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Experimental Analysis of Human Behavior Bulletin

Volume 3

Spring 1985

Number 1

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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-faceted 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.

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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, research notes, i.e., information about specific procedures, anomalous and negative findings, etc., annotated bibliographies, convention and conference notices, specially prepared course materials, and miscellaneous classified advertisements. 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.

SPECIAL ANNOUNCEMENTS

New EAHB BULLETIN Editors Selected

Drs. Philip Chase and Michael Perone (West Virginia University) have been selected as the new editors of the Experimental Analysis of Human Behavior Bulletin. Their editorship will begin with the Fall 1985 issue and continue through the Fall 1987 issue.

Mike obtained his B.S. in Psychology from the University of Maryland in 1975. He graduated from the University of Wisconsin-Milwaukee with his Ph.D. in 1981.

Phil graduated from the University of Massachusetts with a B.A. in Special Education in 1977. He obtained his Ph.D. from the same institution in 1982.

Communications regarding the newsletter, newsletter contributions, membership information, membership dues, etc., should be addressed to either Editor, Psychology Department, P.O. Box 6040, West Virginia University, Morgantown, WV, 26506-6040.

Results of EAHB SIG Graduate Student Review Paper Contest

Of the seven graduate students who submitted manuscripts for consideration in the first annual EAHB SIG graduate student review paper contest, two will receive a Certificate of Merit at the EAHB SIG meeting in Columbus during the 1985 ABA Convention. The names and affiliations of these two authors and paper titles are:

Irwin Rosenfarb (University of North Carolina-Greensboro). "B.F. Skinner's Radical Behavioral Epistemology and the Psychotherapy Process: A Theoretical Analysis." (Advisor: Steven C. Hayes).

Barbara Wanchisen (Temple University). "Increasing Our Awareness of Awareness." (Advisor: Philip N. Himeline).

Each manuscript underwent thorough review by at least two members of the seventeen person review panel. Members of the review panel included (in alphabetical order): Alan Baron, Dan Bernstein, Warren Bickel, Tom Brigham, Phil Chase, Sam Deitz, John Donahoe, Mark Galizio, Dave Gray, Nancy Hemmes, Jim Johnston, Ron Lazar,

Barry Lowenkron, Mike Perone, Laura Schreiberman, Eliot Shimoff and Alan Williams.

Irwin and Barbara have both been invited to present their papers in a special EAHB SIG graduate student paper session. See ABA program supplement for details.

1985 ABA CONVENTION NOTICES

A REMINDER....The EAHB SIG will hold its annual meeting **Saturday, 25 May, 1:00 to 1:50 p.m. in Delaware D.**

The Second Annual EAHB SIG Group Poster Session will be held on **Saturday, 25 May, 8:00 to 9:30 p.m. in the Regency Ballroom.**

The Verbal Behavior SIG will hold its annual meeting on **Sunday, 26 May, 1:00 to 1:50 p.m. in the Marion Room.**

RESEARCH NOTES

Research Methodology for Language Studies: A Kantorian Perspective

**Sidney W. Bijou, John Umbreit,
Patrick M. Ghezzi, and Chia-Chen Chao
University of Arizona**

(Preparation of this manuscript was supported in part by National Institutes of Health Grant BRSG S07 RR07002, and in part by U.S. Department of Education Grant G008300705. Requests for reprints may be addressed to the authors at the Department of Special Education, University of Arizona, Tucson, Arizona, 85721.)

During the past ten years, Kantor (1975, 1977, 1981) has described a natural science approach to the study of language behavior which he called psychological linguistics. Actually, his initial analysis of language behavior was presented in 1936, in a book entitled An Objective Psychology of Grammar. This publication gave rise to a series of studies on the postulates of the approach (Brions, 1937; Bucklew, 1943; Pronko, 1945; Ratner, Gawronski, & Rice, 1964; Wolf, 1958). However, these investigations did not yield a research methodology for the study of language

development or for the analysis of language as it occurs with a wide range of subjects in a variety of settings. During the past three years, we have been attempting to do just that. We shall present a brief overview of our work by describing (a) Kantor's conception of psychological linguistics, (b) our research methodology, and (c) some areas of application.

