#418 B. F. Skinner Lecture Series

5/25/2009
1:30 p.m. – 2:20 p.m.
West 301 AB
EAB

The Evolutionary Economics of Information Use: From Simple Signals to Learning
Chair: James S. MacDonall (Fordham University)

Dr. Davied Stephens (University of Minnesota)

Dr. David W. Stephens received a bachelor's degree in biology and mathematics from the University of Utah in 1978. He received a doctoral degree (D.Phil.) from Oxford University in 1982. From 1982 until 1989, he held postdoctoral fellowships at the Smithsonian Institution, the University of British Columbia, the University of Utah, and the University of Massachusetts at Amherst. In 1989, he joined the biology faculty at the University of Nebraska, Lincoln. In 1997, he took up his present position at the Twin Cities Campus of the University of Minnesota, where he serves as a Professor of Ecology, Evolution and Behavior. In 1990 he received a Presidential Young Investigator Award from the National Science Foundation. His is the author (with J. R. Krebs) of Foraging Theory, and editor (with J. S. Brown & R. C. Ydenberg) of the recently published Foraging: behavior and ecology. His work on animal foraging and decision-making has influenced many disciplines and it is widely cited in biology, economics, computer science, neuroscience, psychology, robotics and anthropology.

Abstract: Animals use signals in many situations: to attract mates, to avoid noxious food items, to defend resources. The value of signals depends, obviously enough, on how potential receivers respond. This presentation develops simple ideas about when receivers should value signals, and argues that these simple principles apply quite generally to situations in which animals use experience to modify their behavior. Part 1 will introduce the basic approach of behavioral ecology and explain how this has been applied to signaling. Following this tradition, I will develop a simple model of 'receiver economics' that emphasizes the interaction between signal reliability and environmental uncertainty. I will discuss experimental tests of this model from my laboratory. In part 2, I will review long-standing ideas about the evolution of learning. These ideas emphasize the statistical properties of the environment (e.g. change and predictability), but they have proved very difficult to study. My laboratory has tested these ideas by controlling patterns of change and predictability for Drosophila over many generations. These studies confirm many of our basic claims. Importantly, the principles involved here closely parallel our studies of animal signal use, and this suggests that same basic economic principle may guide information-use in many situations.

#419 Paper Session

5/25/2009
1:30 p.m. - 2:20 p.m.
North 122 A
EDC

Learning and Generalization
Chair: Matthew Burns (University of Minnesota)

Determining Academic Intervention Efficiency with Maintenance or Generalization Data Rather than Acquisition. (Experimental Analysis) MATTHEW BURNS (University of Minnesota)

Abstract: The instructional efficiency of academic interventions is an important construct when selecting an appropriate intervention. Analysts and interventionists have defined efficiency as time needed to reach mastery. However, maintenance and generalization of the skill are at least as important as acquisition of the skill. Thus, the presentation will provide data that compare efficiency metrics using initial learning and maintenance with 25 fourth-grade students. Each student was taught the pronunciation and English translation for 12 words from the Esperanto international language with two instructional conditions. The first condition was traditional drill (TD) rehearsal with all unknown words, and the second was

incremental rehearsal (IR) with one unknown and eight known words. Results indicated that although the IR condition led to significantly more words being retained, TD was significantly more efficient using initial learning. However, the two conditions were equally efficient when maintenance data were used. Implications for tiered intervention systems will be discussed.

Skill Development Articles Addressing Generalization: A Continuation of a Component Analysis.
(Applied Behavior Analysis) KIMBERLY P. WEBER (Gonzaga University), Kim Killu (University of Michigan - Dearborn), Shannon Hayter (Gonzaga University), Nicole H Lustig (Gonzaga University)

Abstract: The field of behavior analysis has long had the technology and resources to promote the generalization and maintenance of behavior change. Thus, it seems imperative that behavior analysts utilize the available resources to preserve the very skills that they strive to teach and train. A previous investigation (Killu & Weber, 2008) indicated that there is relatively little research representing a comprehensive approach to training for generalized outcomes. This investigation extended the component analysis in addressing the status of generalization and maintenance within instructional programming for individuals with disabilities to specify the types of generalization used to train and measure the acquisition of functional skills. Results are discussed along with implications for the effectiveness of intervention and the viability of applied behavior analysis.

#420 Tutorial

5/25/2009
1:30 p.m. - 2:20 p.m.
West 301 CD
OBM; Service Delivery
BACB CE Offered. CE Instructor: Karolyn A. Smalley, M.A.

A Systemic Change in a Health Care Organization
Chair: Heather M. McGee (Western Michigan University)

KAROLYN A. SMALLEY (The Performance Puzzle)

Dr. Karolyn A. Smalley, a Performance and Instructional Systems Consultant, is a graduate of Michigan State University, the programmed-learning workshop of the University of Michigan, and the MA program in Industrial / Organizational Psychology at Western Michigan University. She helps improve performance at the organization, process and the job level for large, medium and small business organizations. She specializes in process improvement projects, performance management systems, and instructional systems. Karolyn combines her understanding of performance systems and instruction to define organizational change strategies and tactics that provide sustainable results to the organization. In addition, she has successfully, developed, mentored and coached individuals at all levels of the organization.

Abstract: Today's health care environment is tumultuous, uncertain and costly. Governmental regulations and fee structures change frequently. Pharmaceutical and device companies create new products and technologies. Professional medical associations develop new guidelines and protocols to meet these changes. How does a medical practice improve or maintain profitability in the face of these changes? Practice leadership knows the practice must become more efficient. Usually there is no lack of ideas or solutions on how to do this. However, what is less well known are which variables to select and monitor in order to determine success. This presentation is about one practice that had seen a steady increase in overhead and a 3-year trend of reduced net income for physicians. A reasonable solution had been identified. However, the practice had a history of poorly implementing solutions. Consultants were hired to help determine if the practice had identified the correct solution and to recommend implementation strategies and tactics that would enable the practice to succeed. One and a half years after the consultants made their recommendations, the practice saw a 299% increase in profitability. In addition, the administrator could supply anecdotal information that demonstrated the practice had learned to identify the correct variables, collect data and implement an appropriate solution.

#421 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 124 B
AUT/OTH; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Shawn E Kenyon, M.S., BCBA

The Effects of Procedural Integrity on Skill Acquisition and Implementation of Behavior Intervention Plans
Chair: Shawn E. Kenyon (New England Center for Children)
Discussant: Ronnie Detrich (Wing Institute)

Abstract: The term procedural integrity refers to the implementation of an intervention as intended (Codding, Feinberg, Dunn, & Pace, 2005) or as the inter-observer agreement measures on the occurrence or non-occurrence of the independent variables (Billingsley, White, & Munson, 1980). High procedural integrity involves an experimenter measuring what they intended to measure, or implementing a treatment plan exactly as it was intended. The current symposium addresses the issue of procedural integrity with respect to skill acquisition and behavior plan implementation. The first study examines varying levels of procedural integrity with respect to prompt delays and the observed effect on the acquisition of visual-visual match to sample tasks. Results from this study suggest a correlation between low integrity levels and the number of errors committed. The two other studies examine systems for improving procedural integrity regarding behavior plan implementation. A system of monitoring staff performance was developed and performance feedback based on the integrity with which behavior plans were implemented was chosen as an intervention. Results from both studies further confirm that performance feedback is an effective intervention for improving procedural integrity.

Varying Procedural Integrity Using Progressive Prompt Delay to Teach Visual-Visual Stimulus Relations. PAULA RIBEIRO BRAGA-KENYON and Katherine Helen Yates (New England Center for Children)

Abstract: Procedural integrity is a measure of how the independent variables are implemented and is an important component of behavior analytic application and research. This study examined the effects of varying levels of procedural integrity (i.e., 100%, 45%, and 0%) on discrimination training using a progressive prompt delay procedure (i.e., 0 seconds, 3 seconds, and 5 seconds) to teach visual-visual stimulus relations. Three typical adults, who had received previous training on implementing match-to-sample discrete trial procedures, took part in the study. An alternating treatments design was used to counterbalance conditions across the three participants. Inter-observer agreement (IOA) was collected for 100% of the sessions and agreement was 100%. Results showed that: 1) the frequency of errors emitted was higher when integrity was reduced to levels below 100%; 2) discriminations were acquired slower when integrity levels were lower; and 3) one of the participants did not reach the mastery criterion during the 0% integrity condition.

The Effect of Performance Feedback on the Program-Wide Integrity of Plan Implementation. FRANCES A. PERRIN and Denise Marzullo (Bancroft Neurohealth)

Abstract: An evaluation of the source of treatment failures is necessary to successful remediation. Two possible sources of treatment failure include intervention ineffectiveness and lack of implementation integrity. When an intervention is implemented inconsistently, the primary goal is to correct the problem prior to making any changes to the intervention itself. However, monitoring and maintaining high levels of treatment integrity in an applied setting can be challenging. Research on performance feedback has shown it to be a more effective method than traditional consultation for increasing implementation of academic and behavioral interventions (Noell et al., 2005). In the present study, we developed a program-wide system for monitoring treatment integrity in a behavioral stabilization program. The performance of all staff working in the program was monitored regularly by 16 supervisors trained to evaluate treatment integrity and to provide performance feedback. Performance feedback was evaluated in a multiple baseline across living units design. Results demonstrated the effectiveness of this system to increase the integrity with which staff implemented components of behavior and service plans.

An Evaluation of a Program-Wide Process for Improving Treatment Integrity. CHRISTINA M. VORNDRAN, Alfred Brewin, IV, and Jenna Taylor (Bancroft Neurohealth)

Abstract: Behavior Intervention Plans (BIPs) designed to decrease problem behaviors and increase functional replacement behaviors are commonly developed for individuals with developmental disabilities. When a BIP is reported to be ineffective it can be difficult to determine the cause particularly if levels of treatment integrity are unknown or believed to be low. Research has established effective procedures for monitoring and improving treatment integrity of BIPs (Codding, Feinberg, Dunn, & Pace, 2005). In the present study, a multiple baseline across program design was used to evaluate the effectiveness of individualized and group performance feedback for increasing treatment integrity among staff working in two programs for individuals with disabilities. Results indicated that individualized performance feedback immediately produced significant improvement in all components of treatment implementation. Additional data analysis identified treatment components frequently implemented incorrectly by many of the program staff. Group performance feedback was then provided and shown to further improve treatment implementation. Results were shown to maintain for up to a year. These results replicate and extend the performance feedback literature.

#422 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 124 A
AUT/EDC; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Jennifer B. Symon, Ph.D., BCBA

Researchers, Educators, and Practitioners: Training Professionals to Support Students with Autism
Chair and Discussant: Jennifer B. Symon (California State University, Los Angeles)

Abstract: Many educators and professionals who support students with Autism Spectrum Disorders (ASD) do not receive adequate or specialized training in autism. California State University, Los Angeles (CSULA) offers specialized training programs in autism, including a university certificate and masters degree in special education with an emphasis in autism. The training programs promote multidisciplinary collaboration between special educators and related personnel to effectively support students with ASD. The preservice training program will be described followed by outcome data from a five-year Office of Special Education federally funded grant project. Then, three research studies will be presented that targeted improvements in social interactions with peers and on-task classroom behaviors. Antecedent strategies, including offering choices and providing visual supports, were used in each of the three research presentations. Results indicated improvements in these social skills and behaviors. This symposium demonstrates the value of providing clinical and research training to educators and other team members who can design, implement, and evaluate evidence-based practices.

Teaching Initiations and Generalizing Skills: Reaching Levels Comparable to Typical Peers. ELIKA SHAHRESTANI, Jennifer B. Symon, and Randy V. Campbell (California State University, Los Angeles)

Abstract: Children with autism have difficulty in the area of social interaction. Specifically, individuals with autism have difficulty reading social cues and understanding the perspective of others (Attwood, 2000). These deficits not only impede the individual's development but also may lead to social withdrawal and rejection from peers (Delano & Snell, 2006). Much of the research in the area of social skills has focused on intervention strategies to promote initiating and responding to peers in an effort to increase socially appropriate behaviors. Of all the social skill strategies described in the literature, the efficacy of social stories has been least consistent. In the present study, social story interventions were used in combination with reinforcement to teach social initiations in children with autism. Three children with autism participated in a multiple baseline across participants research design. Results indicated that none of the participants' initiations increased following Intervention A, social stories alone; however, once reinforcement was added to the social story (Intervention B), all three participants engaged in significantly more initiations as compared to baseline. Peer comparison data were collected to determine the levels appropriate for peers. Results indicated that participants not only reached levels comparable to peers, but also generalized their skills to the school setting.

Using Antecedent Strategies to Improve Behaviors for Children with Autism. YUN-YI TSAI, Randy V. Campbell, and Jennifer B. Symon (California State University, Los Angeles)

Abstract: Antecedent interventions have been implemented to improve classroom behaviors for children with disabilities, including Autism Spectrum Disorder (ASD). This study evaluated the effects of using picture activity schedules with and without choice making components on task engagement behaviors of three children with autism in a special education day care center. An alternating treatment design (Barlow & Hersen, 1984) was used to compare the effectiveness of two different interventions (using activity schedules only and using activity schedules with choice-making opportunities). A preference assessment based on the response-restriction (RR) analysis (Hanley, Iwata, Lindberg, & Conners, 2003) was conducted to determine the differential preference levels of activity choices for each participant before the data collection. Momentary time sampling procedure was used to record all participants' on-task and off-task behaviors during three independent activities. Observation took place during 15-minute sessions twice per observation day. In addition, a frequency recording method was used to record the number of the adult's prompts necessary to maintain participants' task engagement. The results show the participants demonstrated significant decreases in off-task behavior with choice making opportunities. In addition, the number of the adult prompts decreased when choice making opportunities were provided.

Generalizing the Effects of Choice as an Antecedent Strategy to Children in a General Education Classroom. SEBOUH J. SERABIAN (CSULA-school, Behavioral Building Blocks-work), Michele D. Wallace and Jennifer B. Symon (California State University, Los Angeles)

Abstract: Providing opportunities to make choices has received increasing support as an antecedent intervention to improve the performance of students with disabilities. Additional research is this area is needed to determine under what circumstances the application of choice making as a curricular intervention is appropriate and produces meaningful outcomes. The present study extended this line of research and investigated whether providing choice opportunities to three children in a general education classroom would impact their performance during independent academic tasks (journal and spelling). In addition to examining the effects of choice on disruptive and on-task and behaviors, this study also examined the effects of choice on task completion and on latency to respond. An ABAB reversal design showed that the choice making conditions increased on-task behaviors, increased task completion, decreased latency to respond and decreased disruptive behaviors. The results of this study not only extends the literature on choice making as a beneficial component of behavioral support, but also broaden the generality of interventions using choice to populations beyond those with developmental disabilities.

#423 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 126
AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Julie S. Weiss, M.S., BCBA

An Analysis of Teaching and Prompting Strategies for Children with Autism and Developmental Disabilities
Chair: Julie S. Weiss (New England Center for Children)

Abstract: Four presentations analyzing the effectiveness and efficiency of various teaching and prompting strategies on the acquisition of behavior chains will be presented.The first presentation will discuss a comparison of backward and forward chaining on the acquisition of a play construction model using most-to-least prompting with a fixed delay. The effectiveness of the 2 chaining strategies was evaluated with a multi-element design. Results showed that the efficiency and effectiveness of the chaining procedures varied across learners.The second presentation investigated if independently established related repertoires would emerge as a single chain of behavior when an opportunity was provided for them to occur simultaneously. For all participants, the independent repertoires did occur as a single chain when the opportunity was provided. The third presentation assessed the effects of an intervention package to teach children with developmental delays individual exercise skills in the form of yoga.. . Video modeling and parents training using graduated guidance were utilized to teach the skills. All participants acquired the chains with two participants

demonstrating generalization to new videos of yoga exercises. The fourth presentation involves transfer of instructional control to written task sets. Although there have been several investigations of the use of visual prompts with task analyses, none of these clearly demonstrated control by the prompts. Two four year old children with autism spectrum disorders have participated in this study to date. Participants were taught to follow 4, five-step instructional sets using textual prompts and a least to most prompt hierarchy. Although neither participant showed generalization across sets, the single instruction training was never required by the third set and both showed significant savings effects across sets.

A Comparison of Backward and Forward Chaining on the Acquisition of Play and Vocational Skills.

EMILY BENNETT (New England Center for Children), Julie S. Weiss (New England Center for Children), Myrna E. Libby (New England Center for Children), William H. Ahearn (New England Center for Children)

Abstract: The purpose of the study was to compare the effects of a forward chaining versus backward chaining sequence on the rate of acquisition of a behavior chain. Three individuals diagnosed with an autism spectrum disorder participated and the dependent variable was the number of trials to acquisition for three different behavior chains: two 8-step play construct figures, two 12 step play construct figures and two vocational tasks. Each session consisted of one probe trial and 10 training trials. Generalization probes across a novel teacher and one new setting were conducted after acquisition. Most-to-least prompting with a constant delay was utilized for all conditions. Results showed that both training procedures were effective. Efficiency varied across participants but was consistent across replications with play constructs. Findings generalized across new teachers and settings. Additional data will be collected on vocational tasks. IOA data were collected for at least 40% of sessions and averaged 95%. Procedural integrity data were taken for at least 40% of sessions and averaged 95%.

Generating Novel Play and Vocational Skills Sequences of Responding by Teaching Components: Adduction.

KERRI P. SHANAHAN (New England Center for Children), Julie S. Weiss (New England Center for Children), Myrna E. Libby (New England Center for Children), William H. Ahearn (New England Center for Children)

Abstract: Three individuals diagnosed with an autism spectrum disorder were taught two separate but related play and vocational behavior chains. Participants were then given the opportunity to combine the two related units into a longer, previously untrained sequential chain of behaviors. All participants independently generated a novel chain of behaviors for the play skills after acquiring all components. Furthermore, this skill generalized across novel play materials. Data will be collected on the vocational tasks. All sessions were videotaped. IOA data were collected for at least 40% of sessions and averaged 95%. Procedural integrity data were collected for at least 40% of sessions and averaged 95%.

Teaching Yoga Skills to Young Children with Developmental Delays with Parents as Intervention Agents.

DEBORAH J. GRUBER (Queens College and The Graduate Center CUNY), Claire L. Poulson (Queens College/CUNY)

Abstract: Children with disabilities often lack the skills required to participate in physical fitness activities. The purpose of the present study was to assess the effects of an intervention package to teach children with developmental delays individual exercise skills. These skills were taught with yoga as the method of exercise. The study was conducted in the home environment, with parents teaching the yoga skills. The video-modeling baseline procedure consisted of presenting a videotape showing a certified yoga instructor providing verbal instructions and physical demonstrations of each step in a 24-step response chain that made up two yoga poses. The experimenter trained the parents to use graduated guidance and reinforcement procedures. The intervention was introduced in a multiple-baseline-experimental design across three participants. The graduated-guidance procedure was provided to the participant, enabling the participant to execute the correct physical alignment for each step in the response chain. Baseline data indicated correct matching of the yoga response chain occurred with no greater that 17% accuracy. Systematically with the introduction of treatment, all participants matched the

response chain with 71% accuracy or better. Correct implementation of the graduated guidance procedure occurred for all three parents with the introduction of parent training.

Stimulus Control by Textual Prompts When Completing Task Sequences. CARA L. PHILLIPS (University of Florida), Timothy R. Vollmer (University of Florida)

Abstract: Stimulus control by textual prompts for task sequence completion might facilitate independence, maintenance, and generalization of tasks. Although there have been several investigations of the use of visual prompts with task analyses, none of these clearly demonstrated control by the prompts. Two four year old children with autism spectrum disorders have participated in this study to date. Participants were taught to follow 4, five-step instructional sets using textual prompts and a least to most prompt hierarchy. The sets consisted of independent toy play responses that could be arranged in any sequence. For each set, after initial training in a single response sequence, a novel sequence of the same responses was probed. Single instruction training followed (textual prompts were presented one at a time in any order) if needed. A novel order probe followed. The multiple probe experimental design allowed for tests of both stimulus control by the textual prompts and generalization within and across sets. Although neither participant showed generalization across sets, the single instruction training was never required by the third set and both showed significant savings effects across sets.

#424 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 125
AUT/CBM; Service Delivery
BACB CE Offered. CE Instructor: Joel Hundert, Ph.D., BCBA

The Use of Priming in Supported Inclusion of Children With Autism in General Education Classrooms

Chair: Joel P. Hundert (Behaviour Institute)

Abstract: There is little reason to expect that placement of children with autism in general education classrooms will automatically result in their improved academic performance or social behaviors. Without specific interventions, children with autism in general education classrooms have difficulty learning the class curriculum, attending to teacher instruction, following classroom routines independently, or interacting positively with peers. Unfortunately, there is much more known about how to design and deliver interventions for children with autism in special than general education settings. Interventions to support children with autism in general education classrooms need to be both effective in bringing about improvement of children with autism, but also practical to conduct in a general education setting. One intervention that holds promise is priming, which consists of pre-exposing a child with autism to a problem situation (e.g., following classroom routines, completing seat work assignments) in one setting (e.g., resource room at school, home) that improves the child's performance in a target setting (e.g., general education classroom). This symposium will explore the use of priming as an intervention to support children with autism in general education classrooms.

The Effect of Priming Conducted At Home on Classroom Routine-Following of Children With Autism. JOEL P. HUNDERT (Behaviour Institute), Miranda Sim (Behaviour Institute)

Abstract: Priming consists of exposing an individual to a problem situation before the situation occurs that improves how the individual performs in a target setting without addition interventions being introduced in that setting. Priming holds promises as an effective intervention to support children with autism in general education classrooms because the intervention is implemented in a setting other than the general education classroom. This paper will present the results of a study in which priming was introduced at home to improve the routine-following behavior of two five-year old boys with autism attending a general education classroom. Two types of priming sessions were conducted. One priming session consisted of each boy being taught to raise his hand and answering questions to a video of the classroom teacher teaching a "calendar time" lesson. The second priming session consisted of each boy

practicing giving a social greeting (e.g., "hi") to a video of a peer initiating a greeting. Effects on participants' behaviors in the classroom was assessed by a multiple-baseline design across participants. Priming produced a increase in the target behaviors of participants in the classroom without addition interventions being introduced at school.

Limitations In The Use of Embedded Instruction for Supported Inclusion of Children with Autism. DONNA C. CHANEY (Behaviour Institute), Joel P. Hundert (Behaviour Institute)

Abstract: Embedded instruction consists of embedding teaching trials into the regular routine of a general education classroom and has been shown to be effective in teaching IEP objectives to children with autism in general education classrooms. However, in the studies that have been conducted, children with autism typically have received only between 15 and 30 embedded instruction trials in a school day. It has not been demonstrated that it is possible to embed a sufficiently high number of trials into the routines of a general education classroom to address the significant deficits of a child with autism, nor that increasing the number of embedded instruction trials delivered in a school day will increase the performance of children with autism. This paper will present the results of a study comparing the number of embedded instruction trials delivered to a 12-year old boy with autism by: a) a paraprofessional in a resource room; b) a special education teacher in a resource room; and, c) a general education teacher in a general education classroom.

