen and women in 13 countries have joined the boards, and about $70,000 in cash and goods have been raised for development. Board members include Nathan H. Azrin, Sidney W. Bijou, Fred S. Keller, Ogden R.

Lindsley, John A. Nevin. Murray Sidman, Ellen P. Reese, and many other analysts of behavior, as well as other distinguished individuals outside of this area: I. Bernard Cohen, Victor S. Thomas Professor of the History of Science at Harvard University; Donald O. Hebb of McGill University; Gardner Lindzey, Director of the Center for Advanced Study in the Behavioral Sciences; Jean Mayer, President of Tufts University; Neal E. Miller, of Rockefeller University; Janet T. Spence, President-Elect of the American Psychological Association; W. V. Quine, Edgar Pierce Professor of Philosophy Emeritus at Harvard University; Joseph Wolpe of Temple University; and so on.

The Center has been voted affiliate status by the board of the Massachusetts Psychological Association and has received other professional recognition. The core of the Center's collections is being assembled in large storage facilities provided by the Gerbrands Corporation—books and journals, teaching machines, an air crib, historically-significant laboratory equipment, etc. The Center's first newsletter will appear in December.

The Center will bring new facilities, new opportunities, and new sources of funds to the experimental analysis of behavior and related fields. Direct inquiries to **Robert Epstein, Cambridge Center for Behavioral Studies, 11 Ware Street, Cambridge, Massachusetts 02138.**

Human Operant Behavior Special Issue

This November The Psychological Record will publish a special issue devoted entirely to the experimental analysis of human behavior. The issue is edited by Bill Buskist and its contributors include Alan Baron, Mark Galizio, Peter Harzem, Jim Johnston, Hal Miller, Linda Parrott, Alan Poling and Hal Weiner. If you do not subscribe to the Record and would like to purchase a copy of this issue, send $8.50 to: **The Psychological Record, Kenyon College, Gambier, Ohio 43022.**

CAI Buffs—

I am a graduate student at Western Michigan University and would like to become involved with computer assisted instruction. If you are doing any work in this area, please contact me to let me know the kind of work you are involved with. **Susan Roy, 832 West Lovall Street, Kalamazoo, MI 49007, (616) 345-4268.**

RENEWAL NOTICE—

EAHB SIG membership dues for the 1984 calander year will be due in January, 1984. Please renew your membership by sending $5.00 to: **EAHB SIG, c/o Bill Buskist, Department of Psychology, Auburn University, Auburn, AL 36849.**

EAHB SIG Poster Session—

The EAHB SIG is currently organizing a group poster session for the 1984 ABA Convention. If you have a poster you would like to present at this group session, please send your name and poster title to: **Bill Buskist, Department of Psychology, Auburn University, Auburn, AL. 36849 by 1 March 1984.**

If you are not currently a member of EAHB SIG and would like to join, please complete the form below, cut it out, and enclose in an envelope with a check for $5.00 (made payable to EAHB SIG) and mail to W. F. Buskist, Department of Psychology, Auburn University, AL 36849. The $5.00 fee covers production costs of the EAHB Bulletin.

EAHB SIG MEMBERSHIP FORM

(Please print or type.)

Name: _____

Affiliation: _____

Affiliation Address: _____

_____

_____

Phone: ( )- _____

EAHB Interests: _____

_____

_____

Amount Enclosed: _____