Psychological Linguistics

Psychological linguistics deals with actual language interactions which are specialized types of adjustments in that they are communicative, indicative, or symbolic. To paraphrase Kantor (1977), language interactions are the acts of persons as they adjust to people, objects, and events, either directly through verbalizations and/or gestures (referential interactions), or indirectly through symbolic interactions. Symbolic interactions here refer to the reactions of a person to a stimulus which has been made to substitute for something else, either by that person or by someone else. The reaction could be only an orientational reaction to a substitute stimulus or an orientational reaction followed by a reaction to the object or event symbolized. The other category of language interactions—referential—refers to a person reacting simultaneously to two discriminative stimuli, a listener and a referent, under a specific set of circumstances or settings conditions. Referential interactions may be either narrative, if language behavior results in a language response by a listener, or mediational, if language results in a listener's nonlanguage behavior. The listener may be a person, a surrogate person, or the speaker him or herself, as when a person is both the speaker and listener. A referent may be present or absent, concrete or abstract, existent or nonexistent. A setting condition, which may be social, physical, or organismic, affects the stimulus or response functions in an interaction, or the entire interaction. The language behavior component in a interaction varies in form or topography in accordance with cultural and subcultural style which includes grammatical structures. Our research is concerned only with referential interactions.

Method of Data Analysis

We study the language behavior of only one person (hereafter referred to a A) as he or she provides language discriminative stimuli to a person (hereafter referred to as B). We could analyze the reactions of B, but our research thus far has not focused on B's response to A's language behavior as discriminative stimuli. Conversations between A and B, usually 10 minutes in length, are videotaped. Data on interactions are derived from the videotapes by a trained rater.

A rater's task is accomplished in two phases: first, the language interactions are identified; second, some of the identified interactions are analyzed. Detailed criteria and examples presented in a Manual for Identifying and Analyzing Language Interactions guide this process.

Identification

In the first phase, a rater uses a data sheet that is arbitrarily divided into 10 segments, each representing successive one-minute time intervals, for a total rated session time of 10 minutes. Sessions can be shorter or longer and the intervals can be divided differently, depending upon the research. Frequently, a rater will need to listen several times to what precedes and/or follows a possible language interaction.

Four guidelines specify situations and responses that qualify as language interactions by A. In these situations, A takes the role of the speaker and initiates a referent that A and B discuss. The guidelines are:

1. A initiates an interaction by introducing a referent that occasions a response by B. A may initiate the interaction from a situation of silence or without a period of silence;

2. Immediately after responding to a referent that was introduced by B, A initiates a new interaction by introducing a different referent that occasions a response by B;

3. A makes additional remarks on the same referent that he or she has introduced. These additional remarks are related thematically with respect to A's referent, but represent new "angles" or "twists" on that referent;

4. If during the course of the

conversation A and B agree to adhere to the rules of a particular activity (e.g., playing a game, taking turns telling jokes, role playing, etc.), the interactions initiated by A within the agreed-upon format should be identified as in Guidelines #1, #2, #3.

Seven guidelines indicate the responses that do not qualify as language reactions initiated by A:

1. A makes a comment which is not followed by a language or nonlanguage response by B;

2. A responds to a referent introduced by B;

3. A responds to B's request for clarification and/or elaboration;

4. A clarifies what he or she is saying during the course of speaking, e.g., self-edits;

5. A asks B to clarify and/or elaborate;

6. During the course of an interaction initiated by A, B interjects a comment such as "Oh," "I see," or "Uh-hmm," and A acknowledges the comment but continues talking;

7. A makes non-communicative verbalizations that occasion similar responses from B.

Analysis

We analyze no more than ten interactions per session, which is an arbitrary practice on our part. If there are ten or fewer interactions, then the rater analyzes all of them; however, if there are more than ten interactions, then the rater randomly selects ten of the interactions for analysis. The interactions are analyzed with regard to four categories: (a) the speaker's (A's) behavior; (b) the listener's (B's) behavior; (c) the referent; and (d) secondary adjustments (language as a tool).