The Use of Video Priming with Social Script Training To Increase the Peer Interaction of Children with Autism. JANE LEE (Behaviour Institute), Joel P. Hundert (Behaviour Institute), Erin Harrison (McMaster University)

Abstract: Social script training has been used to increase the peer interaction of children with autism with their peers in general education settings. Social skills training consists of introducing a structured play interaction sequence that is of interest and within the abilities of a child with autism and his or her peers. Typically, two adults are needed to teach script-following, one for the child with autism and the other for the play partner. Video priming (a video of a social script taken from the perspective of the child with autism) may be a more efficient strategy than adult prompting and praising to teach script-following and increase the interactive play of children with autism. This paper will present the results of a study in which video priming was used to introduce social script training for two children with autism attending general education classrooms. Using a multiple-baseline design effects were evaluated on the interactive play of children with autism both during target play sessions in which the video priming and social skill training were introduced, and during generalization play sessions in which these interventions were not introduced.

The Effect of Selected Parameters on the Effect of Priming for Children with Autism in a Classroom Setting. NICOLE WALTON-ALLEN (Behaviour Institute), Joel P. Hundert (Behaviour Institute), Brooke MacKinnon (McMaster University), Faria Sana (McMaster University), Naomi Wheeler (Behaviour Institute)

Abstract: Priming is typically conducted in one settings such as a child's home or in a resource room at school and its effects are measured at a later time when the child uses the primed performance to handle a problem situation (e.g., following classroom routines) in another setting (e.g., in a general education classroom). It is unclear whether the length of the interval between the delivery of priming and its application by a child will influence the effect of priming. Similarly, it is unknown if the effects of priming would be enhanced by conducting priming in a setting similar to that in which the priming would be used. This paper will present the results of two studies in which a parameter of priming was varied and the resultant effects on the performance of a child with autism in a general education classroom evaluated. One study compared the effects of a 30-minute to a 3-hour delay between priming and its implementation in a classroom for two children with autism. A second study compared the effects of priming conducted in a 1:1 setting to priming conducted in the same classroom setting on the routine-following performance of two children with autism.

#425 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 120 BC
AUT/EDC; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Mark T. Harvey, Ph.D., BCBA

The Use of Video Modeling to Increase Social Behaviors for People Who Have ASD and Their Families
Chair: Mark T. Harvey (Florida Institute of Technology)
Discussant: Lynn Kern Koegel (University of California, Santa Barbara)

Abstract: From Kanner's (1943) original conceptualization to the most recent Diagnostic and Statistical Manual of Mental Disorders, social skills deficits have been included among the primary defining characteristics in the complex disorder of Autism. Deficits in social relatedness are observed across the lifespan, and present some of the most debilitating barriers to successful integration of individuals diagnosed with Autism Spectrum Disorders (ASD). Research in the area of video modeling has shown that this approach can be an effective strategy for the acquisition and generalization of appropriate social behavioral repertoires. Utilizing this approach usually entails the creation of videos incorporating confederates (adults, peers, and/or self) who demonstrate examples and/or non-examples of targeted behaviors. After completion, the videos are shown to participants in a training environment (e.g., classroom, home, or community) and measurements of targeted behaviors taken. Results from video modeling interventions have shown great promise in the acquisition, transfer, and maintenance of behaviors. This symposium examines the use of video modeling to increase social skills engagement. The use of video modeling increased play skills for pre-school aged children, conversation skills of young adults, and parent-child interactions for children who have autism. Future directions and integration of video modeling will be presented.

Increasing Playtime Initiations for Children Who have ASD using Video Self- Modeling (VSM).
JORDAN P BOUDREAU (Florida Institute of Technology), Mark T. Harvey (Florida Institute of Technology)

Abstract: The effects of video self modeling (VSM) on social initiations for three children who have autism were investigated using a multiple baseline design. A VSM tape was developed showing the child initiating play activities with peers. Students viewed the VSM videos in their classroom prior to going to a playroom with a dyad of peers. Social initiations during "playtime" were measured and compared to levels exhibited by a typically developing peer within each student grouping. Use of VSM led to an increase in initiation for all participants with two out of three individuals increasing social initiations to levels above typically developing peers. VSM was shown to be an efficacious means for increasing initiations for leisure activities for children who have ASD.

Improving Social Conversation in Young Adults with Asperger's Syndrome Using Video Self-Modeling.
WHITNEY J. SMITH (Eli and Edythe L. Broad Asperger Center Koegel Autism Center), Lynn Kern Koegel (University of California, Santa Barbara)

Abstract: Young adults with Asperger's Syndrome (AS) often display a marked impairment in social interaction, particularly social conversation with peers. This can interfere with the initiation and maintenance of peer relationships. Video self-modeling has been shown to be an effective technique for teaching social behaviors. We examined the effects of video self-modeling of social communicative behaviors during social conversation. A multiple baseline design across participants was employed to target question-asking, which was at low levels at baseline, during social conversation. Results showed that video self-modeling was an effective technique for teaching question-asking during social conversation. In addition, generalization to new peers occurred. Social validation measures also indicated that the number of peer interactions in untreated community settings increased following intervention. Results are discussed in terms of advancing intervention techniques to target more complex social goals for older individuals with AS. This presentation will include video-taped clips of baseline, video self-modeling sessions, and post-intervention social conversations.

Effects of Generic Video Modeling on Parent-Child Interaction of Families with a Child with Autism. HUI-TING WANG (University of Washington), Ilene S. Schwartz (University of Washington)

Abstract: Video modeling is an evidence-based instructional strategy in which a child learns a target behavior from watching a model performing the skill on a video tape. Video modeling, although extremely effective and efficient for children with autism, has not been used widely because of its difficulty in implementation. Moreover, all of the video modeling tapes in existing research studies are individualized with either familiar models or/and familiar settings. It would be difficult and time-consuming for educators to make different tapes for different students and for different skills. An exploration of more cost-effective video modeling strategies is needed. There is only one video modeling study focusing on teaching the parents of the children with autism (Reamer, Brady & Hawkins, 1998). Thus, this study was designed to further investigate the effects of video modeling on training parents as well as their children with autism by watching the generic video modeling tape together to improve parent-child interaction, which is considered a critical cornerstone for developing children's other social relationships. A multiple baseline probe design across the four parent and child dyads was used.

#426 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 127
AUT/DDA; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Adel C. Najdowski, Ph.D., BCBA

The Big Picture: Research Reviews on Parent Training, Safety, Naturalistic Teaching, and Intervention for Older ASD Children
Chair: Ryan Bergstrom (Center for Autism and Related Disorders, Inc.)

Abstract: Empirical studies provide the data that drive applied behavior analysis but focusing solely on particular studies often allows one to "miss the forest for the trees." That is, only by surveying the full range of research conducted in a particular area can one get a clear picture of the breadth of scientific knowledge available in that area. Reviews of literature are useful to clinicians because they summarize results in a consumable format. In addition, literature reviews are useful to scientists because they take stock of the current status of literature in a given area and provide useful directions for future research. The four review papers contained in this symposium review behavioral research on parent training, safety skills interventions, naturalistic behavioral approaches to teaching children with autism, and finally, behavioral interventions for older children with autism, ages 8-21.

Train the People Who Live it Every Day: A Review of Research on Parent Training VARDUI CHILINGARYAN (Center for Autism and Related Disorders, Inc.), Dennis Dixon (Center for Autism and Related Disorders, Inc.)

Abstract: Much research has been published in the thirty years since Stokes & Baer (1977) called for actively programming for generalization. However, the degree to which the field of behavior analysis has responded to this call is questionable. One area in which this may be directly evaluated is the degree to which research studies discuss and describe the process of generalizing treatment effects to caregivers and training those caregivers to effectively implement interventions. The purpose of the current study was to review the articles published in JABA over the past 10 years (1998-2008) and evaluate the prevalence and form of parent training provided. A total of 597 articles were reviewed to determine possible inclusion. 61 articles were included in this review. Results are discussed in regards to the form of parent training and overall trends.

Older Kids Learn Too: Research on Behavioral Intervention for Older Children with Autism. Jonathan J. Tarbox (Center for Autism and Related Disorders, Inc.), Betty Tia (Center For Autism and Related Disorders, Inc.), Romolea Manucal (CARD, Inc.), Ellen Kong (CARD, Inc.), Wendy Sanchez

(Center for Autism and Related Disorders, Inc.), MEGAN D. NOLLET (Center for Autism and Related Disorders, Inc.)

Abstract: A commonly held misconception is that applied behavior analytic intervention is primarily for young children with autism. ABA for younger children currently receives the most public attention but a very substantial amount of research has been conducted on ABA treatment for older children and adolescents with autism. However, hundreds of studies have been published in peer-reviewed journals on the application of ABA procedures to improving the functioning of older children and adolescents with ASDs. This presentation reviews all research on ABA for children with autism published in Journal of Applied Behavior Analysis, Behavioral Interventions, Research in Developmental Disabilities, and Behavior Modification in the last 20 years.

A Review of Research on Natural Environment Training with Children with Autism. SUSIE BALASANYAN (Center for Autism and Related Disorders, Inc.), Adel C. Najdowski (Center for Autism and Related Disorders, Inc.)

Abstract: Natural environment training (NET) is a term that refers to naturalistic behavioral approaches to teaching. Several different teaching strategies fall under this classification, including incidental teaching, milieu teaching, and pivotal response training. Generally NET approaches are designed to mimic typical adult-child interactions and maximize naturally occurring learning opportunities. As the name implies, NET focuses on teaching skills in an environment and format that more closely resembles the typical daily activities that a young child may encounter. In addition to the loosely structured format of instruction, NET differs from DTT in that learning trials are initiated by the learner, rather than therapist. This paper reviews research on several different approaches to implementing NET with children with autism.

Teaching Safety Skills to Individuals with Developmental Disabilities: A Review of Published Research. RYAN BERGSTROM (Center for Autism and Related Disorders, Inc.), Dennis Dixon (Center for Autism and Related Disorders, Inc.)

Abstract: Persons with developmental disabilities are at a greater risk of harm/injuries due to accidents, fires, and are more likely to be victims of crimes such as sexual assault. There are a wide array of behaviors that can be taught to increase one's safety and accident prevention skills. A review of the literature on teaching safety skills to individuals with developmental disabilities was conducted. This yielded a number of studies that taught a wide array of skills from crossing the street, to exiting a building during a fire, to prevention of sexual abuse. Methods and results of these studies are discussed. Preliminary data for a current sexual abuse prevention protocol will be presented as well as recommendations for future direction.

#427 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 131 BC
AUT/DDA; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Melissa Olive, Ph.D., BCBA

Outcome of Early Intensive Behavioral Intervention for Children with Autism
Chair: Arthur E. Wilke (Center for Autism and Related Disorders, Inc.)

Abstract: A significant amount of research has demonstrated that early intensive behavioral intervention (EIBI) produces robust effects for children with autism. However, several questions remain unanswered and the papers presented in this symposium address some such issues. The first presentation is a literature review of published research which has examined the variables that predict outcome in EIBI. The second paper consists of a study which examined the relation between the amount of supervision implemented with outcome. The third paper is a descriptive analysis of the relations between hours of therapy, age, and mastery

of skills across more than 300 children with autism. The final presentation consists of a study that evaluated stress levels for parents of children receiving EIBI.

Predicting Optimal Outcome for Children with Autism: A Review of Existing Research. Jonathan J. Tarbox (Center for Autism and Related Disorders, Inc.), MEGAN M. KIRBY (Center For Autism and Related Disorders, Inc.), Dennis Dixon (Center for Autism and Related Disorders, Inc.), Amy Kenzer (Center for Autism and Related Disorders, Inc.), Michele R. Bishop (Center for Autism and Related Disorders, Inc.), Melissa L. Olive (Center for Autism and Related Disorders, Inc.), Doreen Granpeesheh (Center for Autism and Related Disorders, Inc.)

Abstract: Much research has shown that early intensive behavioral invention (EIBI) produces significant gains for children with autism. However, some children achieve less optimal outcomes in response to EIBI and in doing so highlight the need for examination of specific child characteristics and their link to positive treatment outcomes. Identifying early in treatment those children who will benefit most from EIBI and those who might require variations in the instructional format could potentially lead to an increase in the number of children that obtain the best treatment outcomes. This paper is a review of studies that have identified variables as potential predictors of optimal outcome. In addition, we discuss directions for future research on modifications of EIBI aimed at improving treatment results for children who would otherwise not achieve optimal outcomes.

Intensity of Supervision and Outcome for Preschool Aged Children Receiving Early and Intensive Behavioral Interventions: A Preliminary Study. Svein Eikeseth (Akershus College), Diane W. Hayward (UK Young Autism Project), Catherine Gale (UK Young Autism Project), Jens-Petter Gitlesen (University of Stavanger), SIGMUND ELDEVIK (Center for Early Intervention, Oslo, Norway)

Abstract: This study asked whether intensity of supervision is associated with outcome in preschool aged children with autism (N = 20) who received intensive and early behavioral intervention. Intensity of supervision ranged from 2.9 to 7.8 hours per month per child. Results show a significant correlation between intensity of supervision and improvement in IQ. Thus, intensity of supervision was reliably associated with amount of IQ change between intake and follow-up. These findings add to existing literature by suggesting that intensity of supervision together with intensity of treatment, treatment method, and pre treatment functioning are variables that may affect outcome for children with autism who receive early and intensive behavioral intervention.

Descriptive Analysis of the Effects of Treatment Intensity, Age, and Time in Treatment Across 300 Children with Autism. Doreen Granpeesheh (Center for Autism and Related Disorders, Inc.), DENNIS DIXON (Center for Autism and Related Disorders, Inc.), Jonathan J. Tarbox (Center for Autism and Related Disorders, Inc.), Arthur E. Wilke (Center for Autism and Related Disorders, Inc.), Andrew Kaplan (Center for Autism and Related Disorders, Inc.)

Abstract: Early intensive behavioral interventions have been shown to effectively remediate some cases of autism. However, few studies have evaluated the importance of various factors, such as hours of treatment per week, on treatment outcomes. The present study evaluated treatment progress for 370 children receiving intensive ABA services. Regression analyses were conducted to predict treatment progress based upon the number of treatment hours received monthly, age at start of services, and time since starting services. Results indicated that each of these variables were significant predictors and accounted for considerable portions of the observed variance. Through these analyses the optimal level of each factor could be evaluated. These data are discussed in regards to the factors that are important for treatment providers to manipulate on a system-level to increase efficiency in skill acquisition and achieve optimum treatment outcomes.

Assessing Parent Stress in Families Receiving Early and Intensive Behavioral Intervention. SVEIN EIKESETH (Akershus College), Diane W Hayward (UK Young Autism Project), Catherine Gale (UK Young Autism Project), Sally A. Morgan (UK Young Autism Project)

Abstract: A frequently asked question is whether Early and Intensive Behavioral Intervention (EIBA) add or relieve family stress. The current study assessed changes in stress in families receiving EIBI. Pre treatment family stress was assessed and compared to family stress one year into treatment. Family stress was assessed using the The Parenting Stress Index (PSI). The PSI assesses stress in the parent-child relationship. It identifies dysfunctional parenting and predicts the potential for parental behavior problems and child adjustment difficulties within the family system. PSI yields a Total Stress Score, plus sub scales in child and parent characteristics. Results show a high level of stress in parent-child relationship pre treatment and a reduction, but yet high level of stress in parent-child relationship one year into treatment. Results suggest that EIBI may relieve stress in parent-child relationship.

#428 Paper Session

5/25/2009
1:30 p.m. - 2:50 p.m.
North 226 C
AUT

Medication Use in Persons with Autism
Chair: Alan D. Poling (Western Michigan University)

Pharmacological Treatment of People with Autism. (Applied Behavior Analysis) ALAN D. POLING (Western Michigan University), Kristal E. Ehrhardt (Western Michigan University)

Abstract: This presentation overviews drug treatments for people with autism. Nearly one of every two people diagnosed with autism receives one or more psychotropic drugs. There is a sizaable literature documenting the effectiveness of several drugs in reducing challenging behavior in people with autism, although the quality of many published studies is relatively low and several important research issues have not been adequately addressed. Historically, there has been much acrimonious debate regarding whether prescribing psychotropic drugs for people with autism is good or bad. In actuality, some people with autism derive benefits from drug treatment that cannot be produced by other kinds of interventions. Other people, however, are exposed to unnecessary and even harmful drug regimens. Appropriate drug treatment requires that the right people receive medication, and that their medication regimen be managed to produce optimal benefit. Using psychotropic drugs to benefit people with autism requires that: 1) treatment goals are clear and in the treated individual's best interests, 2) drug effects are adequately monitored and treatment decisions are made on the basis of real drug effects, and 3) drug therapy is flexible and integrated with nonpharmacological interventions. Good treatment is always evidence-based and accountable.

Placebo Medication Use for Behavior Management in an Adult with Autism. (Applied Behavior Analysis) KIMBERLY ANN KROEGER (Kelly O'Leary Center for Autism Spectrum Disorders), Jennifer Brown (Kelly O'Leary Center for Autism Spectrum Disorders)

Abstract: This ABC design single case study aimed to reduce inappropriate tantrum behavior in an adult diagnosed with autistic disorder, and subsequently maintained reduced levels of tantrums through the use of placebo intervention. The individual was medically managed on an as-needed ("PRN") anxiolytic in home and work settings for behavioral outbursts, including negative vocalizations, self-injurious behaviors and periodic aggression towards others. After 2 years of successful episodic medical intervention, the intervention was altered in the work setting to administer a placebo pill in lieu of the anti-anxiety drug at the onset of tantrum behavior. The placebo protocol was initiated due to persistent significantly short drug effect time where the individual was calm within five minutes of ingesting the anxiolytic. (Placebo protocol was approved through the governing agency's human rights committee prior to implementation.) The individual has been successfully maintained on the placebo protocol for 20 months with maintained low incidence of tantrum behavior as well as rapid de-escalation time. Limitations and future implications discussed.

Fitting The Pieces Together: Coordinating Psychopharmacology and Behavioral Treatments to Optimize Patient Outcomes. (Applied Behavior Analysis) AMY ROBIN WOOLEY (Laurel Heights Hospital), Ken Fleishman (Laurel Heights Hospital)

Abstract: This paper will discuss the treatment partnership between the Medical Director and Behavior Analyst at a residential treatment center for children with Autism. Often medications are prescribed independent of behavioral data or regard to behavioral treatment component analyses. These sometimes competing strategies have the potential to confound behavioral treatment effects data or, more importantly, impact a resident's receptiveness and participation in teaching sessions. Our approach, however, promotes systematic changes to medications based on behavior reduction and acquisition data. In the treatment of two residents in which functional assessments suggest that self-injurious behaviors serve a self stimulatory function, psychopharmacology treatment acts as a motivating operation to reduce the natural reinforcement produced by the brain to enhance efficacy of behavioral acquisition of replacement behaviors. Adjustments of medication dosages, time of day, titration speed are made to coordinate with behavioral treatment plans, schedules and progress data. Case studies will be reviewed to illustrate how these two treatment approaches can be combined to produce maximum benefits.

Behavioral Parent Training Used in Combination with Pharmacological and Intensive Behavioral Intervention for Children with Autism. (Applied Behavior Analysis) ERIC BUTTER (Nationwide Children's Hospital & The Ohio State University)

Abstract: Parents are an important agent of behavior change for children with autism. This presentation will describe two research programs that have developed behavioral parent training programs as one component of combination treatments for children with autism spectrum disorders. Design and methodological issues related to using behavioral parent training as a way to expand the effects of both pharmacological interventions and intensive behavioral interventions will be explored. The boundary conditions and parameters related to creating manual-based parent training programs as well as the selection of treatment targets will be discussed. Results from the NIMH RUPP trial of risperidone and parent training as well as an OAR trial investigating parent training as way to expand generalization of skills acquired in early intensive behavioral intervention will be considered as related to the development of parent training programs as combination interventions.

#429 International Paper Session

5/25/2009
1:30 p.m. - 2:50 p.m.
North 227 A
AUT

Novel Approaches with Vocal Behavior
Chair: Michelle A. Furminger (Lizard Children's Centre)

Using Mechanical Devices to Enhance Expressive Language Utterances with Children with Autism Spectrum Disorder. (Service Delivery) MICHELLE A. FURMINGER (Lizard Children's Centre), Cassie le Fevre (Lizard Children's Centre)

Abstract: Under the diagnosis of Autism, communication is one area of deficit. Expressive language can be difficult to teach a child who has trouble imitating spoken phrases that are more than four words in length. Past research has shown the effectiveness of mechanical devices to teach a child to acquire conversational skills and social initiations using voice activated recorders (McClannahan & Krantz, 2005) and video modelling (Nikopoulous & Keenanan, 2004). This paper will investigate the use of cards and button-activated mechanical devices to expand the length of utterances of two children diagnosed with ASD. It was found that the children's learning of a new expressive language task was accelerated when a recorded mechanical device was initially used in place of using verbal prompting directly from a therapist. Data presented will show the rate of acquisition for an expressive task when presented with the

mechanical device in the first instance (prior to presentation of the task using verbal prompting) as compared to acquisition rates with verbal prompting alone.

The Use of Multiple Schedules in the Treatment of Vocal Stereotypy Displayed by Young Children with Autism. (Applied Behavior Analysis) COURTNEY LANAGAN (FirstSteps for Kids, Inc.), Jennifer L. Harris (FirstSteps for Kids, Inc.), Rosimel deDomenico (FirstSteps for Kids, Inc.)

Abstract: While the presence of stereotypy is a criterion for the diagnosis of autism, many questions as to effective interventions targeting its reduction remain. Children diagnosed with autism commonly display an array of vocal stereotypy, frequently impeding socialization and other learning opportunities. The current presentation describes our efforts to reduce stereotypic behaviors (i.e., delayed repetition of television dialogue and unintelligible vocalizations) by bringing said behaviors under control of antecedent stimuli. Specifically, multiple schedule arrangements using bracelets correlated with each condition were utilized to gradually increase the time in which vocal stereotypy did not occur. Results suggest that multiple schedules may be an effective intervention for treating vocal stereotypy.

The Effects of Delayed Prompts on the Verbal-Vocal Behavior of Young Children with Autism. (Applied Behavior Analysis) MOLLY L. DUBUQUE (University of Nevada, Reno)

Abstract: Teaching methods have been developed by behavior analysts that have helped decrease or eliminate behaviors associated with a diagnosis of autism in some children. One method of instruction, known as natural environment teaching, is valued because it can be conducted by parents or teachers in the natural environment. Prompt delay is a type of natural environment teaching procedure that is especially useful for promoting spontaneous speech. The aim of this research was to examine the effects of a training package used to target the frequency with which tutors in a home-based program use a prompt delay to promote spontaneous speech in children with autism. The procedure for training staff to use a prompt delay to increase spontaneous speech by children with autism will be presented. Results will be discussed in terms of the effectiveness of the treatment package with regard to implementing a prompt delay in the promotion of spontaneous speech.

#430 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 224 A
CBM; Applied Behavior Analysis

Behavioral Developmental Treatment of Personality Disorders
Chair: Michael Lamport Commons (Harvard Medical School)

Abstract: The current clinical approach to personality disorders considers them to be properties of the individual, but distinct from mental illness. This view places blame on the individual and turns the disorder into a moral issue. This symposium lays out a new behavioral developmental conceptual framework for studying the development of personality disorders. As a central hypothesis to this approach, we argue that personality disorders and mental illness lie on a continuum, and the major difference between the two is the rate of psychotic incidents and the generality of the context. The first presentation introduces two sets of dimensions we use in our approach to observing personality disorders: The first being social interpersonal perspective taking and intrapersonal perspective taking, and the second being how a person handles value, discounting and delay, risk and change of value in reinforcement and punishment. The second presentation uses a behavioral developmental perspective to address the consequences of various types of traumatic events. The third presentation explores failures in social perspective taking that occur in personality disorders and their resultant negative behaviors. The final presentation focuses on the process of Behavioral Developmental Treatment. This focus clearly defines steps and goals in the treatment of personality disorders.