Speaker's (A's) behavior. First, the duration of each interaction is recorded to the nearest whole second. Then, A's behavior is classified as (a) entirely verbal, (b) entirely gestural, or (c) a combination of verbal and gestural.

Listener's (B's) behavior. The interaction is classified as narrative, mediative, or both narrative and mediative.

Referent. Many of the items included here are specific to our research; different research problems might suggest other items. For us, classifying the referent involves four

general dimensions: time frame, actuality, the particulars of what A says, and feeling reactions in what A says.

For each interaction, the rater indicates all categories that apply. First, the rater determines whether A clearly indicates a past, present, or future time frame, or does not clearly indicate any time frame at all.

Next, the rater determines whether the people, places, objects, activities, etc., that A talks about are authentic (real) or fictional (imaginary).

Then, the rater classifies the particulars of what A says by indicating whether A talks about: himself or herself, or his or her family, friends, or pets; the listener (B), or B's family, friends, or pets; other people (e.g., classmates); animals (e.g., snakes at the zoo); objects (inanimate things); entertainment (i.e., movies, music, show business personalities); sports/recreation (e.g., visits to the zoo, camping trips or family outings, etc., that are not school-related); academic activities (part of the instructional program, including PE, band, etc.); non-academic school-related activities (e.g., recess, lunch, clubs); or other (activities not included above).

Finally, the rater indicates whether A clearly expresses a liking, a disliking, or an anger or fear reaction about the referent.

Secondary adjustments. Secondary adjustments are identified when A's language behavior has an additional or secondary characteristic. Although different research problems might suggest different categories of secondary adjustments, we have included the following: amusement if A humors or amuses B; instruction if A clearly teaches or instructs B; persuasion if A clearly induces or persuades B to exchange goods or services, for example, or to accept some belief; support if A clearly compliments, flatters, or otherwise supports B; punishment if A clearly admonishes, ridicules, or otherwise punishes B; cooperation/sharing if A clearly induces B to share some item or to cooperate on some task such as a game or make-believe play; and esthetic appreciation if A communicates with colorful statements, poetic expressions, or literary quotations.

Reliability

Reliability is determined by point-by-point interscorer agreement between

two trained raters. Data from approximately 30% of the videotaped sessions are analyzed independently by both raters. The formula used is $\frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times 100$. Thus far, reliabilities have ranged from 81%-100%, with an average of 91% overall.

Current Research

We have been involved in research that focuses on the effect of the listener on the language behavior of normal 11-year-old children (four girls, one boy). Each subject interacted with same-sex listeners of different ages; a young adult (25-30 years old), an age peer, and a younger child (6 years old). Briefly, our method of analysis revealed that each subject spoke quite differently to other children (both peers and younger children) than to adults: interactions with adults were much less frequent but much longer in duration than they were with other children.

In progress is a study involving mildly handicapped elementary school age children. Our goal is to develop a teaching/training technique (i.e., intervention package) that can be used by school personnel to improve a handicapped child's sociolinguistic skills in relation to nonhandicapped peers. The ultimate goal is to enhance the mainstreaming process by enabling handicapped children to more fully participate in and enjoy social relationships with nonhandicapped and handicapped children and adults.

Areas of Application

Our experience and data thus far lead us to believe that our research methodology (a) has promise for studying a wide variety of language interactions, (b) is applicable to studies in natural, quasi-natural, and laboratory settings, and (c) will yield meaningful information about language interactions involving various speakers, listeners, referents, and setting conditions. Research using this method can take various forms and serve various purposes. For example, studies might focus on the language interactions between mothers and children, handicapped and nonhandicapped children, or

between therapists and patients, administrators and on-line workers, etc. Studies of the language behavior of babies and young normal children can focus on the nature of language development. Studies of retarded, autistic, and emotionally disturbed children can throw light on the conditions that produce deviate development in language. Studies can center on the functional relationships among the behavior of a speaker, the referent, the behavior of a listener, and setting conditions. Studies of training/treatment can investigate actual and contrived situations that stimulate and facilitate fluent colloquial speech.

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**Reporting Interobserver Agreement:
Another Difference in Applied and
Basic Behavioral Psychology**

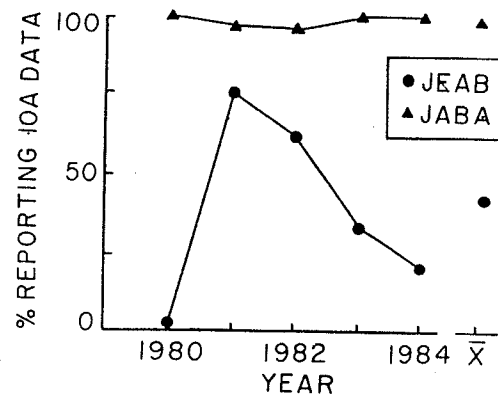
**Alan Poling
Western Michigan University**

Several authors have suggested that behavioral psychology is becoming divided into two specialty areas, the experimental analysis of behavior and applied behavior analysis, neither of which significantly influences the other. Poling et al., (1981) reported that JEAB articles, and other experimental sources, were referenced increasingly infrequently in JABA from 1968 to 1979. Moreover, few members of the 1980 editorial boards of JEAB and JABA regularly read both journals, published in both journals, or found both journals useful in their own research. That this was so is unsurprising, for the journals differ greatly in intent and content.

One noteworthy difference concerns the manner in which dependent variables are assessed. Articles published in JABA deal exclusively with troublesome human behaviors, which are typically quantified through the use of human observers. From 1980 through 1984, 88% of the research articles published in JABA reported data collected by human observers. Responses reported in JEAB articles usually are recorded mechanically; from 1980 through 1984, only 7% of the research articles published therein reported data collected by human observers.

As data recording devices, humans leave something to be desired, for their ratings can be affected by many factors. These include the observer's motivation and expectations, the specifics of the observational situation, and the characteristics of the behavior being recorded (see Kent & Foster, 1977). In view of these considerations, researchers in applied behavior analysis have gone to great lengths to ensure the believability of their observations. Beyond defining in detail the behavior of interest and carefully describing the observational procedures used, these investigators nearly always provide some measure of interobserver agreement, which specifies the degree of correspondence obtained between the data recorded by each

of two (or more) independent observers (Figure 1). In contrast, JEAB authors who employ human observers to collect data often fail to provide a measure of interobserver agreement (See Figure 1).



(Figure 1. Percentage of research articles employing human observers published in the JEAB and in the JABA in which a measure of interobserver agreement (IOA) was actually presented. If IOA was reportedly calculated, but not reported, the article was scored as not reporting IOA data.)

Although techniques for calculating interobserver agreement vary, each ultimately involves consensual validation. Consensual validation is well accepted in science (Kuhn, 1970): If two (or more) independent individuals can agree as to whether or not a phenomenon has occurred, that phenomenon is consensually validated, and others have reason to assume that the phenomenon is a real event, adequately defined and measured under conditions allowing for reasonable accurate assessment. For those who calculate measures of interobserver agreement, as the concomitance between the observations of two raters increases, faith in the data grows apace.

However, in many areas of science, measures of interobserver agreement are rarely if ever provided. Ethologists, for instance, almost never calculate interobserver agreement, even when complex

behaviors such as the "dances" of honeybees are quantified through direct observation. Psychopharmacologists conducting research with nonhumans also regularly quantify dependent variables through direct observation, but rarely report interobserver agreement (Poling et al., 1980). Despite this, both ethology and psychopharmacology are well established disciplines, with seemingly sound data bases.