Behavioral Developmental Perspective on Personality Disorders. JOSEPH ANTHONY RODRIGUEZ (Dare Institute), Michael Lamport Commons (Harvard Medical School), Jonas G. MIller (Dare Institute)

Abstract: This symposium lays out a behavioral developmental conceptual framework for studying the development of personality disorders. We argue that all personality disorders can be described using two sets of dimensions. The first set is social interpersonal perspective taking and intrapersonal perspective taking. The second set of dimensions is how a person handles value, discounting and delay, risk and change of value in reinforcement and punishment. On the one hand, it accounts for abnormal behavior by examining the retarded stage of functioning of the person on social/intrapersonal performance. On the other hand, it accounts for abnormal behavior by examining the person's discrimination of the changes of value of consequences. The reason for using these two sets of dimensions to view personality disorder is that neither of them have any specific content, nor do they refer to any particular set of symptoms. What these two sets of dimensions accomplish is they describe, using just a few dimensions rather than large lists of symptoms, how a person is behaving in a counterproductive way. This approach emphasizes continuity across many forms of personality disorders and mental illness.

Trauma and Development of Personality Disorders. JOSEPH ANTHONY RODRIGUEZ (Dare Institute), Michael Lamport Commons (Harvard Medical School), Jonas G. MIller (Dare Institute)

Abstract: About 1/3 of children who experience trauma seem to develop severe problems. The resultant disorders may include anxiety, conduct and personality disorders. Progress has been made in treating some of these disorders using behavior-analytic techniques. Although behavior-analytic practitioners work with victims of trauma, there is no clearly stated and widely accepted behavioral analytic or learning account for the development of trauma-related problems. Also, there is no behavioral theory, nor many studies, that detail the relationship between the forms of traumas, when they occur, and their behavioral outcomes. Trauma can take place in three major forms: Physical/sexual abuse, psychological abuse and abandonment. Both physical and psychological abuse involve strong aversive stimulation. Abandonment may also involve strong aversive stimulation but in situations in which attachment objects are not available. That stimulation has been shown to elicit "fear" responses and inhibit many behaviors present at the time of the occurrence. Our hypothesis is that the effect of trauma will vary with form, intensity and length of trauma and the hierarchical complexity of relationships that can be discriminated by the individual at the time of the trauma. The consequences of trauma should be able to be clearly delineated from a behavioral point of view.

Failures in Social Perspective Taking at Different Behavioral Developmental Stages and Negative Behavioral Outcomes. JONAS G. MILLER (Dare Institute), Michael Lamport Commons (Harvard Medical School)

Abstract: Social perspective taking is defined as understanding, acknowledging, and integrating the view point of another person with one's own. For example, when individuals are involved in a social conflict they literally take the other individuals' perspectives of the conflict and integrate them with their own. According to Commons and Rodriguez (1990), individuals must identify what causes their behavior and what effect it has on both themselves and others. Individuals benefit from anticipating what effects complex social arrangements have on other peoples' behavior as well as on their own. Social perspective taking is a developmental skill that can be measured from a behavioral developmental stage theory perspective. Failures in social perspective taking are observed through deficient interpersonal strategies that result in problematic social relations. Depending on stage of development, different impairments in social perspective taking are associated with different negative behavioral outcomes. For example, individuals with Psychopathic, Antisocial and Borderline Personality Disorder do not understand social norms. This would require an understanding of how most others view social behaviors. Non-understanding of how others view them results in behaviors such as acting out in public, lying and cheating. This paper explores various failures in social perspective taking and their related negative behaviors.

Behavioral Developmental Treatment. JONAS G. MILLER (Dare Institute), Michael Lamport Commons (Harvard Medical School)

Abstract: Behavioral developmental treatment begins with a discussion of problems and recognition of the patient's suffering. The therapist also focuses on what the patient's short and long term reinforcers are. Patients are asked what they like to do, what they value, etc. Interest tests are often used along with a discussion of what kinds of reinforcers the interests represent. Behavior-development treatment utilizes many behavior teaching techniques to develop social perspective taking skills. These include: role playing, guessing what people think and then asking them what they did think, predicting how they will behave and checking the actual outcome, asking them how others will feel and then asking them how they felt, interviewing others about how they make their decisions and justify their behavior towards others; and asking them who is doing what to whom in a situation. Most personality disorders involve fears, especially over issues of delays and risk of bad outcomes due to possible loss, rejection, abandonment, etc. People describe their fears so that behavioral desensitization can be used. These also include the setting of and adherence to strict contingencies of reinforcement. There is a discussion of the experimental methods used in this treatment and its possible benefits and dangers.

#431 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 222 AB
CBM/CSE; Applied Behavior Analysis

Recent Research on Assessment and Treatment of Eating Disorders and Obesity
Chair: Tamela Giddings (University of South Florida)

Abstract: This symposium will feature four papers on assessment and treatment of eating disorders and obesity. In the first paper, Giddings will discuss a study evaluating a functional treatment for binge eating associated with bulimia. In the second paper, Pearson will discuss research on a group intervention involving ACT for body dissatisfaction and disordered eating. Next, Clemency will discuss research on factors contributing to body image problems and disordered eating in women in performance groups. Finally, Bordieri will discuss research on traditional behavioral treatments combined with ACT for treatment of obesity.

Evaluation of a Functional Treatment for Binge Eating Associated with Bulimia Nervosa. TAMELA GIDDINGS (University of South Florida), Raymond G. Miltenberger (University of South Florida)

Abstract: Binge-eating disorders are a common problem affecting up to 5 percent of the American population in any given 6-month period. The most widely accepted treatment is some variation of Cognitive Behavior Therapy. Although there is an abundance of research showing positive effects, the abstinence rates following this type of treatment are around 50%. A recent study by Bosch, Miltenberger, Gross, Knudson, and Brower-Breitwieser (2008) explored the effects of extinction on binge-eating behavior that was hypothesized to be maintained by relief from negative emotional responding. The study involved four women who engaged in binge-eating behavior, one of whom met the diagnostic criteria for Bulimia Nervosa. The treatment was successful, with three of the four participants obtaining abstinence. To date, this has been the only study examining this procedure and with only four participants. The purpose of the current study was to further evaluate extinction of binge eating maintained by automatic negative reinforcement with women who met diagnostic criteria for Bulimia Nervosa. Four young women enrolled in the study, three of whom met criteria for Bulimia Nervosa. The results showed that the treatment decreased binge eating to zero for all four women, although one dropped out of the study shortly after beginning the intervention.

Acceptance and Commitment Therapy as a Group Intervention for Body Dissatisfaction and Disordered Eating Behaviors. ADRIA PEARSON (University of Nevada, Reno), Steven C. Hayes (University of Nevada, Reno), Victoria M. Follette (University of Nevada, Reno)

Abstract: This study was a small randomized clinical trial collecting pilot data to assess the effectiveness of a one day Acceptance and Commitment Therapy (ACT) workshop targeting body dissatisfaction and disordered eating attitudes. The treatment was compared to a wait-list control condition. The participants were seventy-three women from a local university and a medium sized city in the Western United States. Participants in the wait-list control group completed one week of self-monitoring of hunger and satiety and attended three appointments where they completed standardized measures. Subsequently they were offered the workshop and completed measures immediately post-workshop. Participants in the treatment group attended an initial appointment where they completed standardized measures. Then they attended the workshop and post-measures, and then attended two, once weekly follow up appointments. They also self-monitored hunger and satiety for one week following the workshop. Disordered eating pathology, body anxiety, distress related to thoughts about eating and body image and measures of experiential avoidance showed significant reductions in the treatment group when compared to the control group. Acceptance was shown as a mediating variable for changes in distress levels related to thoughts about eating and body image. Implications are that the study shows strong support as a brief intervention for a broad range of women experiencing disordered eating attitudes and distress related to eating and body image.

Bodies on Display: Self-Objectification, Body Image and Disordered Eating. COLLEEN CLEMENCY (Arizona State University)

Abstract: This study investigated whether participation in multiple performance groups (theatre, and/or dance) was related to elevated levels of self-objectification, body dissatisfaction, and disordered eating among 173 university women in the United States. A trend in body dissatisfaction and disordered eating was found as group membership increased. Self-objectification and body dissatisfaction predicted disordered eating behaviors, replicating findings in previous studies. American college women in performance arts appear to be uniquely at risk for developing poor body image and disordered eating habits, and participation in multiple performance groups may further enhance this at-risk status.

Generating Sustainable Weight Loss: Outcomes from a Combination of Classic and Contemporary Behavioral Interventions. MICHAEL BORDIERI (Southern Illinois University Carbondale), Mark R. Dixon (Southern Illinois University), Nicholas Mui Ker Lik (Southern Illinois University), Becky L. Nastally (Southern Illinois University), Lindsay Beth Vick (Southern Illinois University), Brooke Diane Walker (SIU Carbondale)

Abstract: Two thirds of Americans are overweight or obese. Behavioral interventions targeting weight loss have produced considerable immediate successes but have offered little to no evidence of maintenance. The cultural phenomenon of "yo-yo dieting" mirrors empirical findings which suggest that weight loss, albeit demanding, is a far easier process to target than weight maintenance. This study sought to evaluate the effectiveness of an intervention package designed to generate both immediate and sustainable weight loss in obese and overweight adults. The therapy package combined the traditional behavioral interventions of self-monitoring and goal setting with an acceptance and commitment therapy (ACT) protocol across eight weekly individual therapy sessions. Weight served as the primary dependent measure but this investigation also explored changes in self-monitored health behaviors (i.e. food intake and exercise patterns) as well as a variety of quality of life and process measures. Preliminary data indicate positive outcomes and additional data will be collected. Implications for behavioral based weight loss and weight maintenance interventions will be presented.

#432 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 222 C

CBM/CSE; Service Delivery
BACB CE Offered. CE Instructor: Michael Weinberg, Ph.D., BCBA

Behavior Therapies with Juvenile Offenders: Fire, Sex, and Violence
Chair: Kirk A.B. Newring (Kirk A. B. Newring, PhD, LLC)
Discussant: Halina Dziewolska (Private Practice/ Behavior Analyst Online)

Abstract: Recently, the court system has directed much attention to juvenile firesetters. Behavioral treatments built from social learning theory have empirical support. In addition, several behavioral rating scales exist to estimate risk with this population. As the judicial branch has directed more resources towards juvenile offenders, including firesetters, several legislative bodies are increasing their focus on juveniles adjudicated as sexual offenders. A review of the research suggests that early intervention can provide a meaningful impact for the youthful sexual offender. What's a clinical behavior analyst got to do with all of this? A skillful integration of the best practices sex offender assessment and 3rd wave behavior therapies couples what works with what matters in the treatment of the juvenile sexual offender. In closing, we offer a comprehensive review of the role of applied behavior analysis in the assessment and management of juvenile offenders will be presented. Emerging theoretical trends and evidenced-based practices will be discussed.

Evidence Based Practices with Juvenile Firesetters: A Social Learning Note for Behavior Analysts. JOSEPH D. CAUTILLI (Behavior Analysis and Therapy Partners)

Abstract: Juvenile firesetters is a population that has received much attention recently from the court system. Behavioral treatments built from social learning theory have empirical support. In addition, several behavioral rating scales exist to estimate risk with this population. This symposium offers information on the basics of assessment and intervention for this group.

Recidivism Risk Reduction Therapy (3RT) and the Juvenile Sex Offender. KIRK A.B. NEWRING (Kirk A. B. Newing, PhD, LLC), Jennifer Wheeler (Private Practice)

Abstract: Juvenile sex offenders are the focus of several recent legislative initiatives. A review of the research suggests that early intervention can provide a meaningful impact for the youthful sexual offender. What's a clinical behavior analyst got to do with all of this? A skillful integration of the best practices sex offender assessment and 3rd wave behavior therapies couples what works (evidence-based practice) with what matters (empirically-derived risk factors) in the treatment of the juvenile sexual offender.

Behavior Therapies with Juvenile Offenders. MICHAEL WEINBERG (Orlando Behavior Health Services, LLC)

Abstract: This presentation will focus on behaviorally-based treatment approaches for court adjudicated juvenile sex offenders. Current literature and program interventions in treatment settings will be presented and discussed. Also, use of CBA approaches to evaluating these sex offenders will be presented. In addition, a comparison of behaviorally based approaches to the standard clinical approaches will be presented and discussed.

#433 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 131 A
CSE; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Mark R. Dixon, Ph.D, BCBA

BIG SIG Symposium 1: Behavior Analysis and Risk
Chair: Mark R. Dixon (Southern Illinois University)

Abstract: The science of behavior analysis stretches to all facets of human behavior. One area of that behavior which could undoubtedly benefit from further exploration, is in that of risk. Therefore, the current symposium was created to address various risky behaviors in which humans engage, and offer behavior analytic explanations and concepts to the understanding and minimization of risky behavior.

Creating an Empirical Measure of Risk at Casino Table Games. MARK R. DIXON (Southern Illinois University)

Abstract: The cognitive concept of risk is used to define various features of gambling and the personality type of casino gamblers. While risk can be operationally defined in various ways, an empirical calculation is lacking when referring to games such as roulette, craps, and other table games. This paper will provide an operant account of risk, demonstrate the ability to bring risk under experimental control, and provide data between subjects whereby contingencies of reinforcement can either increase or decrease "risk". Nonbehavioral accounts of risk are imprecise and inaccurate given the ability to quantify this dimension of behavior from a behavioral account.

Cognitive fallacies: Do they predict actual gambling behavior? JEFFREY N. WEATHERLY (University of North Dakota), Katheryn Flannery Woehl (University of North Dakota)

Abstract: The research literature on gambling suggests that subscribing to certain cognitive fallacies is correlated with problem gambling. The present study had non-pathological participants completed a series of questionnaires designed to determine how strongly they subscribed to certain cognitive fallacies. They then gambled money on a slot machine and on video poker. If these cognitive fallacies influence gambling behavior, then participants' subscription to these fallacies should be predictive of their behavior when they are gambling. The results did not support this conclusion, indicating that other factors likely control gambling behavior.

Discounting Probability of Risk and Illness in Human Service Organizations. NICHOLAS MUI KER LIK (Southern Illinois University), Mark R. Dixon (Southern Illinois University)

Abstract: In 2006, the World Health Organization reported that of the 35 million healthcare workers around the world, about 3 million are exposed to bloodborne pathogens each year, and a lack of health precautions predisposes them to infection. This occurs across multiple settings, including nursing homes and residential facilities for clinical populations. Some health care workers may discount the probability of their getting an infection, and discounting of that probabilistic outcome may affect the likelihood of their engaging in precautionary measures. If the probabilistic discounting paradigm could be applied to workers in residential facilities, it could provide some insight about why people do or do not take proper measures to control infection. The current study attempted to assess the rate at which workers in settings such as a residential facility and a nursing home discounted the probability of being infected with diseases such as viral hepatitis and methicillin-resistant staphylococcus aureus while not engaging in proper safety precautions when caring for residents. Participants were also given questionnaires that asked them to self-report the frequency with which they engaged in specific precautionary measures such as wearing masks into a quarantine room and properly disposing of medical waste. Results and implications will be discussed.

The Effect of Financial Contingencies on Golf Performance. JAMES BORDIERI (Southern Illinois University- Carbondale), Michael Bordieri (Southern Illinois University- Carbondale), Mark R. Dixon (Southern Illinois University)

Abstract: Previous research has demonstrated that the introduction of financial gain and loss contingencies can affect performance in a video-game golf simulation. Pilot data indicated that the shot accuracy of participants decreased and their shot variance increased when they were exposed to a monetary gain condition but not when they were exposed to a response cost condition. The present investigation was designed to replicate and extend the previous findings by examining the effect of different financial contingencies on golf performance in a natural environment. Experienced golfers were assessed for baseline performance on both the putting green and the practice range of a municipal

golf course. After stability was established, participants were exposed to conditions in which shot accuracy led to financial rewards and other conditions in which shot accuracy led to financial punishers. Results and implications for a behavioral understanding of golf performance, risk taking, and the "choking" response will be presented.

#434 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 129 A
DDA/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: John T. Rapp, Ph.D., BCBA

Further Analyses of the Sensitivity of Partial Interval Recording and Momentary Time Sampling for Detecting Behavior Changes
Chair: John T. Rapp (St. Cloud State University)

Abstract: This symposium includes four presentations on the sensitivity of partial interval recording (PIR) and momentary time sampling (MTS) for detecting changes in actual or simulated behavioral events. In the first study, Devine and Rapp generated simulated data to target sessions with various percentages (e.g., 25%, 50%, 75%) of an event and subsequently evaluated the extent to which each interval size of PIR and MTS detected small, moderate, or large behavior changes. In addition, Devine and Rapp evaluated whether 10-min, 30-min, or 60-min sessions increased the sensitivity of each interval size of PIR or MTS for detecting small or moderate behavior changes. Finally, Devine and Rapp also evaluated the extent to which PIR and MTS produced false positives when evaluating changes in duration events and whether interval methods generated trends that did not exist in the respective CDR data paths. Testa and Rapp conducted a study that was similar the Devine and Rapp study; however, they focused on evaluating changes in frequency (discrete) events with PIR and MTS. In the third study, Carrol and Rapp evaluated whether the sensitivity of MTS for detecting small or moderate behavior changes could be enhanced using (a) combinations of MTS and PIR, (b) combinations of MTS and whole interval recording, and (c) variable intervals sizes of MTS. In the final presentation, Delmolino et al. evaluated the extent to which various interval sizes of PIR and MTS detected the same behavior function as continuous measures based on the results from functional assessments for several individuals.

Evaluating the Accuracy of Interval Recording Methods in Estimating Duration Events: Assessing the Effect of Session Length. SHERISE L. DEVINE (St. Cloud State University), John T. Rapp (St. Cloud State University)

Abstract: This study extends upon the body of research that exists in assessing the accuracy of partial-interval recording (PIR) and momentary time sampling (MTS) in estimating duration events. Simulated data were generated to produce various absolute durations of behavior (25%, 33%, 50%, 66% and 75%) for various session lengths (10 min, 30 min, and 60 min). Inter-response times (IRT) were simulated for low, medium, or high ratios for each percentage of behavior. The generated data were scored using continuous duration recording (CDR) and graphed into ABAB reversal designs. Subsequently, the generated data were re-scored using PIR and MTS with interval sizes set at 10 s, 20 s, 30 s, 1 min, and 2 min. Results were graphed accordingly into ABAB reversal designs and visually inspected for functional control otherwise depicted in the CDR measures. Overall, increased session length yielded increased sensitivity for most interval recording methods examined, with exception to PIR interval sizes set at 30-s or higher. Increased session length allowed MTS with interval sizes up to 30-s to detect a slightly higher proportion of small behavior changes than 10-s MTS when using shorter sessions.

Evaluating the Sensitivity of Interval Recording Methods for Detecting Changes in Frequency Events: The Effect of Session Length. JENNIFER TESTA (St Cloud State University), John T. Rapp (St. Cloud State University)

Abstract: This study extends the findings on the accuracy of using partial interval recording (PIR) and momentary time sampling (MTS) to estimate frequency events by investigating the effects of session

length. Using simulated data, continuous frequency records (CFR) were generated for events at different rates (approximately 0.75, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 13.0, and 20.0 rpm) and session lengths (10, 30, and 60 min). Thereafter, CFR were converted into PIR and MTS records with 10-s, 20-s, 30-s, 1-min, and 2-min intervals. Data were depicted on line graphs and analyzed within ABAB reversal design. The results indicated that the sensitivity of various interval sizes of MTS increased as the session length increase and that some interval methods generate trends that do not appear in the CFR data paths.

Detecting Changes in Simulated Events: Using Variations of Momentary Time-Sampling to Measure Changes in Duration Events. REGINA A. CARROLL (Saint Cloud State University), John T. Rapp (St. Cloud State University)

Abstract: The extent to which a greater proportion of small behavior changes could be detected with momentary time-sampling (MTS) was evaluated by (a) combining various interval sizes of partial-interval recording (PIR) with specific interval sizes of MTS and (b) using variable interval sizes of MTS that were based on means of 20 s and 1 min. For each targeted percentage, low, moderate, and high interresponse times to event-run ratios were compared with reversal designs to determine whether sensitivity increased with either variation of MTS. The results showed that (a) combinations of MTS and PIR and MTS and WIR yielded increased sensitivity over MTS alone; however, the increased sensitivity was offset by an increased probability of generating false positives and (b) variable-interval MTS produced comparable sensitivity to fixed-interval MTS. Thus, none of the three variations of MTS yielded increased detection of small behavior changes.

Comparison of Data Obtained via Continuous and Interval Recording Methods During Functional Behavior Assessment and Treatment Evaluation for Stereotyped Behavior. SUZANNAH FERRAIOLI (Douglass Developmental Disabilities Center, Rutgers, the State University of New Jersey), Lara M. Delmolino (Douglass Developmental Disabilities Center, Rutgers, the State University of New Jersey), Robert LaRue (Douglass Developmental Disabilities Center, Rutgers, the State University of New Jersey), Kate E. Fiske (Kennedy Krieger Institute), Meredith Bamond (Douglass Developmental Disabilities Center, Rutgers, the State University of New Jersey), Kimberly Sloman (Douglass Developmental Disabilities Center, Rutgers, the State University of New Jersey)

Abstract: A number of studies have demonstrated that the use of partial interval recording (PIR) overestimates the occurrence of stereotyped behavior in clinical settings, whereas momentary time-sampling (MTS) more closely matches the relative duration of the behavior as measured by continuous observation and recording. (Delmolino, Fiske & Dackis, 2008; Gardenier, MacDonald, & Green, 2004). Further, it has been demonstrated that the selection of interval length and rate of the behavior impact the accuracy of both PIR and MTS (Fiske, Delmolino & Ferraioli, 2008; Gardenier et al., 2004 . Despite these findings, PIR data is often utilized for measurement of stereotyped behavior. In related research, Meany-Daboul, Roscoe, Bourret and Ahearn (2007) compared continuous frequency and duration data with PIR and MTS data within a treatment analysis and found that methods generated similar conclusions regarding data trends and response to treatment, although frequency data more closely matched PIR and duration data more closely matched MTS. The current study extends this line of research by comparing the data produced by continuous duration recording with PIR and MTS at various interval lengths for stereotypy exhibited by children with autism across functional behavior assessment sessions. Visual analysis will examine whether the same behavioral function is identified using each data method during functional assessment within a multi-element design. Subsequent data produced in treatment evaluation sessions with each observation method will also be compared to evaluate whether interpretations regarding response to treatment are influenced by data type. This line of research helps to highlight the need for calibration of data collection methods to ensure the most accurate data to guide data-based clinical decisions, particularly in relation to stereotyped behavior.