How much calculation of interobserver agreement contributes to the internal validity of a study is moot. JABA authors and editors hold the practice as sacred; other scientists do not. Who's right? I side with the applied researchers. Though no methodological convention can ensure the quality of dependent measure, calculating interobserver agreement provides a shard of evidence, however small, that the behavior of concern is a real events, adequately defined and indexed. Given this, and the ease with which interobserver agreement can be calculated, it appears judicious to determine and report interobserver agreement data in any study in which human observers collect data. Does anyone agree?

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RESEARCH PROFILES

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

JAN LEFRANCOIS, West Virginia University. My background includes basic animal research as well as undergraduate teaching, therefore, I have become interested in basic research on instruction or rule-governed behavior. Working with Phil Chase, I discovered in the literature an assumption that rule-governed behavior is necessarily insensitive to uninstructed contingency change. On the other hand, the use of rules within as well as outside the laboratory is a common and efficient procedure to obtain behavior. Given these assumptions, my objective was to determine if under certain training conditions, rule-governed behavior could be sensitive to uninstructed contingency change. The typical procedure in studies on rule-governed behavior is that subjects are trained on a single instruction and reinforcement schedule, then an uninstructed change in the reinforcement schedule occurs. Usually, subjects continue to respond in accordance with the instruction rather than the new schedule. This procedure is similar to one used to study transfer of training, i.e., training on one task occurs and then performance on a different task is measured. In this literature, I found that training on a variety of tasks facilitated performance on a new task relative to training on a single task. I was interested in applying a variety of training procedures to rule-governed behavior.

In order to study this, first each subject was instructed that s/he could earn points exchangeable for money by pressing an "Earn" button which was connected to an Apple II Plus computer. In the Variety condition, each subject was instructed and allowed to respond on a different reinforcement schedule every four minutes for the 32 minute training period. The schedules used were: fixed-ratio 60, fixed-ratio 100, variable-interval 20 s, variable-interval 40 s, differential-reinforcement-of-low-rate 15 s,

differential-reinforcement-of-low-rate 45 s, fixed-time 15 s, fixed-time 45 s. When the final schedule ended, the subject was instructed to figure out the best way to earn points and s/he was exposed to a fixed-interval 30 s schedule for approximately 30 minutes. The fixed-interval performances of the Variety subjects were compared to those of subjects in two other conditions. One was a single instruction condition in which subjects were given a single instruction about responding on a reinforcement schedule. Then, they were exposed to that schedule for approximately 30 minutes before exposure to the fixed-interval schedule. The other condition was a contingency-shaped one. These subjects were provided with minimal instruction about responding on a reinforcement schedule, allowed to respond to the schedule for 30 minutes and then they were exposed to the fixed-interval schedule. Sensitivity to the fixed-interval schedule was defined as one response every 30 seconds. In general, those subjects trained on the Variety procedure responded more sensitively to the fixed-interval schedule than those trained by a single instruction or those who were contingency-shaped. Thus, I concluded that under certain conditions, rule-governed behavior can be sensitive to an uninstructed change in contingencies.

This study has prompted several new research questions. These include our current plans to investigate a general instruction about sensitive responding and its effects on response sensitivity to contingency change.

HOWARD GOLDSTEIN, Department of Communication, University of Pittsburgh. Studies with preschoolers are being conducted to identify communication skills that might enable severely behavior-disordered and autistic children to be mainstreamed in regular or less-restrictive classrooms. Intervention research has focused mainly on increasing the communicative interaction of severely handicapped preschoolers with normally developing children integrated in a model demonstration preschool. Recent studies have demonstrated the efficacy of teaching sociodramatic play scripts to promote interaction. In other studies, normally developing peers have been

taught to employ strategies (e.g., establishing eye contact, joint play initiations, responding, descriptive talking) to promote communicative interaction of handicapped children. This line of research has implications for capitalizing on peer-mediated intervention and for modifying the role of teachers in order to promote handicapped children's interaction with peers.