#435 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 128

DDA/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Lisa Winborn-Kemmerer, Ph.D., BCBA

Further Analysis of Variables that Influence Mand Training
Chair: Lisa C. Winborn-Kemmerer (West Virginia University)
Discussant: Joel Eric Ringdahl (University of Iowa)

Abstract: Individuals with developmental disabilities and autism often present a variety of communication deficits. This can include the use of vocal sounds or babbling and the absence of vocal speech. Depending on the individual's existing communication skills, different topographies of mands (e.g., vocal sounds, manual signs, communication cards, microswitch devices) may be targeted for training and alternative strategies may be needed to effectively increase communication. For example, training and reinforcing more than one mand may increase the individual's functional communicative repertoire. In addition, training mands across multiple settings and functional contexts may affect the errors made with mands, the individual's ability to generalize mands, and the amount of problem behavior displayed during training. In this symposium, the presenters will discuss the role of several variables (e.g., training multiple mands, extinction of mands, mand errors, stimulus generalization, and use of lag schedules of reinforcement) that may influence mand training and the use of functional communication skills.

Stimulus Generalization and Extinction of Mands During Functional Communication Training. LISA C. WINBORN-KEMMERER (West Virginia University), Jennifer Wolfe (University of Louisville), Allison Cheek (University of Louisville)

Abstract: The purpose of this study was to evaluate the stimulus generalization of two mand topographies across settings and to further evaluate problem behavior and mands when one of the mands was placed on extinction. Two children with developmental disabilities and autism participated in this study. A functional analysis was conducted across one setting to identify the reinforcers for problem behavior. Next, problem behavior was assessed for the escape condition of the functional analysis in an alternative setting. Concurrent FCT programs were then implemented across both settings for problem behavior maintained by negative reinforcement. A microswitch was trained in one setting and a communication card was trained in the other. Following FCT, stimulus generalization (novel setting) was assessed for each mand. Finally, both mands were available for reinforcement in each setting, however, extinction was provided for one of the mands. All phases of this study were conducted within a multielement and reversal designs. Results showed that both mands generalized to novel settings and that the children used the alternative mand, when one of the mands was placed on extinction without increased problem behavior. Interobserver agreement was obtained across 30% of sessions and averaged above 80%.

An Evaluation of Mand Errors Across Functional Contexts During Functional Communication Training. TERRY FALCOMATA (University of Iowa), David P. Wacker (University of Iowa), Joel Eric Ringdahl (University of Iowa), Kelly M. Vinquist (University of Iowa), Anuradha Salil Kumar Dutt (University of Iowa)

Abstract: The purpose of this study was to evaluate stimulus generalization errors during and following FCT and to examine the conditions under which errors were most likely to occur. Specifically, we evaluated the occurrence of stimulus generalization errors in manding across functional contexts in which one or more functions of problem behavior were identified. Errors were evaluated across three functional contexts (i.e., restricted tangible, attention, and demand) to allow for a direct evaluation of stimulus generalization within and across reinforcement classes (i.e., positive reinforcement, negative reinforcement) and functional contexts. We first conducted functional analyses to identify the function(s) of problem behavior with three children diagnosed with developmental disabilities. Next, we implemented FCT in which three novel manual signs across three respective functional contexts (i.e., tangible, attention, demand) were trained and the occurrence of stimulus generalization errors was evaluated across all three functional contexts. The results suggested that variables relating to reinforcement class affected patterns of stimulus generalization regardless of the presence or absence of functions of problem behavior within respective functional contexts. Interobserver agreement was obtained during at least 30% of sessions and averaged above 90%.

The Use of Lag Schedules of Reinforcement to Increase the Variability of Vocal Production in Children with Developmental Disabilities. ALLISON TETREAULT (West Virginia University), Claire St. Peter Pipkin (West Virginia University), Brittany Glass (West Virginia University)

Abstract: Children diagnosed with developmental disabilities present a wide range of communication deficits. These deficits may range from complete mutism and nonuse of words to mild grammar deviations. While there is abundant literature on teaching strategies for children who use words, less attention has been given to strategies for subjects who engage in only the production of sounds. Intuitively, shaping procedures that reinforce successive approximations to the target behavior (here, a word) would seem to be a useful strategy. However, some children do not imitate vocal sounds and do not produce enough sounds to allow for the selection of a shapeable vocal unit (e.g., "eat" or "candy" cannot be shaped from the sounds /b/ or /p/). We investigated a lag reinforcement schedule to increase the vocal variability of young pre-verbal children with autism. By increasing variable vocal production, a wider array of sounds developed in the children's vocal repertoire, which can be selected from and shaped into functional words. Future applications of this technology are suggested. Interobserver agreement was obtained for 30% of sessions and averaged above 80%.

#436 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 120 A
DDA; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Jonathan J. Tarbox, Ph.D., BCBA

Recent Research in Training Mediators of Behavior Change Programs
Chair: Kristen Lein (CSU, Fresno and BEST Consulting, Inc.)
Discussant: Linda A. LeBlanc (Western Michigan University)

Abstract: Most research on behavior intervention procedures involves implementation of procedures by expert clinicians and/or experimenters. While this tradition is likely to contribute to procedural fidelity, in the real lives of clients, it is often parents, teachers, siblings, or others, who will need to be able to implement interventions. Therefore, research on effective methods for training others is needed. This symposium contains four studies on training. The first study examines the use of feedback in the training of paraeducators. The second paper describes the development of a program designed to include siblings in behavioral intervention for children with autism and will present preliminary data. The third study looked at the effects of contextualized treatment on parental adherence to behavior protocols with children diagnosed with developmental disabilities. The symposium will conclude with a discussion by Dr. Linda LeBlanc.

Sibling Sessions: Training Siblings to Participate in Sessions at a Center Based Program for Children with Autism. KRISTEN LEIN (California State University, Fresno and BEST Consulting, Inc.), Amanda Adams (California State University, Fresno), Jessica Akers (California State University, Fresno), Ashley Yaugher (California State University, Fresno)

Abstract: Children with autism benefit from programs that contain significant family involvement. Siblings of children with autism are not only present in the household, but may carry additional caretaking responsibilities for their sibling or may feel some neglect at the attention a sibling in a treatment program receives. Siblings are often willing and present peers, and can make excellent peer trainers. This allows the sibling an opportunity to take an active and important role in their brother or sisters program, increases their understanding of the process, provides the child with autism a constant trained peer (or near peer) in their home environment providing multiple opportunities for generalization, and, thought not proven, may improve family dynamics. The Central California Autism Center at California State University, Fresno has implemented a sibling session program with these goals in mind. This presentation will include information on how the program was developed, how the siblings were trained, results from pre and post tests, data form the training sessions and the ongoing sibling session design.

Evaluation of an eLearning Tool for Training Behavioral Therapists in Academic Knowledge of Applied Behavior Analysis. CATHERINE PETERS (Center for Autism and Related Disorders, Inc.), Doreen Granpeesheh (Center for Autism and Related Disorders, Inc.), Jonathan J. Tarbox (Center for Autism and Related Disorders, Inc.), Kathy Thompson (Center for Autism and Related Disorders, Inc.)

Abstract: Effective treatment programs depend on top-quality training of staff. Training is often costly, time-consuming, and can be especially inaccessible for persons living in rural locations. Self-instructional computer-based training programs, also known as electronic learning (eLearning), offer an alternative or supplement to traditional classroom training formats. The eLearning format provides increased accessibility to training by allowing individuals to experience training anywhere in the world with a computer with internet access. This study evaluated the effectiveness of an eLearning program as a supplement to in-person instruction, for training new behavioral therapists on academic knowledge of basic applied behavior analytic principles and procedures. Results are discussed in regards to the overall efficacy and efficiency of the eLearning training format and the implications for global dissemination of behavior analysis.

Evaluating Parental Adherence to Behavioral Intervention for Children with Developmental Disabilities. RYAN P. GUTTERSON (California State University, Los Angeles), Carolyn Hitch (California State University, Los Angeles)

Abstract: This study looked at the effects of contextualized treatment on parental adherence to behavior protocols with children diagnosed with developmental disabilities, and the collateral effects on the child's behavior. The contextualized treatment included an emphasis on collaborative goal setting within a family-chosen routine. Two dependent variables were measured: (a) percentage of parental adherence (number of steps implemented appropriately over the total number of steps), and (b) frequency of the child's target response (i.e., functional communication and/or compliance). Results are discussed with respect to the benefits of contextualized parent training approaches for parents of children with developmental disabilities.

#437 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 132 BC
DEV/CBM; Service Delivery

Application of Behavior Analysis to Improve Quality of Life for Individuals with Dementia
Chair: Clair Rummel (University of Nevada, Reno)

Abstract: Current estimates show that 3.4 million adults, approximately one in seven adults over the age of 71, have some form of dementia (National Institute on Aging, 2007). As demographics shift over the next decade the growing need for restraint-free interventions to improve quality of life for both the individual with dementia and the caregiver will intensify. Individuals with dementia experience a progressive loss of ability to communicate, carry out tasks of daily living and maintain relationships. The presentations will outline behavioral interventions that decrease losses associated with dementia, including interventions to increase verbal repertoires using an idiographic approach to communication training; facilitate item recall through the use of tacts, echoics and intraverbals; and use self-referent stimuli to increase wayfinding ability in individuals with dementia. The growing needs of individuals with both Down syndrome and dementia of the Alzheimer's Type will be addressed
in a new conceptualization of the effects of function-based interventions designed to reduce agitation in this population.

Facilitating Conversation in Alzheimer's Disease: An Idiographic Approach to Communication Training for Family Caregivers. RUTH GENTRY (University of Nevada, Reno), Jane E. Fisher (University of Nevada, Reno)

Abstract: The loss of verbal repertoires is an inevitable consequence of Alzheimer's disease (AD). Communication difficulties are among the most stressful problems family caregivers report. This study employed a multiple baseline across caregiver/care-recipient dyads to evaluate the effects of an individualized approach to caregiver communication training. Four family caregivers were taught to modify specific verbal behaviors to create a non-punitive, supportive communicative environment for their family member with dementia. Coding of audio recordings of dyad conversations in the natural environment indicated that caregivers' verbal behaviors significantly impacted the fluency and coherence of the speech of AD participants. Fewer communication problems occurred within dyads following caregiver training. Results indicate that individualized caregiver communication skills training can create environments that facilitate rather than punish the conversational speech of persons with AD, thereby promoting the preservation of verbal repertoires in persons with AD and meaningful relationships between persons with AD and their families.

Using Tacts, Echoics, and Intraverbals to Facilitate Item Recall in Persons with Dementia. Mark R. Dixon (Southern Illinois University), Katie A Sadowski (Southern Illinois University-Carbondale), LAURA BARNES (Southern Illinois University)

Abstract: Skinner's 1957 analysis of Verbal Behavior has demonstrated a fair amount of utility to teach language to children with autism and other various disorders. However, the learning of language can be forgotten, as is the case for many elderly suffering from dementia or other degenerative diseases. It appears possible that Skinner's operants may facilitate not only acquisition of language but also the ability to recall items or objects that may have appeared to be "forgotten". The present study examined the utility of having a series of adults in long term care emit either tacts, echoics, or intraverbals upon presentation of various visual stimuli. Compared to a no-verbal response condition, it appears that the incorporation of Skinner's verbal operants can in fact improve recall for this population. Implications for the re-training of lost language are presented.

Wayfinding in Nursing Home Residents with Dementia. ALLISON A. JAY (University of Colorado, Colorado Springs), Leilani Feliciano (University of Colorado, Colorado Springs), Sarah Anderson (University of Colorado, Colorado Springs), Linda A. LeBlanc (Western Michigan University)

Abstract: There is a growing population of older adults with dementia that are residing in long term care settings. These individuals commonly experience difficulty locating their bedroom as a result of limited learning histories and ineffective discriminative stimuli to help distinguish individual bedrooms. Ineffective wayfinding abilities may expose elders to safety hazards and may create problems for other residents and staff. Study 1 investigated the ability of four elders with severe dementia to recognize various self-referent stimuli (i.e., young adulthood photograph, middle adulthood photograph, current photograph, and printed name). Residents that were able to meaningfully recognize at least one type of stimulus then participated in an intervention in which the various stimuli (i.e., best recognized stimulus, poorest recognized stimulus, no stimulus) were posted outside their bedroom doorway during assessment probes and room finding abilities were measured using direct observation techniques. Data are presented as accuracy and latency to room finding. Subsequent studies (Study 2 and 3) improve upon the first study by investigating the effects of various stimulus presentations (i.e., memory box vs. bulletin board), and the effects of discrimination training on wayfinding abilities. Results from Study 2 and 3 on resident room finding will be discussed.

Behavioral Interventions to Reduce Agitation in Individuals with Downs Syndrome and Dementia. MARY E. STEERS (University of Colorado, Colorado Springs), Leilani Feliciano (University of Colorado, Colorado Springs)

Abstract: Individuals with developmental disabilities have a longer life expectancy than ever before. Yet, adults with Down's syndrome (DS) are at an increased risk of developing dementia of the Alzheimer's type (DAT), with prevalence rates of ranging from 50-75% by age 65 (Torr & Davis, 2007). Individuals with DAT often exhibit agitation (i.e., physical and/or verbal aggression), which negatively affects quality of life (QoL) and increases caregiver burden. Previously, physical or chemical restraints have been used

to manage agitation (Cohen-Mansfield, Libin, & Marx, 2007) but the negative consequences associated with these strategies mandates the use of alternative interventions. Behavioral interventions to reduce agitation in individuals with DS and in individuals with DAT are often effective, but few studies investigated interventions in individuals with both DS and DAT. It is crucial to initiate empirically-derived, behaviorally-based approaches to manage behavior problems in this population. We present a conceptualization of the effects of function-based interventions designed to reduce agitation in individuals with DS and DAT. This project seeks to use functional assessment and resulting function-based interventions to effectively manage agitation with the goal of decreasing perceived caregiver burden and stress and increasing QoL for both the caregiver and the individual with DS and DAT.

#438 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 121 A
EDC/CSE; Applied Behavior Analysis

Educating through the Physical – Using Applied Behavior Analysis in Physical Education.
Chair and Discussant: Phillip Ward (The Ohio State University)

Abstract: Physical activity holds great promise as a natural setting for learning and for behavioral change. Despite claims that engagement in physical activity can promote socially desired behaviors, there remains a lack of a clear conceptual base that can guide interventions as well as research endeavors in this field. This situation leaves those who utilize physical activity as a learning agent to base their practice on common sense, intuition, or trial and error. The purpose of this symposium is to suggest examine a conceptual framework of 'Educating through the Physical'. This framework is grounded in the theory of Behavior Analysis and the principles of that science provide the guidelines for application and for the use of various procedures. In this symposium we discuss the rationale of 'Educating through the Physical,' present data-based examples of interventions used to educate through the physical and review the literature in physical education using interventions grounded in applied behavior analysis.

Behavioral Interventions in Physical Education. PHILLIP WARD (The Ohio State University)

Abstract: Two tests of the utility and value of a science to an educational community are the extent to which its findings (a) are used as recommended practices in the preparation of teachers and (b) are incorporated by teachers into everyday practice. This presentation presents the results of a review of experimental research conducted in physical education settings using applied behavior analysis principals and procedures. Following a on-line search, articles were selected from journals by visually inspecting each issue to identify those that used a single subject design to assess the effects of behavioral interventions in P-12 or teacher preparation settings. A total of 44 studies met the inclusion criteria. Studies were categorized according to their focus: (a) preservice or inservice teacher behavior, (b) student learning, (c) class management, or (d) student learning specifically focused on students with disabilities in adapted or inclusive settings. The review describes the scope of the behavioral interventions and examines the research designs used. A methodological critique suggests that while findings have been robust and the designs used are typically rigorous, investigators have not assessed generality, maintenance or social validity as well as they might.

Why Educate Through the Physical? Why Educate through the Physical: A Rationale and Behavioral Interpretation. EITAN ELDAR (Zinman College, Israel), Shiri Ayvazo (University of Nevada, Las Vegas)

Abstract: In an era of diversity, inclusive education, and increasing rates of maladaptive behaviors, social competence is essential for successful performance in school and in life. Physical education it has been argued is an effective vehicle for the acquisition of social skills and values. Since the 1980s, there has been a proliferation of prosocial programs in physical education that set the acquisition of prosocial skills as their primary objective. The unique features of physical activity and play highlight it as a constructive

context for attaining behavioral goals such as self-control and social skills. Strenuous activity, competition, adherence to rules, team play, frustration and joy are all characteristics inherent in sport that make it a perfect "school for life". We provide a rationale for teaching prosocial and adaptive competencies of students of various age groups and needs, through a physical education program. Strategies that can endorse educational goals other than those of movement will be suggested with their behavioral interpretation.

Physical Education as a Context for Behavioral Assessment and Intervention – Emerging Data.
EITAN ELDAR (Zinman College, Israel), Michal Hirschmann (Zinman College, Israel), Efrat Elran (Zinman College, Israel)

Abstract: We shall present data from two studies that have used Physical Education (PE) for assessing and teaching pro-social skills. In the first study, sixteen male high-school students practiced a movement game. The difficulty level of the game was manipulated through four different difficulty domains: (1) Duration of the game; (2) Intensity of running; (3) Complexity of the physical task; and (4) Distracters during performance. The dependent variable was students' misbehavior. A multielement design showed that the highest levels of misbehaviors occurred with the manipulation of the intensity factor, a pattern that became more pronounced as the task prolonged.
The second study examined the contribution of individualized PE program in improving students' behavior and consequently, in facilitating classroom management. Three students from three different classes in a special education school participated in the study. A multiple baseline design across participants indicated an improvement in the behavior of all target students during the individual PE intervention. The reduction in inappropriate behavior was apparent during academic classes as well. Improvement in learning time for all students in two classes and a more stable learning pattern for the third was shown.

#439 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 121 BC
EDC/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Amy Davies Lackey, Ph.D., BCBA

Goodbye Trainer: The Role of Rule Governed Behavior in Faculty Training
Chair: Kelly A. Hobbins (Hawthorne Country Day School)

Abstract: The higher-order class of behaviors that characterize rule governed behavior play a role in traditional and novel forms of faculty training in schools. Because of the economical nature, and practicality generated by instruction-following, many complex behaviors of school staff are shaped by the verbal community. While many traditional approaches to faculty training involve instruction following, these instructed performances are often insensitive to the consequences experienced in a classroom. The four papers presented in this symposium will provide instructional tactics for ensuring such skilled performance with faculty that allow a combination of both rule governed and contingency shaped experiences through the use of PSI, module systems of training, as well as a teacher performance rate accuracy tool. Further, the papers will examine the contingencies that maintain instruction following, as well as the relationship between verbal formulations and nonverbal contingencies. Results discussed from each of the aforementioned studies will also examine the contingencies that maintain instruction-following with respect to faculty training.

The Economics and Outcomes of PSI in Faculty Training. AMY J. DAVIES LACKEY (Hawthorne Country Day School), Virginia S. Wong (Hawthorne Country Day School), Jean Korchma (Hawthorne Country Day School)

Abstract: The personalized system of instruction (PSI) developed by Keller and his colleagues has been demonstrated to be effective in collegiate settings. Whether this system can be effective in the workplace (specifically a school setting) may depend on the economics of time and student outcomes as a result of this type of training. Procedures described by Keller (1968) were employed with the training of school

staff in a behavior analytic school setting, and compared with a traditional lecture method used in workshops and staff training. A within-subjects design was used in which half of the faculty participants experienced the PSI condition and half experienced the traditional lecture method. Following the training sequence, employees were to demonstrate the skills they acquired by running instructional programs in a discrete trial format. Accuracy and rate, as well as teacher and student performance were measured through the use of a Teacher Performance Rate Accuracy Form, or TPRA (Greer), and functioned as the dependent variable of the study.

Using a Self-Management Script with an Embedded Task Analysis to Prompt Teacher Completion of Performance Goals and Collateral Effects on Student Behavior. TINA MARIE COVINGTON (Hawthorne Foundation), Daren Cerrone (Hawthorne Country Day School), Jason Cory Rosenfeld (Hawthorne Country Day School), Amanda W. Doll (Manhattanville College), Jean Korchma (Hawthorne Country Day School)

Abstract: In three studies we investigated the effects of a self-management script on the cumulative number of performance goals completed by teachers. Teachers were given a set of 5 performance goals related to increasing verbal behavior; contingency shaped behavior, and verbally mediated skills in ABA. Supervisors through quizzes, spot checks and classroom meetings monitored progress. During intervention, teachers were given a self-management script, which listed the behaviors necessary to identify, organize, set up a timeline, and monitor the completion of performance goals. Results showed that the textual script correlated with an increase in the number of performance goals completed weekly by the participants. Positive effects on student behavior were evident and suggested further investigation on the collateral effects of the completion of the performance goals.

The Effects of Supervisor-Delivered Feedback and Video Self-Observation with the Teacher Performance Rate/Accuracy (TPRA) Measurement. AMANDA W DOLL (Manhattanville College), Daren Cerrone (Hawthorne Country Day School), Jason Cory Rosenfeld (Hawthorne Country Day School)

Abstract: Previous research has demonstrated that teachers in special education settings make superior improvements in their instruction when they are provided with repeated observations and specific, rather than general feedback (Ingham & Greer, 1992) that addresses both their own behavior and their students' behavior simultaneously, such as with the TPRA (Selinske, Greer, & Lodhi (1991). The present multiple baseline across teachers study used the TPRA measure within a special school environment to provide written and graphic feedback to teachers and teaching assistants during a baseline condition. Those staff identified as requiring support on the basis of their pre-intervention performance were invited to participate. These staff were taught to code videotaped instructional segments until they were calibrated observers to the training tape. Finally, teachers recorded their own teaching and were then taught to perform TPRA observations on themselves and to apply decision rules and goal-setting to their own graphed performances. A functional relationship between video self-observation was demonstrated for several of the teachers.

Teaching Machines for Teachers - The Legacy of B. F. Skinner. JEREMY H. GREENBERG (Applied Behavioral Consulting Services, LLC)

Abstract: There has been an increase in the use of computers and technology over the recent years in the instruction of students. Video modeling has demonstrated positive results for many students. Teachers and supervisors can benefit as well from technological enhanced instruction. Schools for students that use applied behavior analysis have a need for consistent training procedures. Some examples of computer-based training will be discussed as well as potential benefits.

#440 International Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 122 BC
EDC/CSE; Applied Behavior Analysis

Recent Developments in Evidence-based Practice and Their Relevance for the Field of Applied Behavior Analysis
Chair: Oliver Wendt (Purdue University)

Abstract: Evidence-based practice (EBP) is increasingly being recognized as the preferred approach to clinical practice in Applied Behavior Analysis (ABA). EBP involves the integration of research evidence with clinical expertise and stakeholder perspectives to derive the best possible decisions for a client. The EBP process involves: asking a well-built question, searching for and appraising evidence, applying the evidence, and evaluating the application.Implementing EBP, however, can be difficult. Practitioners can experience barriers such as lacking skills and knowledge, missing resources (e.g., no access to research databases), and limited time. Consequently, evidence-based journals have evolved that try to translate research into practice, thereby reducing EBP implementation barriers.The growing importance of EBP can also be attributed to the desire to know if an intervention is effective. ABA practitioners and their clients want to know what outcomes will be improved by an intervention, how much improvement to expect, how long the intervention will last, and how much it will cost. Such questions can be answered by systematic reviews of research evidence and institutions such as the Campbell Collaboration have evolved to produce, disseminate and maintain systematic reviews.This symposium will highlight these current EBP movements and discuss their relevancy for the ABA field.