In a second series of studies, matrix-training procedures are being implemented to establish and expand the syntactic repertoires of language-handicapped preschoolers and mentally retarded children. Single-subject research designs are employed to identify how to structure instructional content in order to provide language exposure in ways that contribute to efficient and generalized learning. These studies have investigated: (1) how training efficiency can be enhanced by relating the selection of training items to the present linguistic repertoires of children, (2) how transfer between expressive and receptive language responses can be facilitated, and (3) how observational learning of receptive and expressive language responses can be promoted when initially absent. This research has implications for facilitating generative language development by programming generalization and thus circumventing the slow and lengthy process of training individual responses.

This research is supported by Contract No. 300-83-0368 (Early Childhood Research Institute) from the U.S. Department of Education and by Grant No. HD-17850 from the National Institutes of Child Health and Human Development. Doctoral assistantships are available presently.

SUSAN ROY, Western Michigan University. While in the EAB program at Western Michigan University, I became very interested in computer assisted instruction (CAI). I had the opportunity to learn about "good frames/bad frames" in CAI and the components of a well designed, and effective, CAI lesson. After completing my Master of Arts degree at WMU, I accepted a Training and Development Analyst position with the City of New York. The Financial Information Services Agency (FISA) consists

of over 380 data processing professionals that manage the worlds largest on-line public sector financial management system. FISA's training department provides its users, the 140 City agencies, with CAI and formal classroom sessions to familiarize them with this computer system. We also provide all internal training for FISA employees.

My role at FISA includes designing and programing CAI lessons to introduce new computer users to various software systems. The CAI lessons consist of text frames, graphics and videotape. The Apple computer, which is interfaced with a VCR, controls the lesson and has the capacity to monitor the learner's responses. Data are used to alter the learner's pathway through the lessons. The CAI lessons include feedback frames, prompts, and the change of stimulus from text to graphic or videotape as reinforcement. The goal of these lessons is to build competence and confidence. Our current research is focused on finding new, effective ways of presenting technical material to non-technical professionals.

WILLIAM F. VITULLI, University of South Alabama. I am currently engaged in following up 'leads' from the findings of several past research projects pertaining to the effects of contingent feedback on human efforts to detect 'targets' which are out of the line of sight of the participant. Traditionally, this area of investigation is referred to as "Experimental Parapsychology." My assumption is that if 'psi' functions in a manner similar to other human skills, then immediate feedback should constitute aspects of positive reinforcement when the subject is told that he/she is correct, or should constitute aspects of punishment or extinction when the subject is told that he/she is wrong or not told anything about their performance, respectively. I am making use of the televideo terminals (CRT) of our university's computer to randomly present targets, provide immediate feedback, store and analyze the data, etc. I am currently conducting a project which will scrutinize a number of demographic variables as well as attitudinal responses in relation to success at 'hitting' hidden targets.

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 human behavior.

Brigham Young University

Presently the graduate program in EAHB within the Department of Psychology at Brigham Young University allows a student to pursue both an M.S. degree and a Ph.D. A basic core of courses in experimental psychology is required, together with courses in a "tool" area and thesis/dissertation credit. The requirements for the M.S. degree can generally be met in a year's time; those for the Ph.D. would generally require a 3-4 year period for completion. Financial aid in the form of tuition waivers and teaching/research fellowships are available from the university.

The research facilities are located on the top floor of the Kimball Tower—a 12-story complex completed in 1980. There are three computer-based laboratories (featuring PDP8-e minicomputers equipped with the SUPERSKED system) and convenient access to a VAX system for larger applications. The research laboratories are equipped with a large stock of experimental devices for both human and animal research. Several Apple IIe microcomputers have been interfaced to the PDP8-e computers to permit experimental procedures that utilize the color graphic, audio, and joystick interaction capabilities of the Apple for human research, while session programming and data recording are performed by the PDP8-e. Colonies of pigeons, rats, and monkeys are maintained. The department employs a full-time animal caretaker and a full-time technician, who oversees a well-equipped shop and is also an expert in computer programming.