The Campbell Collaboration (C2): Bridging the Research-Practice Gap. CHAD NYE (University of Central Florida)

Abstract: This paper will provide a summary of the Campbell Collaboration's mission to promote the collection, synthesis, and analysis of scientific evidence through systematic reviews to address 'What Works' in interventions, treatments, programs, or instruction. C2 is an international research network that produces systematic reviews of the effects of educational and social interventions. C2 is based on voluntary cooperation among researchers of a variety of backgrounds. C2 currently has five Coordinating Groups: Social Welfare, Crime and Justice, Education, Methods, and the Users group. The Coordinating Groups are responsible for the production, scientific merit, and relevance of systematic reviews. They provide editorial services and support to review authors. C2 is modeled after its sibling in health care, the Cochrane Collaboration. Cochrane had been producing systematic reviews since 1994; many of its members saw the need for an organization that would produce systematic reviews of research evidence on the effectiveness of behavioral, educational, and social interventions. Support for this idea from social and behavioral scientists led to the creation of C2 in 2000. Of special interest to the ABA field, is the Education Coordinating Group, which prepares, updates, and disseminates systematic reviews of high-quality educational and training interventions to improve education and learning.

Producing Systematic Reviews of Single-subject Research Through C2. OLIVER WENDT (Purdue University)

Abstract: This presentation will provide an overview on how to conduct a systematic review of single-subject experimental designs (SSEDs) through the Campbell Collaboration (C2). SSEDs typically rely on within-subject experimental controls and use of time series data to establish the effectiveness of an intervention. The adoption of evidence-based practice (EBP) in disability, health care and rehabilitation fields demands that practitioners do not rely on any one individual study but rather the aggregated evidence from a synthesis of studies using SSEDs. In EBP, systematic reviews of SSEDs constitute one of the most persuasive forms of scientific evidence. Systematic reviews of SSEDs rank higher on evidence hierarchies than an individual SSED.

The Campbell Collaboration offers excellent editorial service and peer review for authors of systematic reviews. Publishing a review with C2 increases visibility and impact. Campbell can offer financial assistance for certain projects, assistance with searching and other forms of methodological support. The steps in producing a Campbell systematic review are:

1. Selecting a topic
2. Title registration
3. Establishing a review team
4. Developing a protocol (project plan)
5. Undertaking the systematic review
6. Publishing the review

The Role of Evidence-Based Journals as Evidence-Based Information Sources. RALF SCHLOSSER (Northeastern University)

Abstract: This paper will illustrate how evidence-based journals provide structured abstracts of appraised research studies and systematic reviews, thus reducing barriers to engaging in evidence-based practice (EBP). When trying to incorporate EBP in daily practice, clinicians often face considerable implementation barriers, including a beginning knowledge and skills base about EBP, lack of resources (e.g., access to pertinent databases), and insufficient dedicated EBP time. Perhaps the most time-consuming EBP activity that also requires the most expertise is the searching for and critical appraisal of evidence. Clinicians require knowledge of and skills in searching various sources in order to retrieve the best and most current evidence in an efficient manner. Clinicians also require knowledge of various factors that contribute to the internal and external validity of research. This presentation will highlight the roles of evidence-based journals among the array of evidence-based information services in order to negotiate these barriers to EBP implementation. The presenter will draw from experience as founding editor of Evidence-based Communication Assessment and Intervention, a new evidence-based journal in the area of communication disorders.

Translating Research to Practice through Evidence-Based Practice Journals in Education. MARK D. SHRIVER (Munroe-Meyer Institute)

Abstract: This presentation will discuss issues specific to the translation of research to practice with an emphasis on the role of dissemination of research to practitioners based on lessons learned in the development and on-going publication of the Journal of Evidence-Based Practices for Schools (JEBP). The mission of JEBP is to positively influence the daily practice of school psychologists and educators through dissemination of studies demonstrating the successful application of an evidence-based practice for an educational setting. Articles published in JEBP facilitate the translation of research to practice by (a) using non-technical language, (b) outlining an evidence-based practice, (c) describing the literature supporting the effectiveness and theoretical underpinnings of the practice, (d) describing the findings of a study in which the practice was implemented in an educational setting, and (e) providing readers with the information they need to implement the practice in their own schools. Implementation Guidelines are another key element of JEBP; these guidelines summarize an evidence-based practice and can be used as pull-out handouts in educational settings for guiding implementation of the practice.

#441 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 221 AB
OBM/AUT; Service Delivery
BACB CE Offered. CE Instructor: Gordon A. Defalco, Ph.D., BCBA

Quality Assurance Systems: Using OBM to Monitor Critical Clinical Service Delivery Components of ABA Programs
Chair: Gordon A. DeFalco (Evergreen Center)
Discussant: Robert F. Littleton, Jr (Evergreen Center)

Abstract: Applied behavior analysis continues to expand and refine effective procedures for producing behavior change. Training and maintaining staff skills in these procedures have become increasingly demanding and labor intensive. Another challenge to the field is service delivery models that involve consultation by staff in off site locations such as schools and home settings. To accommodate these challenges, many companies have developed system-wide management interventions to address the need to effectively impact all clients, insure staff training and skill maintenance, and staff fidelity in procedural implementation. This symposium will describe system-wide interventions that have been designed to address critical training issues in a community residential school and in a community-based consultation and autism services delivery model. The first presentation describes a research study that compared the effectiveness of classroom presentations and online training presentation called Training on Demand (TOD). The second presentation focuses on a critical task for applied behavior analysts, that of graphing data. A systems approach to collecting data, submitting graphs, and monitoring/reviewing compliance will be described. The final presentation describes a supervisory feedback system and the effects of its implementation on supervisor and staff teaching behavior over a 1-year period in a home-based service model.

A Comparison of Web-Based Versus Live Training on Staff Skill Acquisition. DIANA LOUISE FISHBACK (Evergreen Center), Gordon A. DeFalco (Evergreen Center)

Abstract: The purpose of this study was to evaluate the effectiveness of 2 staff teaching formats, live presentation and online computer presentation. Approximately 200 experienced and inexperienced employees were randomly assigned to either a traditional classroom or web-based presentation on wheelchair van safety procedures using identical power point and video information. Staff acquisition was assessed on a written test administered immediately after the presentation and a behavior checklist assessing staff performance of safety skills on a wheelchair van. Results indicated minimal differences between the classroom trained and web based trained staff on the written quiz and behavior checklist. All staff also completed a survey evaluating their satisfaction with the presentation format. Satisfaction was measured using a 5-point Likert scale. Results indicate favorable ratings for both online and live presentations with each group averaging 4.0 in all areas. Given the similarity in performance between classroom and web based instruction advantages and limitations of these 2 instructional formats will be discussed. Directions for future research will be considered

Increasing Submission of Graphical Data for Home Based Autism Services. STEVEN WOOLF (BEACON Services), Robert F. Littleton, Jr (Evergreen Center)

Abstract: The graphic display of data is an essential feature of applied behavior analysis that sets it apart from many other human services and educational professions. Graphs are used by behavior analysts to organize data, determine treatment effectiveness, communicate treatment outcomes to others, and examine the effects of particular interventions on human behavior (Copper, Heron, & Heward, 2007). There is significant research supporting the effectiveness of using graphs to communicate and interpret behavioral/educational data (Parsonson & Baer, 1992). Despite this empirical support, it is often difficult for large human services/educational organizations to maintain and collect graphed data on a consistent basis (Fox & Davis, 2005). This presentation describes the systems used by an agency serving over 300 children receiving home based ABA services. The processes of collecting data, submitting graphs, and monitoring/reviewing compliance will be described. Data will be presented on system implementation and discussed in terms of the effects of system supports, compliance monitoring, visual posting, and incentives relative to graph submission behavior.

Effects of a Supervision Monitoring System on Written Supervisory Feedback. ANN FILER (BEACON Services), Robert K. Ross (BEACON Services), Robert F. Littleton, Jr (Evergreen Center)

Abstract: Providing quality home based services to children with autism presents a number of challenges. Among those are ensuring that staff training results in competent implementation of complex procedures. In order to accomplish the goals of providing effective supervision, maintaining or remediating teacher performance, systems supports are required. Green, Rollyson, Passante, & Reid, (2002) suggested that "direct feedback" was related to high levels of staff performance. This study also suggested that specific feedback was a critical element of effective supervisory behavior. The present

study looks at the effects of the implementation of a formal system to provide objective and subjective feedback on staff implementation of ABA programming in home based settings. The presentation will review the components of a written feedback system and the effects of its implementation on supervisor and staff behavior over a one year period. The data indicate that the overall ratings of staff performance increased. Additionally, the use of the system resulted in higher frequencies of "specific" performance feedback and lower frequencies of "general" feedback statements over time. These data suggest that implementation of a formal supervision feedback system may shape the behavior of supervisors and, in turn, the staff they supervise.

#442 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 120 D
OTH/AUT; Applied Behavior Analysis

Sexual Behavior from an Applied Behavior Analytic Perspective (STEPSIG Symposium)
Chair and Discussant: Helen Bloomer (Aspire Programs)

Abstract: The study of sexual behavior has often been theory driven, as opposed to data-driven. In this symposium, the treatment of inappropriate sexual behavior, as well as the development of typical sexual behavior and paraphilias will be described from a data-based Applied Behavior Analytic perspective.

A Behavioral Description of the Development of Paraphilias. BOBBY NEWMAN (Room to Grow)

Abstract: Paraphilias, or sexual arousal patterns that are not standard within the sub-culture, have been theorized to emerge for a variety of reasons. Data will be presented that support an Applied Behavior Analytic understanding of the development of paraphilia.

A Content Analysis of BDSM Internet Media. FAWNA STOCKWELL (The Chicago School of Professional Psychology), Bobby Newman (Room to Grow)

Abstract: BDSM (Bondage, Discipline, Sadism, and Masochism) lifestyle interactions often involve some type of social dynamic in which one individual has a great deal more power or control of a situation than another individual, and this raises the question of whether physical and emotional force/coercion is used, as well as whether both of the involved parties freely consent to participate in the activity. This project involved a content analysis of three types of stimuli: BDSM/fetish online discussion boards, BDSM/fetish video clips, and BDSM/fetish narrative fiction writings. Results of the analysis will indicate the prevalence of force and consent in each of the three domains. Implications of the findings will be discussed.

A Training Package for Teaching Appropriate Touching of Self and Others. CRISTIANE B SOUZA BERTONE (Expanding Repertoires), Lisa M. Swift (Expanding Repertoires), Bobby Newman (Room to Grow)

Abstract: Many students daignosed with developmental disabilities have had no, or only cursory, sex educaiton. They then often suffer the consequences of engagin in inappropriate touching. In this paper, we will discuss the importance of teaching "appropriate" touching for individuals diagnosed with developmental disabilities. We will discuss intereventions for decreasing "inapporpriate" touching in adolescent individuals diagnosed with developmental disabilities and present data regarding a teaching package that aims to teach more appropriate touchign of self and others..

#443 Symposium

5/25/2009
1:30 p.m. - 2:50 p.m.
North 129 B
TBA/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Rachel S. F. Tarbox, Ph.D., BCBA

Current Issues in Graduate Training in Behavior Analysis
Chair: Jonathan J. Tarbox (Center for Autism and Related Disorders, Inc.)

Abstract: The field of behavior analysis is expanding at a rapid pace, as is evidenced by the growing membership of the Association for Behavior Analysis International and the growing number of Board Certified Behavior Analysts. This is encouraging for the health and vitality of the field but important issues related to the professional quality and scientific foundation of the field, as well as to the availability of qualified experts to meet clinical demand, remain. This symposium consists of four papers discussing various issues related to graduate training in behavior analysis, the manner in which it is currently being conducted, the outlook in terms of supply and demand for individuals with graduate degrees in behavior analysis, and the implications for the quality of the field.

The Graduate Training Crisis in Autism and Applied Behavior Analysis. JONATHAN J. TARBOX (Center for Autism and Related Disorders, Inc.)

Abstract: A crisis is currently raging in autism and applied behavior analysis: There simply are not enough masters and PhD-level expert clinicians to meet the clinical demand. Gone are the days when behavior analysts had to beg for funding to work with children with autism. Many top quality agencies now have scores or even hundreds of families languishing on their waitlists, with funding in hand, but for whom there is no one available to supervise their children's services. This situation is so commonplace that many in the field of applied behavior analysis have come to accept it as a given – but deprivation from effective treatment is anything but a given to the families who desperately need it. Unfortunately, the outlook is bleak. The rate at which new graduate training programs are developing is not sufficient and no solution appears to be on the horizon. This paper will discuss the nature of the problem and some potential steps toward a solution. The case will be made that a significant change in the way in which the problem is currently conceptualized will be necessary if any significant progress is to be made.

Current Issues Associated with Graduate Training in Applied Behavior Analysis. ELLIE KAZEMI (California State University, Northridge)

Abstract: Successful graduate training in Applied Behavior Analysis involves teaching the use of concepts and principles of ABA within the framework of scientific methodology and design. The gap between science and practice has been evident in the field of clinical psychology with a distinction made between professionals who develop, conduct, and publish research (i.e., PhDs) versus professionals who consume and interpret research findings for practice (i.e., PsyDs). Applied Behavior Analysts, however, are scientists in practice, requiring graduate training that fuses these seemingly disparate fields. At CSUN, we find the majority of candidates who currently seek post-MA coursework in behavior analysis either enter our program with previous strengths in scientific methodology and design or in clinical practice. The diverse background of candidates enriches classroom discussion but also serves as a challenge. Furthermore, supervised fieldwork experience is typically conducted at local behavioral agencies or schools limiting overall quality control. I will discuss some of these challenges, how CSUN proposes to deal with some of these challenges, the role of BACB, and changes needed to implement the "Gold Standard Strategy" discussed by Shook, Rosales and Glenn (2002).

Challenges and Opportunities for Graduate Training in ABA in Ireland. KRISTEN A. MAGLIERI (Trinity College Dublin), Rita Honan (Trinity College Dublin), Maeve Bracken (Trinity College Dublin), Claire E. McDowell (University of Ulster), Sinead Smyth (University of Ulster, Coleraine)

Abstract: Behavior Analysis has a long and influential history in Ireland and Northern Ireland, but interest in the application of behavior analysis in education and healthcare has grown considerably in recent years. To meet this growing need, graduate training programs in Applied Behavior Analysis have developed across the island. Training is now available at all levels, from board certified associate behavior analyst to doctoral behavior analyst. This presentation will discuss the benefits and challenges of providing graduate education in ABA as Ireland actively considers how best to implement psychological and special needs services at a national level. Trinity College Dublin developed the first board certified training program at the associate level in Ireland and the course has responded to a variety of challenges during this time. This presentation will review the responses to these challenges and the lessons learned. We will also present perspectives on developing support for ABA services in Ireland and Northern Ireland in general.

Is Graduate Training in Applied Behavior Analysis Possible for Individuals Who Work Full-time? RACHEL S. F. TARBOX (Chicago School of Professional Psychology, Los Angeles), Michele Nealon-Woods (The Chicago School of Professional Psychology, Los Angeles)

Abstract: As the field of behavior analysis continues to grow, the need to provide high quality graduate training has increased. Funding agencies are increasingly requiring that professionals are Board Certified Behavior Analysts, and in some cases, that individuals also hold a doctoral degree. There are a number of well-established graduate training programs in behavior analysis; however, programs are not typically designed to meet the needs of a full-time working professional. There are several reasons why an individual may chose to attend graduate school while maintaining a professional career including; financial constraints, a desire to work in the field while engaging in the learning process, advanced degree requirements at their current place of employment, and more. Although there are some potential drawbacks to attending graduate school under these conditions, there are several potential benefits such as the type of learning environment that is created in the classroom when the students bring their applied experience to the table. The purpose of this talk is to describe a model of graduate training that has been designed to meet the needs of these individuals. Three programs will be described; certificate program for meeting the course requirements for the Behavior Analysis Certification Board, a terminal Masters degree, and a Doctoral degree.

#444 International Paper Session

5/25/2009
1:30 p.m. - 2:20 p.m.
North 132 A
TPC

Blocking, Instinctive Behavior, and Pyramid Schemes: Diverse Conceptual Issues
Chair: John W. Donahoe (University Massachusetts/Amherst)

Blocking of Stimulus Control: Limits on the Normative Discrepancy Account. (Experimental Analysis) JOHN W. DONAHOE (University Massachusetts/Amherst), Rosalind Burns (University of Massachusetts/Amherst), José Burgos (University of Guadalajara - CEIC)

Abstract: Blocking of stimulus control occurs when a target stimulus is followed by a reinforcer in the presence of another stimulus that has already been paired with the same reinforcer. Blocking of control by the target stimulus indicates that some variable in addition to contiguity is required for conditioning. This additional variable is commonly called discrepancy, as in the Rescorla-Wagner model. However, experimental work—including that reported here—shows that not all subjects display blocking. Such individual differences are problematic for a variable held to be fundamental to the conditioning process. In the present experiment we show that the degree of blocking is not predicted by various measures of individual behavior such as the extent of disruption of responding when conditioning is shifted from single-stimulus training to compound-stimulus training that includes the target stimulus. Findings from other laboratories and computer simulations from this laboratory suggest that individual differences in blocking occur to the extent that contextual stimuli are components of the functional CS. These findings

are used to make a general point about the importance of studying the behavior of individual subjects, even for phenomena that are conventionally defined by group comparisons in normative psychology (associationism).

CANCELLED: Instinctive Behavior is Neither Respondent Behavior nor Operant Behavior. (Theory) MASAYA SATO (Seisa University)

Abstract: Behavior analysis classifies all behaviors into respondent behavior and operant behavior. However, instinctive behavior is neither respondent behavior nor operant behavior. The reasons are (1) the measure of instinctive behavior is neither latency nor magnitude, (2) the releaser of instinctive behavior functions not quantitatively but qualitatively, (3) most of instinctive behaviors can not be conditioned respondently or operantly.

Behavioral Contingency Analysis of Pyramid Schemes, Monetary Systems, and Securities Markets. (Theory) FRANCIS MECHNER (The Mechner Foundation)

Abstract: Behavioral analysis that uses a formal language for codifying behavioral contingencies reveals that all of the above, as well as lotteries, chain letters, and derivatives, share certain important features: (1) Availability of a positively reinforcing act whose occurrence makes a similar act available to another party. (2) Every repetition of the act increases some variable (e.g., number of claims against, or competing for, a limited asset: amount of a debt; depletion of a limited resource). (3) When the cumulative total of such a variable reaches a certain critical value, an external agency (a physical or natural process, a legal or social mechanism, etc.) triggers an action or event that terminates the process abruptly. (4) That action or event is negative for the party whose act consequated the reaching of that limit.
Examples of this contingency:
• Buying an asset and then selling it at a profit to a buyer who may in turn resell it at a profit.
• Issuing securities or currency units backed by soft assets (e.g., projected future earnings, a franchise, a reputation, a credit facility, derivatives, etc.). The securities or currency units are then used as backing for the issuance of more securities or currency units.

#445 Symposium

5/25/2009
2:00 p.m. - 3:20 p.m.
North 225
EAB; Experimental Analysis

Science Board Translational Series: Laboratory and Applied Perspectives on Token Reinforcement
Chair and Discussant: Timothy D. Hackenberg (University of Florida)

Abstract: Token reinforcement systems are among the oldest and most successful technologies to emerge from behavior analysis. Numerous studies have documented the therapeutic and educational benefits of token procedures across a wide range of settings and subject populations. Unlike most successful technologies in behavior analysis, however, the science and technology of token systems have developed largely in parallel, with little cross-fertilization of ideas and concepts. The present symposium is designed to bridge the gap between laboratory and applied research on token systems, bringing together complementary research programs from laboratory and applied research realms. Each presentation will review token reinforcement from a different perspective—Hackenberg on laboratory research, Borrero on token economies in traditional applied settings (e.g., classrooms, clinics), and Silverman on token (voucher) reinforcement in substance-abuse contexts. The goal is to identify common themes that cut across research areas, facilitating productive interaction along the laboratory-application continuum.

Token Reinforcement in the Laboratory and Beyond. TIMOTHY D. HACKENBERG (University of Florida)

Abstract: There is a long history of laboratory research on token reinforcement, dating back to the 1930s and extending through to the present day. Despite periods of productive research activity, the literature on token reinforcement has developed sporadically, with little integration across research programs. The purpose of the present paper is to review what is known about token reinforcement under laboratory conditions and in relation to general principles of behavior. Special emphasis will be placed on domains with applicability to research in applied settings—generalized reinforcement, antecedent functions, and conditioned punishment—to foster productive dialogue among laboratory and applied scientists.

Token Economies in Applied Settings: Suggestions for Bidirectional Interaction Along the Basic-Applied Continuum..JOHN C. BORRERO (University of Maryland, Baltimore County)

Abstract: In the applied literature the token economy has been implemented as a behavior change procedure for over 40 years, and is quite common in classroom and vocational settings in which research is not conducted (i.e., it is commonly used a behavior change procedure and not as a mechanism for the conduct of original research). Basic research involving token reinforcement preparations has too comprised a respectable slice of the literature in a period spanning more than 50 years. However, at both ends of the basic-applied continuum, token economy research has decreased considerably in the last 40 to 50 years. This presentation will: (a) review the history of the token economy in applied settings, (b) review some existing nonhuman literature with implications for improving the viability of the token economy in application, and (c) include suggestions for basic experimentation to address matters of importance in the application of token systems. In all cases, past and current token research will be highlighted.

Voucher-Based Token Reinforcement in the Treatment of Drug Addiction. KENNETH SILVERMAN (Johns Hopkins University)

Abstract: Evidence from the laboratory and the clinic suggests that drug addiction can be viewed as operant behavior and effectively treated through the application of principles of operant conditioning. The principles of operant conditioning have been applied to the treatment of drug addiction with particular effectiveness in abstinence reinforcement procedures. Under these procedures, patients receive desirable consequences contingent on providing objective evidence of drug abstinence (e.g., drug-free urine samples). Voucher-based abstinence reinforcement, in which patients receive token reinforcers (monetary vouchers exchangeable for goods and services), has been particularly effective and versatile. Guided by basic laboratory research on operant conditioning, voucher-based token reinforcement has been effective in promoting abstinence from a range of drugs and in diverse populations. It has been parametrically manipulated to increase the proportion of patients that respond to the intervention and to promote long-term abstinence. It has been integrated into a variety of settings, including treatment clinics, drug courts, and workplaces. This presentation will review the history, current status, and future directions of research on voucher reinforcement in the treatment of drug addiction, with examples from a program of research that has focused on the treatment of cocaine and heroin addiction in poor and chronically unemployed adults living in Baltimore, MD.

#446 Tutorial

5/25/2009
2:30 p.m. - 3:20 p.m.
West 301 CD
DEV; Theory
BACB CE Offered. CE Instructor: Ruth Anne Rehfeldt, Ph.D., BCBA

On the Relation Between Stimulus Equivalence, the Naming Hypothesis, and Relational Frame Theory in the Analysis of Verbal Behavior and Cognition
Chair: Ramona Houmanfar (University of Nevada, Reno)

RUTH ANNE REHFELDT (Southern Illinois University)

Dr. Ruth Anne Rehfeldt has had an ongoing interest in derived stimulus relations since she was an undergraduate at the University of Puget Sound, where she did an independent study on the topic with a child with autism. She studied under Dr. Linda Hayes at the University of Nevada, where the two collaborated on a number of basic laboratory investigations of stimulus equivalence. After working directly with individuals with autism and other intellectual disabilities, Dr. Rehfeldt's interests in derived stimulus relations shifted from the laboratory to educational and habilitation settings. Her interests in refining a technology based upon derived stimulus relations has evolved further since joining the faculty in the Rehabilitation Services and Behavior Analysis and Therapy programs at Southern Illinois University. To this end, Ruth Anne co-edited an upcoming book with Yvonne Barnes-Holmes entitled Derived Relational Responding: Applications for Learners with Autism and other Developmental Disabilities: A Progressive Guide to Change, which features a number of internationally recognized contributors in the area of relational learning. Ruth Anne has published over 70 scientific papers and book chapters. She is currently the Editor of The Psychological Record, and is an editorial board member for Journal of the Experimental Analysis of Behavior, Journal of Applied Behavior Analysis, and The Behavior Analyst.

Abstract: The phenomenon known as derived stimulus relations holds a number of important implications for the understanding of human language and cognition, leading some researchers to suggest that relational learning repertoires are the basis of most, if not all, of complex human behavior. This tutorial will first describe the relation between derived stimulus relations and emerging language repertoires, and will then discuss three current theoretical perspectives on derived stimulus relations. These include Sidman's (1994) stimulus equivalence paradigm, Horne and Lowe's (1996) Naming Hypothesis, and Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001). Similarities and differences between the three theoretical positions will be discussed within the context of language development in children, along with the experimental procedures and results of studies in support of each position. Strategies for programming for the emergence of rudimentary verbal repertoires that have been inspired by each theoretical framework, separately and in conjunction, will also be discussed.

#447 Paper Session

5/25/2009
2:30 p.m. - 3:20 p.m.
North 122 A
EDC

Explicit Teaching Procedures
Chair: Nancy Marchand-Martella (Eastern Washington University)

Let's get More Explicit!: What We Need in Effective Adolescent Literacy Programs. (Applied Behavior Analysis) NANCY MARCHAND-MARTELLA (Eastern Washington University), Ronald C. Martella (Eastern Washington University)

Abstract: This presentation will provide an overview of the research behind adolescent reading and best practices in effective literacy programs. The need for text-based, collaborative learning and explicit instruction are emphasized. Participants will practice strategies needed to improve adolescent literacy including, but not limited to, how to provide modeled think alouds, error correction procedures, graphic organizers, guided and independent practice, and generalization activities. Sample program materials highlighting these best practices will be shared.

Types of Prompts and Their Instructional Implications for Errorless Teaching Practices.
(Applied Behavior Analysis) JASON C. VLADESCU (Central Michigan University), Kristi Knop (Central Michigan University), Michael D. Hixson (Central Michigan University)

Abstract: The importance of errorless teaching procedures as an alternative for children who have difficulty learning through trial-and-error teaching has been established. The use of prompts to teach new discriminations is likely to be familiar to behavior analysts. However, the contribution of difference prompts and sameness prompts by Engelmann (1991) to the conception of prompts is likely to be novel to many educators. Difference prompts highlight the stimulus feature most relevant to the discrimination to create a greater difference between minimally different examples. Sameness prompts highlight similarities between stimuli to stipulate common behavior. The central purpose of this presentation is to introduce the parameters of difference prompts and sameness prompts, discuss prompt modification techniques (i.e., fading) to avoid prompt dependence and misrules, provide applied examples, and examine related research. A review of the four common errorless teaching methods (i.e., delayed prompting, superimposing, stimulus fading, and stimulus shaping) will also be provided.

#448 B. F. Skinner Lecture Series

5/25/2009
2:30 p.m. - 3:20 p.m.
West 301 AB
VRB

Guess What? Language is Learned!
Chair: Matthew P. Normand (University of the Pacific)

Dr. Fiona Cowie (California Institute of Technology)

Dr. Fiona Cowie is an Associate Professor of Philosophy at the California Institute of Humanities. She has a B.A. (Hons.) in Philosophy from the University of Sydney, and a Ph.D. in Philosophy from Princeton University. Her book, What's Within? Nativism Reconsidered (OUP, 1999) was the first book-length attempt to refute Chomsky's innateness hypothesis and challenge the nativist hegemony, and Cowie regards the vituperation it engendered as a clear vindication of her arguments. Cowie is currently writing a book about the evolution of language, entitled Building Babel. She expects it to be similarly denounced. She lives in Pasadena, CA, with her children and other animals.

Abstract: Chomsky's view that much of one's knowledge of a natural language is innate has dominated theorizing in linguistics, psychology, and philosophy for fifty years. On the basis of 'arguments from the poverty of the stimulus,' Chomsky and his followers argued that human beings are innately endowed with a 'language faculty' containing substantial information about the form and functioning of human languages. New (and not-so-new) research from a variety of fields reveals that this view is now untenable In the first part of this paper, I will survey some of this research – from psychology, neuroscience, and linguistics -- showing how it undermines the Chomskyan position. In the second part, I will explore the origins of language, arguing that evolutionary considerations also strongly support an empiricist picture of language acquisition.

#449 Symposium

5/25/2009
2:30 p.m. - 3:50 p.m.
North 228
EAB; Applied Behavior Analysis

Using Behavior Analysis to Improve Exotic Animal Management: Applications for Husbandry, Wellness and Conservation
Chair: Diann Gaalema (Georgia Institute of Technology)
Discussant: Christy A. Alligood (Disney's Animal Kingdom)

Abstract: Methods derived from the experimental analysis of behavior have proven useful in many areas of captive animal care. These techniques have been used successfully to increase physical activity, provide needed stimulation, reduce stress and encourage compliance with basic husbandry and veterinary procedures. The three presentations in this session will illustrate the continued usefulness of behavior modification techniques with captive exotics while introducing new applications in the areas of wellness and conservation. The first presentation of this session will focus on the use of target training to alleviate stress during husbandry and research procedures in capuchin monkeys. The transfer of this learned behavior to a research setting will also be discussed. In the second presentation the role of operant conditioning in a new wellness initiative at the Palm Beach Zoo will be discussed. The behavioral outcomes from this project for several species including alligators, raptors and anteaters will be presented. The third presentation will focus on the use of Pavlovian conditioning as a conservation method for endangered amphibians.

Target Training Facilitates Voluntary Movement of Capuchin Monkeys from Group-Housing Enclosures to Individual Test Cubicles. ROGER THOMPSON (Franklin & Marshall College), Jon Anderson (Franklin & Marshall College), Caitlin Knierim (Franklin & Marshall College), Audrey Koid (Franklin & Marshall College), Sarah Chabal (Colgate University), Sabrina Brando (Animal Concepts)

Abstract: Target training procedures were used to rapidly train 10 capuchin monkeys (Cebus apella) to voluntarily enter and leave test cubicles directly from group housing. Target training alleviates the stress for both humans and animals associated with traditional methods of capture and restraint in husbandry and testing procedures. Initially, when an animal approached its target, a geometric, colored shape, it was presented with a click "bridge" stimulus followed by a food reinforcer. In subsequent training stages, the animals were rewarded for touching, holding, and following targets into a test cubicle where responses were successfully generalized to different sized targets and targets were discriminated from those of other monkeys. However, when paired, monkeys also attempted to touch the target of their partner suggesting that they may have formed a conceptual stimulus equivalence set of "target." Individual 'errorless' discriminative performances also transferred to targets presented behind mesh and glass. Responding in this latter glass condition is being used to facilitate transfer of responding to touch screen screen displays that will be used in future noninvasive studies of concept learning and perception including tests of the hypothesis alluded to above that during target training the animals acquired a conceptual stimulus equivalence set of "Target".

Behavior Analysis and Wildlife Wellness. TERRY L. MAPLE (Palm Beach Zoo), Emily Maple (Palm Beach Zoo)

Abstract: The Palm Beach Zoo, an institution will a strong commitment to applied behavior analysis, has developed a "Wildlife Wellness" management philosophy providing best practices for improving overall physical and psychological health for a diversity of wildlife including birds, mammals, and reptiles. The program is based on a sophisticated training history that controls behavior in exhibits and behind the scenes, and provides opportunities for the public to observe animals interacting with their keepers/trainers. New protocols, developed through collaboration among keepers, curators, scientific staff, and veterinarians, combine more naturalistic sources for food, nutritional advances, enrichment, and induced activity through operant conditioning on a daily basis. Each animal and each species is provided with an individually tailored schedule and regime managed by computerized record systems.

The wellness program has also led to the development of an innovative new facility currently in the programming and design process, the Wildlife Wellness Center, and a new outreach program that aims to teach public school children better health practices based on our success in managing exotic fauna at the zoo. We will demonstrate the results of our wellness experiments with several unusual species including alligators, raptors, and anteaters.

Sexual Conditioning in the Dyeing Dart Frog. DIANN GAALEMA (Georgia Institute of Technology), Terry L. Maple (Georgia Institute of Technology), M. Jackson Marr (Georgia Institute of Technology), Paul Corballis (Georgia Institute of Technology), Mollie Bloomsmith (Yerkes National Primate Research Center), Danté Fenolio (Atlanta Botanical Garden)

Abstract: Sexual conditioning, a form of Pavlovian conditioning, has been used to improve reproductive outcomes in a variety of species. Benefits such as more appropriate breeding behavior and even increased number of offspring have been demonstrated in species as different as Japanese quail and blue gouramis. In the current study sexual conditioning is being used to encourage breeding behavior in the dyeing dart frog. In sexual conditioning access to a receptive mate is made contingent on the presentation of an initially neutral stimulus. The conditional stimulus is then presented prior to a breeding opportunity. Groups where this contingency is in place are predicted to have better breeding outcomes compared to control groups. As many amphibians are currently going extinct in the wild, any technique that can improve captive breeding in this species has major conservation applications. The unique challenges of working with amphibians in a Pavlovian conditioning paradigm will also be discussed.

#450 Symposium

5/25/2009
2:30 p.m. - 3:50 p.m.
North 227 BC
EAB; Experimental Analysis

Recent Topics on the Disruptive Effects of Negative Incentive Shifts
Chair: Tammy Wade-Galuska (University of South Carolina-Salkehatchie)
Discussant: Dean C. Williams (University of Kansas)

Abstract: Negative incentive shifts, or shifts from favorable to unfavorable reinforcement conditions, result in counterproductive disruptions in behavior. It has been suggested that such disruptions, which often take the form extended pausing following reinforcement, actually is a form of escape behavior. When given an explicit option to turn off the schedule during this transition, for example, pigeons have been shown to do so fairly reliably. Along these lines, the first study in this symposium investigates the disruptive effects of negative incentive shifts in two strains of rats, one of which (Fischer 344) has been shown to be more sensitive to other aversive stimuli (shock). The second study investigates whether or not negative incentive shifts in reinforcement context make pigeons mistake-prone. This study arranged a delayed-matching-to-sample task to determine if negative incentive shifts would engender inaccuracy in identity-matching in addition to extended pausing as measured by the latency to peck the sample stimulus. Finally, in applied settings, one way to attenuate the disruptive effects of transitions between activities is to maintain a very rigid schedule and provide advance notice of imminent transitions. The last study explores whether increasing the predictability of negative incentive shifts will lessen their disruptive effects in rats.

Pre-Ratio Pausing Following Rich-to-Lean Transitions on Multiple Schedules in Fischer 344 and Lewis Rats. ADAM T. BREWER (University of Kansas), Patrick S. Johnson (University of Kansas), Jeff S. Stein (University of Kansas), Monica T. Francisco (University of Kansas), Dean C. Williams (University of Kansas), Gregory J. Madden (University of Kansas)

Abstract: Pausing is maladaptive on fixed-ratio (FR) schedules because it decreases the rate of reinforcement. Perone and Courtney (1992) demonstrated that pigeons pause longer at transitions from a rich (large reinforcer magnitude) to a lean (small reinforcer magnitude) component in a multiple FR-FR schedule. Perone (2003) showed that pigeons were more likely to escape at rich-lean transitions

suggesting that these transitions are aversive. Moreover, pausing may function as form of escape when no explicit-escape contingency is provided. To further assess the aversiveness account, pausing was compared between inbred rat strains differing in responsiveness to aversive stimulation. Fischer 344 (F344) rats are more sensitive to aversive stimulation than Lewis rats in shock-avoidance (Katzev & Mills, 1974) and conditioned-taste aversion tasks (Lancellotti et al., 2001). If rich-lean transitions are aversive, then F344 rats should pause longer than Lewis rats. Both strains were exposed to a multiple FR-FR schedule with FR values that ranged from 1 to 100. In rich components, ratio completion resulted in a large amount of food (7 pellets), while lean components resulted in a small amount of food (1 pellet). Our results support the aversiveness account because F344 rats paused longer at rich-to-lean transitions than Lewis rats.

Effects of Signaled and Unsignaled Shifts in Reinforcer Magnitude on Delayed Matching-to-Sample Performance in Pigeons. YUSUKE HAYASHI (West Virginia University), Chata A. Dickson (West Virginia University), Michael Perone (West Virginia University)

Abstract: We investigated the effects of signaled and unsignaled shifts in reinforcer magnitude in a delayed identity matching-to-sample procedure with retention intervals ranging from 0 to 16 s. Four pigeons were trained on two conditional discriminations with red and green as sample and comparison stimuli. Under the multiple-schedule condition, the brightness of the houselight was correlated with the magnitude of the upcoming food reinforcer for a correct choice, whereas under the mixed-schedule condition, the brightness of the houselight was undifferentiated. A fixed-ratio schedule specified the number of trials that had to be completed correctly to earn a food reinforcer. We will describe the joint effects of past reinforcer magnitude and stimuli correlated with upcoming magnitude on sample latency (pausing) as well as on the accuracy on the delayed matching-to-sample task. The generality of earlier reports on disruptive effects of discriminative shifts in reinforcer magnitude (e.g., Perone & Courtney, 1992) will be discussed.

The Disruptive Effects of Negative Incentive Shifts: Does Predictability Matter? CHAD M. GALUSKA (College of Charleston), Tracy Taylor (College of Charleston)

Abstract: Negative incentive shifts involve transitions from favorable-to-unfavorable conditions of reinforcement and engender behavioral disruptions in animals and humans. The purpose of this paper is to explore a seemingly inconsistent finding between the animal and human literature. In animal models, signaling the occurrence of a negative incentive shift results in disrupted behavior in the form of extended pausing. A small experimental data set in humans, however, suggests that highly structured and signaled transitions between activities actually reduce behavioral problems. One difference in methodology is that existing animal models do not actually provide advance notice of imminent negative incentive shifts. In several experiments, we provided advance notice of negative incentive shifts involving reinforcer magnitude in a rat model. We also explored differences in the behavioral disruption engendered by predictable versus unpredictable sequences of large and small reinforcers. Our results suggest that, in rats, predictability plays but a minor role in attenuating the behavioral disruption engendered by negative incentive shifts.

#451 International Paper Session

5/25/2009
2:30 p.m. - 3:50 p.m.
North 226 AB
EAB

Theory
Chair: Liliane DeAguiar-Rocha (Queens College and The Graduate Center, CUNY)

An Integrated Model of Choice and Timing in Concurrent Chains. (Experimental Analysis) ELIZABETH GRACE EVELYN KYONKA (University of Canterbury), Randolph C. Grace (University of Canterbury)

Abstract: Predicting what an individual chooses to do and when it chooses to do it are necessary and sufficient elements of a unified theory of individual behavior at the molar level. As such, procedures that enable congruent measurement of choice- and timing-related behaviors provide an optimal test bed for theories of behavior. Grace and Nevin (1999) embedded non-reinforced trials, characteristic of the peak procedure, into a two-alternative concurrent chains procedure in order to measure preference and temporal control. In our research employing this procedure, we have found positive evidence of residual covariation – a relationship between relative measures of preference and temporal control beyond that attributable to interreinforcer interval. A linear-operator model in which response strength is updated according to a comparison of experienced delay to reinforcement with a criterion can describe initial-link response allocation. An information-processing approach describes acquisition of temporal control. We explore the observed relationship between choice and timing in light of these complementary quasidynamic models.

An Improved Effect Size for Single Case Research: Non-Overlap of All Pairs (NAP).
(Experimental Analysis) KIMBERLY VANNEST (Texas A & M University), Richard I Parker (Texas A & M University)

Abstract: Non-Overlap of All Pairs (NAP), an index of data overlap between phases in single case research, is demonstrated and field tested with 200 published AB contrasts. NAP is a novel application of an established effect size known in various forms as Area Under the Curve (AUC), the Common Language Effect Size (CL), the Probability of Superiority (PS), the Dominance Statistic (DS), Mann-Whitney's U, and Sommers D, among others. NAP was compared with three other non-overlap-based indices: PND (percent of non-overlapping data), PEM (percent of data points exceeding the median), and PAND (percent of all non-overlapping data), as well as Pearson R2. Five questions were addressed about NAP: (a) typical NAP values, (b) its ability to discriminate among typical single case research results, (c) its power and precision (confidence interval width), (d) its correlation with the established effect size index, R2, and (e) its relationship with visual judgments. Results were positive, the new index equaling or outperforming the other overlap indices on most criteria.

Resistance to Change in Responding as a Function of Primary or Conditioned Reinforcement.
(Experimental Analysis) LILIANE DEAGUIAR-ROCHA (Queens College and the Graduate Center, CUNY), Melody Berkovits (The Graduate Center, CUNY), Jason S. Rockwell (Queens College and the Graduate Center, CUNY), Laura J. Seiverling (Queens College and the Graduate Center, City University of New York), Catherine Tsiris (Queens College and the Graduate Center, CUNY), Adam Whiting (The Graduate Center, CUNY), Nancy S. Hemmes (Queens College/CUNY)

Abstract: Prior research has demonstrated effects on resistance to change when primary reinforcement is manipulated; however, little confirming data exist for conditioned reinforcement. An ABACA design was used to manipulate parameters of primary or conditioned reinforcement between components of a multiple Random Interval (RI) 150-s RI 150-s to determine effects on resistance to change. In Experiment 1, two groups of pigeons experienced either manipulation of a parameter of primary reinforcement or conditioned reinforcement. After stable responding was established, change in response rate was measured in comparison to baseline levels under a disruption procedure (response-independent presentation of food during an inter-component interval). Baseline conditions were re-established followed by a second disruptor: extinction. During Experiment 1, primary reinforcer magnitude was manipulated for Group 1 in a systematic replication of Nevin (1974, Experiment 3). Conditioned reinforcer value was manipulated for Group 2: response-produced arbitrary stimuli (SAs) were presented in each component, and the contingency between each SA (potential conditioned reinforcers) and the primary reinforcers earned under the RI 150-s schedule was varied between components. In Experiment 2, the manipulations for each group were switched. In both Experiments, the more favorable component (higher reinforcer magnitude or higher SA-reinforcer contingency) generally showed more resistance to change.

#452 International Paper Session

5/25/2009
2:30 p.m. - 3:50 p.m.
North 221 C
OBM

Issues in Organizational Behavior Management
Chair: James L. Squires (Western Michigan University)

Where are You Going and How Do You Get There? The Importance of Professional Development. (Theory) THORHALLUR O. FLOSASON (Western Michigan University), Michelle VanWegner (Western Michigan University), Erick K. A. Marmolejo (Western Michigan University), Eric J. Fox (Western Michigan University), James L. Squires (Western Michigan University)

Abstract: This paper will address the issue of professional development planning for students. Graduate students in behavior analysis have diverse career aspirations, while some aim for academic careers, others plan to enter more applied fields. During the course of their studies, students gain a wide range of valuable knowledge and experience. A large part of this experience is academic in nature, including coursework and research activities. But what about knowledge, skills, and abilities that students need for future roles but are not acquired through their graduate work? How and when do they fill these skill gaps? We will introduce a simple professional development model for students, undergraduate and graduate, one that is a hybrid of the career development framework and job analysis practices commonly used in organizations. Several potential jobs for graduate students in behavior analysis were identified. Detailed job profiles were then created for each job title, which was divided into five sections: Job title, possible work activities, competencies, development activities, resources, and certification and licensure requirements. All job profiles were accessible to students via the university's website. Practical implications and the importance of structured development planning for students will be discussed.

Affective Reactions to OBM Interventions: A Content Analysis of JOBM; or Doing Good and Doing Well. (Theory) DONALD A. HANTULA (Temple University), Catherine Dever (BioVid Corp.)

Abstract:
There is unequivocal evidence that OBM interventions increase work performance and safety related behaviors, benefitting the organizations that use OBM. The effects of OBM interventions on the employees in these organizations are not well documented and are consequently less well known. From a purely performance improvement perspective, questions of employee reaction to OBM interventions may seem secondary. However, from a broader perspective, OBM intervention effects on employee well-being are as important as OBM intervention effects on employee performance. To determine the effect of OBM interventions on employee reaction and well being, narrative comments regarding employee reactions were abstracted from empirical JOBM articles from volume 1 to the present and content analyzed. According to the employee reactions documented in these articles, overall OBM interventions are well accepted by employees and seem to improve worker well-being. Other themes, including the features of OBM interventions that seem to be more well-received, a systems perspective on employee reaction to OBM interventions, and recommendations for how OBM applications can be constructed to do good and to do well are discussed.

Meta-Contingencies and Their Influence on Public Sector Leadership in the Nordic Countries. (Applied Behavior Analysis) NED CARTER (SALAR, Stockholm, Sweden)

Abstract: This presentation describes similarities and differences in the ways that leadership in the public sector is practiced in the Nordic countries. The presentation is based on a literature review and interviews conducted with public sector leaders employed in the public sector in the Denmark, Finland, Norway and Sweden. Leadership in the Nordic countries encompasses two areas that are dealt with separately in English, management and leadership. The term management is often connected with the ability to do

things right or correctly, while leadership to a greater extent involves doing the right thing. Nordic leadership is characterized by participation, involvement and collaboration with co-workers in leadership processes, shared responsibility, co-creativity/influence, leadership arises in relations – and is nothing on its own, equality, dialogue, flat hierarchies and minimal power distances, openness and honesty, leadership is less "macho" than in many other cultures.
Similarities exist within the context of (mostly) related languages, the welfare-state as a basic social model, a large public sector and many interested parties, high degree of organization and importance of trade unions, related institutional conditions, including legislature, judicial systems etc., consensus, dialogue, involvement as basic assumptions for communications and decision-making in the society, focus on quality of life.

#453 Panel Discussion

5/25/2009
3:00 p.m. - 3:50 p.m.
North 120 D
OTH/OBM; Applied Behavior Analysis

Planning and Executing a State-Level Behavior Analysis Conference
Chair: Roger Frank Bass (Carthage College)

WILLIAM J. MURRAY (Wisconsin DHS)
DAVID M. TREJO (University of Wisconsin, Milwaukee)

Abstract: Tactics for planning and executing a state-level conference will be presented. The discussion will be lightly structured with emphasis on issues raised by the audience. All facets of planning will be addressed from site selection to funding to menus.