Two faculty members (in a 22-member department) have specialties in EAHB. Dr. Harold L. Miller, Jr. (Ph.D., Harvard University, 1975) maintains research in the areas of choice and decision-making (matching/maximization) with increasing

attention to microeconomic applications. Dr. Paul W. Robinson (Ph.D., Utah State University, 1973) has major interests in applied behavioral analysis, particularly as concerns parent-child interactions and delinquency.

Brigham Young University is located in Provo, Utah, approximately 45 miles south of Salt Lake City. Its proximity to the Wasatch mountain range affords spectacular scenery and a variety of seasonal recreations. The campus is modern and centralized and supports a student population of 27,000. Those admitted to the university are expected to abide by a code of conduct prescribed its sponsor — The Church of Jesus Christ of Latter-day Saints ("Mormon").

Requests for further information should be directed to either Dr. Miller or Dr. Robinson, Department of Psychology, Brigham Young University, Provo, UT 84602 (801-378-4287).

Queens College of the City University of New York

Queens College of the City University of New York offers two programs of graduate training which focus on the experimental analysis of behavior. The M.A. program in psychology offers an area of concentration in Clinical Behavioral in Mental Health Settings*, and the Ph.D. program in psychology offers a subprogram in Learning Processes. Both degree programs provide comprehensive training in behavioral assessment and behavior modification. The doctoral program offers research opportunities in basic and applied experimental analysis of human behavior.

The Ph.D. program in Learning Processes, one of ten subspecialties of the doctoral program in psychology at the Graduate School of the City University of New York (CUNY), is located on the Queens College campus.

The Learning Processes program offers training in both basic research in animal and human behavior, and in applied human behavior analysis. An integrated approach to both domains begins with a focus on basic methodology, research, and theory in behavior analysis. Through lecture and

experimental laboratory coursework, students are provided with intense investigation of a wide spectrum of behavior processes. Advanced seminars, informal student-faculty discussions, and individual research projects provide further training in behavior analysis and theory. Applications of behavior principles to human behavior is addressed explicitly in specialized courses, applied research projects, and field placements.

Students are regarded as integral members of the program's community whose current research interests include such topics as self control, operant approaches to psychophysical phenomena, behavioral analysis of language and language development, and temporal control of behavior.

Requirements for the Ph.D. include a minimum of 60 credits in psychology and related fields, the passing of a first doctoral examination, usually taken during the second year of study, and a second examination usually taken during the third year. The first examination assesses the student's knowledge of various areas of psychology, while the second exam is limited to the student's general field of specialization. Requirements also include courses in statistics and experimental methodology, demonstrated competence in a foreign language or other research tool, and the completion of a dissertation under the guidance of a member of the doctoral faculty and a dissertation advisory committee.

Departmental laboratories contain modern research equipment including microcomputer systems, as well as solid state and electromechanical programming equipment. Students have access to the campus VAX computer for data analysis and word processing, and to the facilities of the CUNY Computer Center. Research facilities are provided for the study of rodents, pigeons, and monkeys, as well as for human research. Ancillary facilities include an operating room, histology laboratory, mechanical, electronic, and photography shops. For students who pursue applied interests, the program arranges field placements in settings appropriate to their professional goals.

The program of study is designed to be completed within four to five years. A

favorable faculty/student ratio permits a high degree of contact with the faculty, and enables the program to tailor the student's progress through the program on an individual, flexible basis. A wide range of course work is available to the student. Courses may be selected from those offered by the Learning Processes program, and by other graduate programs in the psychology department focusing on clinical behavioral applications and neuropsychology (basic and applied). In addition, courses may be selected from those offered by graduate programs at other campuses of the City University of New York. Breadth of training is encouraged—in addition to research and practicum experience, students are usually given teaching responsibilities for which compensation is provided. Recent graduates are now holding a variety of positions in academic and applied settings. Examples include university faculty, directors of research and training in mental health and mental retardation facilities, school psychologist, and designer of training programs in business.