#454 Paper Session

5/25/2009
3:00 p.m. - 3:50 p.m.
North 131 BC
TPC

Skinner and Watson: Lives in Context
Chair: Edward K. Morris (University of Kansas)

John B. Watson's Childrearing Advice: Controlling for Context, Reassessing the Criticisms.
(Theory) EDWARD K. MORRIS (University of Kansas), Kathryn M. Bigelow (University of Kansas)

Abstract: The founder of behaviorism, John B. Watson (1878-1958), wrote for the popular press throughout the 1920s, most notably on childrearing (e.g., in McCall's), which resulted in his 1928 book, Psychological Care of the Infant and Child. Although a best seller, the book was (and is) controversial. It has been described, for instance, as "brutal," "subhuman," and "pathological." Our presentation examines the validity of these criticisms by assessing what Watson actually advised (a) in the context of his day, not our day, and (b) independent of his provocative rhetorical style and controversial social views. In four of the five areas Watson addressed (i.e., fears, tantrums, day and night care, masturbation), we found that his advice about childhood problems and how to "control" them were consistent with the advice of his day and, in some cases, more progressive (e.g., about sex) and enlightened (e.g., prevention). Only his admonition against too much "mother love" (but not no love) was unusual, and even then not unique. On the basis of recent reviews of the history of childrearing and Watson's reservations about his own advice, we close with a discussion of the nature of "behaviorist" childrearing advice and whether any such advice actually exists.

News and New Interviews from the B. F. Skinner Foundation. (Theory) CRISS WILHITE (California State University, Fresno), Chelsea Wilhite (University of Nevada, Reno), Melissa Nosik (University of Nevada, Reno)

Abstract: The B. F. Skinner Foundation's Archival Committee will present recently gathered material regarding Skinner's life, research and influence. Examples include the conditions leading to the writing of Walden Two (provided by Terry Knapp) and excerpts from Skinner's FBI file (provided by Joseph Wyatt). Additionally the Foundation has begun a video project to document Skinner's life through interviews with his former students and colleagues regarding their interactions with Skinner and the impact he had on their careers. Video vignettes of interviews conducted by Chelsea Wilhite with Jack Michael and by Josh Pritchard with Charles Catania will be presented.

#455 International Paper Session

5/25/2009
3:00 p.m. - 3:50 p.m.
North 132 A
TPC

Neural Events and Behavior
Chair: José E. Burgos (University of Guadalajara - CEIC)

Is There Such a Thing as the Neural Causation of Behavior? (Theory) JOSÉ E. BURGOS (University of Guadalajara - CEIC)

Abstract: The strongest candidate for the neural causation of behavior is neural command as investigated in the behavioral neuroscience of escape reflexes in invertebrates and lower vertebrates. For observed neural-behavior relations to qualify as causal, they must fit a basic intuition about the neural causation of behavior, namely: temporal asymmetry (neural causes always precede their behavioral effects). However, observed neural-behavior relations that the dominant views of command regard as causal do not fit this intuition. One view conceives command as the necessity and sufficiency of interneurons for the response of an escape reflex. This view defies the intuition in that necessity and sufficiency is a symmetric relation, which means implausibly that the response is sufficient for the interneurons. The other view conceives command as a dynamic property of circuits that include sensory and motor neurons. This view defies the intuition by admitting that reflexes, qua relations between exteroceptive stimuli and motor responses, can be caused by neural events that supposedly are effects of the exteroceptive stimuli. None of this means that behavior is neurally unexplainable, but only that neural explanations of behavior are non-causal. I propose that the neural-behavior relation is a part-whole relation where the neural is part of behavior.

Attention to Intention: Fact or Artifact? (Theory) ARMANDO MACHADO (University of Minho), André Smith (University of Minho)

Abstract: Lau et al. (Science, 2004) report an experiment designed to study the neural correlates of attention to the intention to perform an act. Participants were asked to report the time at which they felt the intention to push a button (condition A), or the time at which they actually pushed the button (condition B). They found that whereas the act was reported about 30 ms before it actually took place, the intention to act was reported about 230 ms before the act. fMRI analyses revealed specific activations (e.g., pre-supplemental motor area) associated with attention to intention. The authors concluded that such activity reflects the neural representation of intention. After offering a behavioral analytic critique of Lau et al.'s arguments, we report two experiments that show that their results were due to the demand characteristics induced by the experimental design. In addition, we conclude that what was revealed in Lau et al.'s study was not the locus of intention but an artifact created by the experimental procedure.

#456 Paper Session

5/25/2009
3:00 p.m. - 4:20 p.m.
North 227 A
AUT

Teaching Perspective Taking
Chair: Lisa J. Stoddard (FirstSteps for Kids, Inc.)

Teaching Perspective-Taking Skills to Children with Autism. (Service Delivery) LISA J. STODDARD (FirstSteps for Kids, Inc.), Jennifer L. Harris (FirstSteps for Kids, Inc.)

Abstract: Complex social and verbal behavior is of great interest to behavior analysts, yet remains an area of need, particularly with respect to interventions for children with autism. Perspective-taking skills, including inferring the mental states of others (such as desires, knowledge, beliefs, and intentions), is thought to be integral to social success. Children diagnosed with autism often have difficulty with perspective-taking skills. Therefore, it stands to reason that intervention teaching a perspective-taking repertoire may be beneficial in improving general social behavior. Unfortunately, while many interventionists target such skills, there is little empirical evidence to support the efficacy of the training procedures used. The current presentation describes our efforts to teach individual perspective-taking skills (such as visual perspective-taking) using a multiple-baseline design, as well as probes of perspective-taking tests. Based on descriptions of typically developing perspective-taking skills in developmental literature, a curriculum including sequential targets is presented, as well as data supporting the efficacy of this approach as part of a comprehensive treatment package. This sequential approach may serve to expand the current body of social skills training programs, and those who work with children with autism will benefit from the detailed description of targets and training procedures.

Role of Double-Reversed Relations in a Relational Frame Approach to Teaching Perspective Taking. (Applied Behavior Analysis) JEANA L. KOERBER (Western Michigan University), Eric J. Fox (Western Michigan University)

Abstract: Perspective-taking ability is a key aspect of typical language development and social interactions. Most methods for teaching perspective-taking skills have been based on a cognitive approach known as Theory of Mind (ToM; Baron-Cohen, 1995; Baron-Cohen & Hammer, 1997; Baron-Cohen, Tagor-Flusberg, & Cohen, 2000). While these methods have had some success, the overall results are mixed and the methods have proven particularly ineffective with children with autism and related disorders. An emerging theory of language known as Relational Frame Theory (RFT) seems to offer new insights into how perspective-taking skills develop. The current project examines the RFT protocol in greater detail, particularly the role of the double-reversed relation and uses traditional theory of mind tests to evaluate the effectiveness of the protocol on perspective-taking ability in 3 five year old children. Data is currently being collected for this study. However, the utility of the double-reversed relation will be discussed as well as its impact on increasing perspective-taking ability.

Relational Frame Theory and Behavioral Interventions for Young Children with Autism. (Applied Behavior Analysis) ROBERT GULICK (Achievement Center), Danielle Lynn Cotterill (Mercyhurst College), Phillip J. Belfiore (Mercyhurst College)

Abstract: Traditional EIBI programs are often criticized for fostering a rigid use of language. While these programs provide learners with well-contrived stimulus conditions that capitalize on the child's ability to master a rote skill such as tacting, they often fall short in generating novel language responses. Alternatively, relational frame theory and its formulation of derived relational responding may provide a conceptual framework on which to build a line of applied research to develop and test interventions that will bolster existing EIBI programs in these areas of generality and flexibility of language skills. The following study investigated the possibility of children with autism acquiring and demonstrating novel mands without direct teaching. The results indicated success on several levels. The study replicated

previous findings that the establishment of an equivalence class through conditional discrimination training is a viable means to facilitate the derived transfer of mand function. Secondly, the present study extended previous findings beyond the basic manding for tangible reinforcers to more advanced applications, such as the manding for information. Finally, this work can be seen as a positive step toward improving how the current teaching technology can foster more flexible language repertoires for young children with autism.

#457 Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 222 AB
CBM/VRB; Applied Behavior Analysis

Flexibility with Body Image, Disordered Eating, and Valued Living
Chair: Kate Kellum (University of Mississippi)
Discussant: Emily Kennison Sandoz (University of Mississippi)

Abstract: Disordered eating is a class of behaviors associated with devastating disruptions of life, frightening medical consequences, and traditionally unsuccessful interventions. Behavioral approaches have offered no exception. The narrowness and rigidity that characterize disordered eating are not easily explained by direct contingencies. Interventions based on direct contingency accounts have been only marginally successful. Acceptance and Commitment Therapy (ACT) is an emerging behavior therapy based on the idea that these behaviors are verbally-maintained. ACT focuses on reducing aversive control by expanding upon functions of aversive private events, and increasing appetitive control by increasing contact with values events. Part of the difficulties typically referred to as eating disorders involves the aversive control exerted by one's body image. The papers in this symposium will explore the relationship between psychological flexibility with body image, disordered eating, and valued living. The first will explore self-reported body image attitudes, flexibility with body image, and valued living. The second will consider the impact of body image attitudes and flexibility with body image on performance on the implicit relational assessment procure. The third will evaluate the outcomes and processes of Acceptance and Commitment Training for Body Image Disturbance.

Psychological Flexibility, Disordered Eating, and Valued Living. AMY E. YAUGER (University of Mississippi), Lindsay Martin (University of Mississippi), Emily Kennison Sandoz (University of Mississippi), Kelly G. Wilson (University of Mississippi), Kate Kellum (University of Mississippi)

Abstract: Part of the difficulties typically referred to as eating disorders involves narrowness and rigidity in the way an individual interacts with the private events that make up his or her body image. When body image is salient, aversive control tends to dominate the behavioral repertoire. Acceptance and Commitment Therapy for Eating Disorders takes aim at precisely this issue, with the focus on increasing a particular kind of appetitive control, referred to as valued living. The current study examines the relationships between psychological flexibility with regard to body image, body image related attitudes, disordered eating, and valued living.

Verbal Processes Associated with Disordered Eating. LINDSAY MARTIN (University of Mississippi), Emily Kennison Sandoz (University of Mississippi), Kelly G. Wilson (University of Mississippi)

Abstract: Basic learning processes provide a simple and straightforward account of eating behavior in animals. However, human eating behavior seems to be subject to contingencies not fully captured by basic respondent and operant contingencies. One explanation is that these contingencies are contacted verbally. Emerging treatments for disordered eating (e.g., Acceptance and Commitment Therapy) focus on undermining the verbal control thought to be central to these behaviors. In this study, an implicit relational assessment procedure (IRAP) was created to examine verbal processes that may be related to disordered eating behaviors. Participants were exposed to words representing over- or under eating, and to contingencies supporting their classification as either "good" or "bad." Data were examined for

differences in rates of correct responding between conditions (over-eating good/under-eating bad vs. under-eating good/over-eating bad). These differences were also examined separately for those reporting disordered eating at the clinical level. Finally, rates of correct responding were predicted from body image distress and degree of flexibility with body image distress.

The Effects of ACT for Body Image Disturbance on Eating Behavior and Valued Living. EMILY KENNISON SANDOZ (University of Mississippi), Kelly G. Wilson (University of Mississippi), Kate Kellum (University of Mississippi)

Abstract: Body image involves one's subjective experience of his or her own body. Under some conditions, body image can come to exert strong aversive control, disrupting the effects of appetitive control and narrowing an individual's behavioral repertoire. This is commonly referred to as body image disturbance. Typically, interventions to address body image disturbance involve attempts to change how the body is experienced. Acceptance and Commitment Training for Body Image (ACT-BI) takes a different approach, aiming to expand the functions of body image, in order to increase the breadth and flexibility of the repertoire. The current study will examine the impact of ACT-BI, cognitive behavioral group training, or waitlist control on eating behavior and quality of life. Body image attitudes, coping strategies, and flexibility with body image will also be evaluated as reputed mechanisms of change.

#458 International Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 131 A
CSE; Experimental Analysis

Implicit Testing in Behavior Analysis: Where's The Science?
Chair: Amanda Gavin (University of Tesside)

Abstract: The current series of papers together provide an outline of a behavior-analytic research program into means of "implicit" testing without the necessity for mentalistic concepts or the use of poorly understood stimulus presentation and response derivation methodologies. The first paper outlines a series of behavior-analytic concerns over the widely employed Implicit Association Test and provides several suggestions for researchers interested in understanding and developing implicit tests that are acceptable to behavior analysts. The second paper reports on an experiment that illustrates how implicit test effects are both easily malleable and have a questionable ability to make reliable behavioral predictions. The third paper provides a theoretical model, along with supporting empirical evidence, that a behavior-analytically understood test can effectively predict and explain subjects' performances during a computer game designed to test racial prejudice. Finally, the fourth paper, describes an experiment that aimed to assess the effectiveness of a novel behavioral test at identifying differences in verbal histories of a sample of male and female subjects. This test represents a functionally-understood counterpart to several popular implicit tests.

"Implicit" Testing: No Science, No Process, No Function. BRYAN T. ROCHE (National University of Ireland, Maynooth), Maria R. Ruiz (Rollins College), Amanda Gavin (University of Tesside)

Abstract: The current paper outlines the Implicit Association Test and reviews its meteoric rise in popularity in the absence of a process-based account. Most users of the test understand little about it except how to administer the test and generate scores. From a behavioral perspective, the test appears to serve as little more than a test for the relative rates of response function acquisition by pairs of verbally related and unrelated stimuli. These differences point to variances in the histories of specific verbal stimulus classes, such as differences in class strength. They do not reasonably point to such constructs as "unconscious bias" as users of the test widely claim. Moreover, the test is imbued with procedural artifacts and statistical scoring techniques that blur the reported reaction time and accuracy measures leading to contrived behavioral indices that can not be accurately described as response times, response accuracy, response rate, or even fluency, even though they may be presented a such. Now that implicit testing has begun to be employed within the field of behavior analysis, researchers need to be keenly

aware of the limitations of these tests as a measure of anything at all of interest to psychologists, let alone behavior analysts.

IAT Effects and Behavioral Probability: How Related Are They? MARIA R. RUIZ (Rollins College), Bryan T. Roche (National University of Ireland, Maynooth), Sara Jacobsen (Rollins College), Melissa Bernardo (Rollins College), Amanda Gavin (University of Tesside)

Abstract: Subjects were first exposed to a word-picture association training phase using a respondent conditioning preparation. Specifically, two nonsense syllables were paired with images of plants and animals, respectively, as well as with the colors red and blue, respectively. Subjects were also exposed to an equivalence training procedure which led to the formation of two three-member equivalence relations, each containing one of the two nonsense syllables. They were then exposed to a derived transfer of functions test that probed for the derived transfer of stimulus functions (i.e., colors and images) to other equivalence class members. Subjects were then exposed to an IAT-type test consisting of images and stimuli from the established stimulus equivalence relations. The laboratory controlled history led to the successful creation of a non-socially-established IAT effect. This effect was then undermined across repeated exposures to the IAT (i.e., via practice effects), after which the test for derived transfer of functions was re-administered. The results show that the power of the IAT to predict responses during the derived transfer of functions test is easily compromised through simple laboratory interventions.

Can the IAT Predict the Decision to Shoot in the Shooter's Game?: A Behavioral Model. Maria R. Ruiz (Rollins College), Bryan T. Roche (National University of Ireland, Maynooth), MELISSA BERNARDO (Rollins College), Sara Jacobsen (Rollins College), Amanda Gavin (University of Tesside)

Abstract: In the Shooter's Game (Correll, Park, Judd & Wittenbrink, 2007), subjects are instructed to shoot images of Caucasian or African American males holding a gun. Subjects are required to make rapid decisions whether or not to shoot across trials in which images are presented of Caucasian and African American males holding a wallet, a beer can or a gun. More erroneous shooting responses are made when subjects are presented with the African American compared to the Caucasian. The current paper presents a behavioral model of the Shooter Game effect in which it is conceptualized in terms of contextual control over derived classes of discriminative stimuli for avoidance or aggression. The model also allows behavioral predictions to be made regarding responses during game play on the basis of IAT-style test results. Preliminary data supporting the model will be presented.

A Transparent and Coherent Implicit Test for Verbal History: Just Functional Behavior Analysis, No Slieght of Hand. AMANDA GAVIN (University of Tesside), Bryan T. Roche (National University of Ireland, Maynooth), Maria R. Ruiz (Rollins College)

Abstract: The current paper reports on an experiment that demonstrates the utility of a functionally-understood test for verbal history. The test is procedurally transparent, relies on traditional behavioral principles and is free from theoretical constructs. Specifically, the test assesses the relative rates of acquisition of common response functions to word pairs considered compatible for a normal population compared to words considered incompatible. Subjects (N=20) were required to respond to exemplars of child, adult, sexual and nonsexual stimulus categories in one of two specified ways. For exemplars of two of the four categories presented on a computer screen, subjects were instructed to respond with a red key press, while for exemplars of the remaining two categories subjects were instructed to respond with a blue key press. In another block of testing the requirements were juxtaposed so that the combination of stimuli requiring a common key response was altered. There was more rapid acquisition of common response functions across suspected compatible exemplars (child and nonsexual) than incompatible (child and sexual) exemplar pairs. This test provides a behavior-analytic counterpart to the Implicit Association Test and other similar tests.

#459 Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 120 A
DDA/EDC; Applied Behavior Analysis

The Effects of Establishing Operations on Assessment and Treatment Outcomes
Chair: Anjali Barretto (Gonzaga University)
Discussant: Timothy R. Vollmer (University of Florida)

Abstract: In this symposium, we will present data on the effects manipulating specific antecedents and consequences during assessment and treatment. Kelly Schieltz from The University of Iowa will present data on functional analysis and mand analysis outcomes and will discuss the whether a mand analysis can be used to identify social reinforcers for aberrant behavior. Lisa Winborn-Kemmerer from the West Virginia University will discuss the antecedent effects of parent presence on functional analysis and functional communication training outcomes. Nathan Call from The Marcus Autism Center and Emory University School of Medicine will describe the effects of restricted access to preferred items on escape-maintained problem behavior. Following the presentations, Timothy Vollmer from the University of Florida will discuss the presentations.

A Comparison of Functional Analysis and Mand Analysis Results. KELLY M. SCHIELTZ (University of Iowa), Jay W. Harding (University of Iowa), David P. Wacker (University of Iowa), Wendy K. Berg (University of Iowa), John F. Lee (University of Iowa)

Abstract: The purpose of this study was to evaluate whether destructive behavior and manding were maintained by the same social reinforcers. A summary of 12 participants that met criteria for clear functional analysis results were included in this study. All participants were preschool-aged children with developmental disabilities who engaged in destructive behavior. All procedures were conducted in the participants' homes by their parent with investigator coaching. Inter-observer agreement was assessed across 30% of all sessions and averaged 97%. During Phase 1, functional analyses (attention, escape, and tangible test conditions) of destructive behavior were conducted within multielement designs. During Phase 2, functional analyses of manding were conducted within multielement designs. For only 2 of 12 participants, destructive behavior and manding were maintained by the same social reinforcers. For 7 participants, the analysis of mands identified an additional social reinforcer that was not identified for destructive behavior. For 2 participants, the analysis of mands did not identify a social reinforcer that was identified for destructive behavior, and for 1 participant the analysis of mands was unclear. Results suggested that an analysis of mands should not be used to identify social reinforcers for destructive behavior.

The Effects of Establishing Operations on the Functional Analyses Outcomes of a Young Boy with Autism. LISA C. WINBORN-KEMMERER (West Virginia University)

Abstract: We assessed the functional analyses outcomes of a 5-year old boy with autism who displayed problem behavior at home. Descriptive data suggested that problem behavior was most severe when both parents were present and removed their attention by interacting with one another. During Phase 1, two separate functional analyses were conducted with each parent. Both functional analyses showed that problem behavior was maintained by positive (tangible) and negative (escape) reinforcement. No attention function was observed. During Phase 2, we evaluated the effects of attention on problem behavior when both parents were present within a reversal design. During Condition A, both parents removed their attention but problem behavior resulted in attention from the boy's mother. Condition B was similar to Condition A, but attention was provided for problem behavior by the boy's father. The results showed that problem behavior occurred across both conditions but was higher when mom was the reinforcer. During Phase 3, a functional communication training program for attention was implemented resulting in a decrease in problem behavior when both parents were present. Interobserver

agreement was 80% or higher across all phases. The effects of establishing operations on functional analyses outcomes and the development of effective interventions are discussed.

The Influence of Restricted Access to Preferred Items in the Escape Condition of a Functional Analysis. NATHAN CALL (The Marcus Institute), Joanna Lomas (The Marcus Institute), Kelly McKnight (The Marcus Institute), Amber L. Valentino (The Marcus Autism Center)

Abstract: The escape condition of some functional analyses manipulates an establishing operation in the form of the presence of demands while delivering escape from those demands contingent upon the occurrence of problem behavior. However, in the natural environment, compliance with some demands also results in restricted access to preferred items or alternate activities, This restricted access to preferred items/activities may serve as a second establishing operation that influences problem behavior. The current study examined problem behavior that appeared to be maintained by escape from demands based on results of a functional analysis. A second analysis manipulated the presence and availability of preferred items during the demands. Data were examined to determine the occurrence of problem behavior in the presence or absence of both types of establishing operations. Results suggested that, for all 3 participants, problem behavior that occurred in the demand condition of the original functional analysis was at least partially influenced by the restricted access to preferred items establishing operation. Results from two treatments based on competing hypotheses that problem behavior was maintained by either escape from demands or access to preferred items supported this conclusion. Interobserver agreement data were collected on at least 20% of sessions for all participants and averaged greater than 80% agreement.

#460 International Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 129 A
DDA/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Kyong-Mee Chung, Ph. D., BCBA

Diverse Reaserch and Clinical Activities in a New Behavior Intervention Clinic in Korea
Chair: Kyong-Mee Chung (Yonsei University, Seoul, Korea)

Abstract: A new behavior intervention clinic was open in at the Seoul Children's municipal hospital in 2008. The clinic provides assessment and treatment services for children with various developmental disabilities and their families. Also, the clinic has been provided consultation services to the related fields including inpatient unit. This symposium consisted of 4 research activities based on clinical services conducted at the clinic over the past 6 months. Although continuous efforts have to be made for research and clinical areas, these presentations suggest that this clinic so far contributed the establishment of ABA in Korea both research and clinical areas. Suggestions for the future will be discussed.

Effectiveness of Group Behavior Intervention Program for Parents of Children with Developmental Delays and Autism Spectrum Disorders. KYONG-MEE CHUNG (Yonsei University, Seoul, Korea)

Abstract: The purpose of this study was to evaluate effectiveness of group behavior intervention program for mothers of children with autism spectrum disorders and mental retardation. Participants were 23 mothers whose child ages from four to six years. They were randomly assigned to two groups: Theory-Based Group (TBG) vs. Practice-Based Group (PBG). The parent training, lasting 8 weeks for 1 1/2 hours per session, targeted 12 basic skills to increase positive behaviors and reduce problematic behaviors. The only difference was mothers of the PBG group actually developed and implemented a behavior management program for their own child and received feedback from the therapist. The training effectiveness was evaluated through direct observation using an observational coding system as well as self-report questionnaires. For both groups, less problem behaviors and more positive behaviors were observed during the post-treatment and 3 month follow-up. However, TBG group performed better than the PBG group in reducing problem behaviors during task and play condition. These results

suggested that, theory learning is more effective for improving mothers' and children' behaviors during task and play settings. Clinical and research implications and future directions were discussed.