A number of Queens College and CUNY Graduate School awards are made including adjunct lectureships (stipend \$983 to \$2,949 per semester) and graduate assistantships (\$5,000 to \$10,000 per year).

Inquiries for registration in Fall, 1985 should be directed to **Prof. Bruce L. Brown** in the doctoral program, or **Prof. A. Harvey Baker** in the masters program, **Department of Psychology, Queens College, Flushing, New York**. The graduate secretary, **Ms. Eichler**, will be glad to assist at (718) 520-7284.

*Pending approval by the Board of Trustees of CUNY.

University of Massachusetts

Behavior analysis is integrated within several areas and divisions of the Psychology Department at the University of Massachusetts, although it does not constitute a unified program. For example, several faculty who are behaviorally inclined—**Patricia Wisocki, Marian MacDonald, Mort Harmatz**—teach in the clinical division. **John Donahoe**, who is affiliated with the division on

neurosciences and behavior, teaches basic experimental analysis of behavior and **Beth Sulzer-Azaroff**, affiliated with educational psychology, teaches a sequence of courses in research and practice in applied behavior analysis. A number of adjunct faculty provide specialty courses and/or field supervision: **Walter P. Christian, Robert Epstein, John Scibak**. Illustrative courses regularly offered in the area include behavior therapy, applied behavior analysis, learning and thinking, within subject research methods, and various specialty seminars.

The University of Massachusetts' doctoral program heavily emphasizes research. Much of this is conducted in field settings, such as programs for the handicapped, mentally disabled, elderly, and also public schools and others. The Psychology Department of 55 faculty and several hundred graduate students resides in its own building, as well as in a number of other locations on campus. Considerable well-equipped space is devoted to laboratory research.

One program, the **Developmental Disabilities Training Program**, has attracted quite a few students who appreciate a behavioral perspective. This doctoral program, designed to prepare psychologists for leadership in the delivery of psychological services to the developmentally disabled, is based on a set of 17 competency areas. Student progress through the sequence of activities that include departmental and area requirements as well as the specific competencies in approximately four years, during which time they receive support funded via a federal grant. For pre- and post-doctoral trainees who wish a less intensive familiarity with services to the developmentally disabled, a one-year specialty program is also available. These trainees acquire knowledge and skills in the areas of service to the developmentally disabled, applied behavior analysis, research and others.

ANNOUNCEMENT

The Southeastern Association for Behavior Analysis (SEABA... most people pronounce it "say ABA"), is a regional affiliate of ABA. Started last spring, SEABA has now scheduled its second annual meeting,

to be held at the Francis Marion Hotel in Charleston, S.C., October 31 - November 2, 1985. The program is "one track" (all sessions in one room) and integrates applied and basic, human and animal research. The Program Chairs for the upcoming meeting are James Johnston (University of Florida) and Rick Shull (UNC-Greensboro). A call for poster session submissions will go out later this spring. EAHB research is very welcome. All other sessions are invited. Suggestions for session topics, speakers, and the like should be sent to the program Chairs at the Association address given below.

SEABA membership is open to all behavior analysts and their students (ABA members are automatically considered qualified for membership). Dues are \$5 (\$2 for students). Requests for membership materials should be sent to **Steve Hayes, SEABA Secretary**. The Association address is **SEABA, Department of Psychology, University of North Carolina at Greensboro, Greensboro, NC, 27412-5001.**



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 Mike Perone and Phil Chase, Department of Psychology, West Virginia University, Morgantown, West Virginia, 26506. The \$5.00 fee covers production costs of the EAHB Bulletin.

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