The Effectiveness of Positive Behavior Support(PBS) for Children with Developmental Disabilities in an Inpatient Unit. SEUNG-AH LEE (Yonsei University), Hyeonsuk Jang (Seoul Children's Municipal Hospitial), Dongsoo Suh (Seoul Children's Municipal Hospital)

Abstract: The present study evaluated the effectiveness of PBS implemented by 12 staffs for 23 children with developmental disabilities in an inpatient unit of a city hospital. Children engaged in a variety of problem behaviors including self-injury, tantrums and noncompliance. The staffs consisted of nurses and assistant nurses working in 3 shifts. Trained graduate students used a behavioral checklist to collect data on the behaviors of children and staff through partial interval recording(10-second interval for one child and 60-second interval for one staff, respectively). After baseline measurements, an instructional session was provided to inform staff about PBS and underlying basic behavioral principles. The staffs were advised to give praise and attention for children's positive behaviors and ignore any problem behavior. Weekly training sessions were also held and feedbacks were provided on their behavioral progress. The results showed that children's problem behavior decreased while the level of positive behavior remained the same. In addition, staff's positive interactive behavior increased while negative behavior decreased. The use of PBS has barely been assessed in unit setting. With reduced problem behaviors of children, it would be possible to expect cost-effective management of unit by saving time and labor for taking care of problem behaviors.

The Effect of Individual Parent-Training on Discrete Trial Training (DTT) for Mothers of Children with Developmental Disorders. U-JIN LEE (Yonsei University), Yeon-Jin Jo (Seoul Children's Municipal Hospital)

Abstract: This study investigated the effects of individual parent-training on DTT for mothers of children with pervasive developmental disorder (PDD) and autism aged from 2 to 4 years (1 boy and 2girls). A multiple baseline design across subjects and behaviors were used. During treatment phase, individual parent-training on DTT was provided focusing on three target behaviors; compliance with instructions (B1), imitation (B2), and eye-contact (B3). Performance of mothers was measured by a checklist consisting of 4 subscales; prompting, reinforcement, procedure, and data-collecting. Results demonstrated that the individual parent-training was effective to improve levels of performance of mothers on DTT. The maintenance effect was also reported from follow-up data for one mother. Three mothers demonstrated generalization of acquired skills to trained target behaviors. Additionally, children showed improvement in a few target behaviors. This result implies that individual DTT training for parents has the advantage of generalization and cost effect.

The Effectiveness of Using Stimulus Control in Treatment for Problem Behaviors with Diverse Functions. JEAN H. CHOI (Yonsei University), You-na Kim (Seoul Children's Municipal Hospital), Hyeonsuk Jang (Seoul Children's Municipal Hospital)

Abstract: The aim of present study was to examine the effectiveness of treatment package including stimulus control for problem behaviors with diverse functions. The participants were 3 boys with multiple problem behaviors. P1, a 16-year-old boy who was showing self-injurious behaviors (SIBs), P2, an 8-year-old boy who was referred for aggression, and P3, an 11-year-old boy referred for severe SIBs, aggression, and stereotypic behaviors. Functional Analyses (FA) were conducted, and indicated that P1's SIBs were maintained by demand, attention, and escape. P2's aggression was mainly maintained by pursuit of sensory stimuli. P3's problematic behaviors were also maintained by escape and demand. Changing criterion design was used for all three participants' treatments. Treatment package for P1 and P3 included stimulus control, three-step prompts (verbal, gesture, and physical), Treatment and Education of Autistic and related Communication Handicapped children (TEACCH), extinction, and parental training; P2's treatment contained stimulus control, three-step prompts, vocal control practice, and extinction. The results showed successful reduction of problematic behaviors in all of the three participants and indicated the effectiveness of stimulus control regardless of functions of behaviors. Several suggestions and practical issues are also discussed.

#461 Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 128
DDA/AUT; Service Delivery

Teaching Social Skills to Children with Developmental Disabilities Through Early Intensive Intervention in Group Based Settings
Chair: Junelyn Lazo (Center for Behavioral Sciences, Inc)
Discussant: Joyce C. Tu (Center for Behavioral Sciences, Inc.)

Abstract: Children with developmental disabilities such as autism typically receive early intensive behavioral intervention in home-based settings. Home-based settings may limit the generalization of social skills unless otherwise programmed into the intervention plan. As such, the overall purpose of the three papers is to examine the effectiveness of intensive behavioral intervention in a group-based format. In this symposium, the researchers examine the learning of social skills during early intensive behavioral intervention in group-based settings. Thus, all the participants were in a 1:1 ratio receiving a minimum of ten hours per week of intensive services in a group-based setting. The group-based setting occurred outside of the home of the participants. The three papers compared rates of learning vocal imitation during group-based play, examined the effectiveness of early intervention in a group-based setting, and studied the critical components for a social skills group for children with autism.

Comparing Rates of Vocal Imitation Response in Structured Settings versus Play Settings.
JOHANNA F. LORCA (Center for Behavioral Sciences, Inc.)

Abstract: Vocal imitation is a lesson often taught to children with developmental disabilities. The lesson is typically implemented in a structured environment using discrete trials teaching methodology and shaping. Research suggests that vocal imitation has been also been taught during play. Our study compares the rate of vocal imitation responding during structured settings versus play settings. Three children with developmental delays who qualify for Early Start services from the Regional Centers of California participated in the study. Their ages range from 17 months to 29 months. The independent variable for this study is the implementation of vocal imitation lessons during play and structured settings. The dependent variable is the rates of responding (i.e. number of words imitated) in structured settings versus play settings. The results show that when vocal imitation is taught during play for young children with developmental delays, the rate of learning is higher when compared to the rate of responding during structured settings. In addition, the results found the generalization of imitation skills is more likely to occur during play.

Examining the Effectiveness of Early Intensive Intervention in a Group-Based Setting for Children with Developmental Disabilities. TRICIA M. CANTON (Florida Institute of Technology)

Abstract: Research has shown that early intensive behavioral intervention has been effective in addressing skill deficits in children with developmental disabilities. Intensive behavioral intervention is typically conducted in-home. Therefore, the purpose of this study is to determine if early intensive behavior intervention conducted in a group setting at a 1:1 ratio will result in a decrease in the percentage of delays for young children identified at risk for autism. Three young children whose ages ranged from 31 to 33 months participated in this study. During baseline, all three children showed delays of more than 33% in the areas of cognitive development, receptive language, expressive language, gross/fine motor development, and social/emotional participated in this study. The independent variable of this study is the implementation of at least 10 hours per week of 1:1 early intensive behavioral intervention (both home and group-based) for at least eight months. The dependent variable is the percentages of delays in the above mentioned areas. The result shows that all three children decreased their percentage of delays across the seven domains. In addition, the group-based component of the intervention proved critical in transitioning these children to lesser restrictive educational environment.

Studying the Critical Components to a Successful Social Skills Group for Three Children with Autism. RHYSA MORENO (Center for Behavioral Sciences, Inc.)

Abstract: A lack of social skills is a hallmark to children with autism. Because this is a major area of skill deficit for individuals with autism, there is a plethora of research that has shown the importance and effectiveness of applied behavior analysis in addressing this area. Typical home-based intensive behavioral intervention teaches individuals with autism basic skills such as engaging in conversation, eye contact, or taking turns, etc. However, the opportunities for generalization of these skills are often lacking in home-based programs unless programmed for generalization. Therefore, this study examines critical components for a successful social skills group for children with autism. Three children diagnosed with autism participated in this study. Their age ranged from 5 to 6 years old. All had participated in home-based ABA program for at least 6 months. The independent variable for this study is the implementation of social skills group. The dependent variable is the number of skills learned and generalized in social group.

#462 Panel Discussion

5/25/2009
3:00 p.m. - 4:20 p.m.
North 121 BC
EDC; Theory
BACB CE Offered. CE Instructor: Jennifer Zarcone, Ph.D., BCBA

Professional Development Series: Understanding the Publication Process
Chair: Kelly M. Vinquist (University of Iowa)

GREGORY J. MADDEN (University of Kansas)
DOROTHEA C. LERMAN (University of Houston-Clear Lake)
GREGORY P. HANLEY (Western New England College)
JENNIFER R. ZARCONE (University of Rochester Medical Center)

Abstract: The publication process is essential in the development, expansion, and dissemination of research in behavior analysis. During this event, panelists will describe the publication process and provide the audience with useful tips to help authors publish their work.

#463 International Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 121 A
EDC; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Suchowierska Monika, Ph.D., BCBA

ABA in the Schools: Using Behavioral Techniques to Help Students in General Education Classrooms
Chair: Monika M. Suchowierska (Warsaw School of Social Psychology)
Discussant: Linda S. Heitzman-Powell (University of Kansas)

Abstract: This symposium will consist of three presentations and remarks from the discussant. The first presentation will provide a review of applications of ABA in the schools and will create conceptual and empirical background for the following two presentations. Four main teaching paradigms that have been derived from behavior analysis will be discussed. Challenges to the wide use of ABA in the schools will be presented. The second presentation will show data on implementing a training package to improve behavior management skills of one teacher and the effects of the changes in the teacher's behavior on the students' behavior. The last presentation will show data on using behavioral techniques to improve academic skills and participation in the lessons of three typically-developing children attending first and third grades of public

general education classrooms. The discussant will be asked to remark on the three presentations and conclude with comments on the role of behavior analysts in the schools.

Review of Applications of ABA in the Schools. MONIKA M. SUCHOWIERSKA (Warsaw School of Social Psychology)

Abstract: This presentation will provide an overview of using behavioral techniques to improve students' performance and teaching methods as well as to reduce problem behavior in the general education classrooms. Four main teaching paradigms that have been derived from behavior analysis will be discussed (i.e., programmed instruction, personalized system of instruction, direct instruction and precision teaching). Major accomplishments of ABA in general education classrooms and challenges to the wide use of ABA in the schools will be presented.

The Effectiveness of Implementing a Training Package on the Behavior Management Skills of One Teacher. RAFAL J. KAWA (University of Warsaw), Monika M. Suchowierska (Warsaw School of Social Psychology)

Abstract: The study was aimed at testing the effectiveness of a training package on the behavior management skills of one teacher working in public general education classrooms. A training package describing the principles of reinforcement and extinction was used to improve a teacher's skills and to reduce problem behavior in four students. The results show that the teacher learned to use effectively reinforcement and extinction and the change in her behavior positively affected the students' behavior. Social validity measures confirm the positive results.

The Use of Behavioral Techniques to Teach Academic Skills and to Increase the Level of Participation in the Lessons by Three Children in Elementary School. MONIKA M. SUCHOWIERSKA (Warsaw School of Social Psychology)

Abstract: The study was aimed at testing the effectiveness of using behavioral techniques to teach three 8- and 9-year-old typically-developing children language and math skills and to increase their participation in the lessons. Children were taught language and math skills during individual sessions. The results show that participants achieved significantly higher scores on achievement tests and they also participated more often in the lesson activities relating to the taught skills but not to other, untrained skills.

#464 International Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 122 BC
EDC/AUT; Applied Behavior Analysis

The Evidence Base for Speech-Language Interventions: Behavioral Interventions of Stuttering, Manual signs, and PECS
Chair: Ralf Schlosser (Northeastern University)

Abstract: Evidence-based practice (EBP) is gradually gaining momentum applied behavior analysis. Behavioral interventions play a critical role for speech-language pathologists. To engage in EBP, it is important to understand the empirical support behind various interventions. In order to determine the evidence-base for any one treatment, it is preferred to rely on a systematic review (and meta-analysis, if possible) of the evidence aggregated from multiple studies rather than any individual study. Thus, the purpose of this invited symposium is to present the results of systematic reviews on selected speech-language interventions. Chad Nye will present the findings from two systematic reviews on behavioral interventions in stuttering, one based on studies using group design and the other on studies using single-subject experimental designs. Oliver Wendt will highlight the results from systematic reviews of intervention research on augmentative and alternative communication (AAC) for individuals with autism spectrum disorders. Jamie Schwartz will present findings from a systematic review of manual signing in individuals with autism. Finally,

Ralf Schlosser will present a systematic review on the effects of PECS in children with autism and PDD-NOS.

The Effects of Behavioral Interventions on Stuttering: Two Systematic Reviews. CHAD NYE (University of Central Florida)

Abstract: Two systematic reviews and meta-analyses of the research relating to behavioral stuttering treatment will be presented: one involving group designs and the other involving single-subject experimental designs. The presentation will provide a summary of the eight key steps involved in the systematic review process, including but not limited to a detailed descriptions of the information retrieval (electronic and hand-search strategies, inclusion criteria, study coding, and effect size computations. The results will be discussed in terms of the support for the evidence base for behavioral treatments of stuttering and directions for future research.

The Effectiveness of Augmentative and Alternative Communication (AAC) for Autism Spectrum Disorders: Evidence from Systematic Reviews. OLIVER WENDT (Purdue University)

Abstract: This presentation will highlight the results from recent systematic reviews of intervention research on AAC for individuals with autism spectrum disorders. Applying rigorous inclusion criteria and systematic review methodology, experimental research from 1976 to 2008 was evaluated relative to the impact of AAC on (a) increasing functional communication skills, (b) facilitating natural speech production, and (c) improving social regulation functions. Methodological gaps in the current research base will be revealed and directions for future research will be derived.

The Effects of Manual Sign Interventions in Individuals with Autism. JAMIE SCHWARTZ (University of Central Florida)

Abstract: This presentation will highlight the process and outcomes of a systematic review on the effects of manual sings (sign alone or total communication) on the signed or oral communication skills in children with autism. The key steps of a systematic review will be described including information retrieval, the formulation of inclusion and exclusion criteria, data extraction, data analysis and aggregation, and interpretation. Both group and single-subject experimental designs qualified for inclusion, but the results will be discussed separately. The results will be discussed in terms of the empirical support for manual sign interventions for this population and in terms of directions for future research.

Effects of PECS on Speech, Language, and Communicative Behaviors in Children with ASD: A Systematic Review. RALF SCHLOSSER (Northeastern University)

Abstract: Children on the autism spectrum disorder frequently rely on the Picture Exchange Communication System (PECS) and other exchange-based approaches as an augmentative and alternative communication (AAC) technique. While more and more treatment studies are being added to the body of literature, a systematic review of this literature has not occurred. Systematic review methodology was used to minimize bias in locating, selecting, and synthesizing treatment studies involving PECS. In this session, the methods, findings, and implications for practice and future research will be presented.

#465 Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 221 AB
OBM/AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: H. Keith Massel, Ph.D., BCBA

Managing your Organization: Taking a Systemic Approach for Optimal Success
Chair: H. Keith Massel (Vista Center for Behavior Analysis)
Discussant: Manuel A. Rodriguez (CLG)

Abstract: Managing an organization requires the understanding and appreciation of many internal and external variables, which interact in complex ways. For an organization to reach its full potential, these variables must be accounted for and managed. External variables, such as third party payment systems, industry best practices, and governmental regulations, to name a few, regularly effect the ways that agencies take on new clients and provide services. Internal variables such as goals and strategies, staff training, hiring & recruiting, consequences & feedback, and management practices can affect the quality, timeliness and cost of services. In order to effectively manage an agency that meets the demands of its cliental while achieving it's mission, the interactions and influences of these external and internal variables must be measured and managed. This symposium will begin with a brief overview of a systems perspective of an organization and an introduction to the tools required to establish an Optimal Performance System. This paper will be followed by an example of the application of these tools within an ABA service provider agency, and finally the presentation will conclude with first hand accounts and testimonials from employees working within the agency. After seeing Optimal's approach to system management and seeing the results of its application, audience members should leave with a rudimentary understanding of a systems perspective to organizational management and an understanding of the potential for such an approach, in a clinical ABA program.

Optimal's Approach to System Management. SHANE D. ISLEY (Optimal), Donnie M. Staff (Optimal)

Abstract: Optimal encourages the application of evidence-based approaches, which enlists tools from human performance technology (HPT). These tools drive the analysis and design of systems that can be maintained by employees within the organization. The goal of a system design should be to provide agencies with a strong infrastructure that will support highly proficient, sustainable services, prevent inefficient processes, and as a result, minimize costs. Optimal emphasizes a value-adding, results-driven, systemic, partnership approach to system design, and specializes in establishing a comprehensive performance improvement culture for organizations, which encourages ongoing performance enhancing efforts long after Optimal has completed its intervention efforts. Organizations who adopt comprehensive performance-centered systems effectively generate services and link adaptively to their environment. Organizational and performance deficiencies occur when essential workplace variables (mission-goals, process quality, feedback systems, and alignment among organizational levels) interfere with performance. Understanding and appreciating an organization's systemic nature is the key to a successful design of a successful organization.
Brethower, D. M. (1995.) Specifying a Human Performance Technology Knowledgebase. Performance Improvement Quarterly, 8(2), 17-39.

Vista Center for Behavior Analysis: Implementing an Optimal Performance System to Individuals with Autism and their Families. H. KEITH MASSEL (Vista Center for Behavior Analysis), Shane D. Isley (Optimal)

Abstract: Providing highly effective, consistent, and sustainable services to individuals with autism and their families requires more than skilled clinicians and willing clients. While it is an often-overlooked feature of effective services delivery, providing such services requires comprehensive performance analysis and improvement efforts at all levels of an agency. Recognizing this, Vista initiated an agency-wide reorganization, based on a comprehensive performance analysis of their organization. In a desire to expand, Vista began to deconstruct and rebuild their organization's foundation, in accordance with the

methods and practices of human performance technology (HPT) and systems theory. These efforts began with a functional mission statement collaboratively created between Vista employees and Optimal. Disseminated throughout the agency, the mission statement was the beginning of an entire agency re-alignment that allowed the managerial staff of Vista to direct their performance improvement efforts towards a resolute outcome. Employees' performance goals and decisions can be steered and evaluated by this organization-wide objective. This was followed by objective and quantifiable work outputs developed for all job levels, designed to align with and support the elements of Vista's new mission statement. Phase I of the reorganization also involved the development of a restructured client scheduling process that is efficient, streamlined, tested and was systematically rolled out in order to insure its sustainability. Continuing efforts include the streamlining and systemizing of other key internal processes, as well as an advanced measurement and employee reimbursement process.

The Effects of a Reorganized System on Vista Center for Behavior Analysis' Clinical Staff and Services. MARIA G. JIMENEZ (Vista Center for Behavior Analysis), Mario Vega (Vista Center for Behavior Analysis), H. Keith Massel (Vista Center for Behavior Analysis)

Abstract: True systemic interventions create noticeable changes throughout an organization. When internal and external variables are being measured and manipulated throughout the organization, employees and clients at all levels should be able detect these changes. The emphasis on organizational alignment during performance improvement efforts exists for several reasons, one of them being so that employees and clients are directly tied into the inner workings of the agency at all times. When this occurs, it provides employees and clients with a direct and immediate feedback loop concerning the effectiveness of services. During this section of the symposium, Vista's Program Managers will report on the effectiveness of Vista's performance improvement efforts, allowing audience members the opportunity to see the systemic effects of such efforts, as well as an example of an efficient and well-managed human service organization.

#466 Symposium

5/25/2009
3:00 p.m. - 4:20 p.m.
North 129 B
TBA/EDC; Applied Behavior Analysis

Learning Technologies: Complexities, Cams, Contingencies, Concerns, and Consequences
Chair: Brett Grant Kellerstedt (Salem State College)

Abstract: Arranging contingencies for successful learning via technology is an important consideration when selecting for student behavior. The three presentations in this symposium cover (a) student self-paced, adaptive technology to teach statistics and other course content; and (b) the use of distance technologies in training behavior analysts. The first paper is a data-based presentation in which comparisons are made between two sections of a self-paced course, one with contingencies for completing work and exams at a mastery level, and the other without such contingencies. The second paper details a system that can be used for a variety of course content, along with a behavioral analytic explanation of the key components. The final paper addresses concerns with distance supervision of students who may become eligible for BCBA certification. All three presentations are linked through an emphasis on the conditions under which computer-a and internet-based technologies may be used in a way consistent with effective behavioral principles conducive to learning.

Mastery-Based Contingencies for Learning Statistics: A Significant Step Forward in Shaping Student Behavior. DARLENE E. CRONE-TODD (Salem State College)

Abstract: One of the most difficult (and avoided) courses in Psychology is an undergraduate course in statistics. This is partially due to not taking into account individual differences in skill level, and then using shaping steps to increase complexity of response sets. Two sections of undergraduate courses are compared: (a) one without a contingency in place to complete work before exams; and (b) one with such

a contingency in place. In addition, the latter course required exam scores to be at, or above, mastery criteria prior to continuing to the next exam. Differences between the courses indicate a higher level of mastery, and more work completed, for the contingency-based course when compared with the non-contingency-based course.

MediaMatrix Presenter: An Internet-based System for Incorporating Cascading-Complexity in Question and Answer Types. ROGER D. RAY ((AI)2, Inc. / Rollins College)

Abstract: This paper reviews features of a new Personal Response software system, called MediaMatrix Presenter. The Presenter allows for various levels of difficulty/complexity both in presentations and in types of associated question-based response demands in either synchronous (in-class) or asynchronous (distance learning at individual pace). The system allows use of multimedia presentations, including video, designed to approximate individualized adaptive instructional strategies described by Ray and Belden's (2007) expert-system electronic text and tutoring system called MediaMatrix. The Presenter incorporates wireless internet services to manage multiple instructor, course, section, and student records that store individualized data on each student's responses to presentation questions. During presentations classmate-based summaries for each question provide aggregated data immediately following each individual question. Daily summary scores for each student across all questions for a given presentation are also accessible. Question types accommodated by the system include multiple choice, sentences with a single fill-blank typed production, selection-based paired-associates of verbal/graphic stimuli, and "multi-blank" associates involving production of four freely typed answers to a single verbal or graphic prompting stimulus.

Distance Supervision for BCBAs: What is the Evidence? CHRISTINE HOFFNER BARTHOLD (University of Delaware)

Abstract: Many professionals are offering supervision via distance learning technologies such as web cam. Distance learning provides the opportunity for some individuals who would not otherwise be able to participate in training and supervision opportunities to become certified professionals. Does distance learning supervision produce the same quality of practitioner that traditional face-to-face supervision provides? In this presentation, I will discuss models of distance learning supervision, empirical support for these models, and suggestions for future research.

PSI & PI: The Pluses and the Minuses. ROBERT W. ALLAN (Lafayette College)

Abstract: The Personalized System of Instruction (PSI) and Programmed instruction (PI) are well proven, data-driven methods of enhancing student learning of course materials. Why have these methods not been more widely adopted? This paper will explore some of the contingencies punishing the use of PSI and PI and some of the contingencies that might still be profitably used to improve student performance even in the face of arranged punishers.

#466a Paper Session

5/25/2009
3:30 p.m. - 3:50 p.m.
North 120 BC
AUT/OBM; Applied Behavior Analysis

Incontinence as a Function of Wearing Diapers
Chair: Kathryne Balch Schooley (BEST Consulting, Inc.)

Incontinence as a Function of Wearing Diapers. KATHRYNE BALCH SCHOOLEY (BEST Consulting, Inc.), Kristen Lein (CSU, Fresno and BEST Consulting, Inc.), Erin Bowen (CSU, Fresno and BEST Consulting, Inc.)

Abstract: The primary mission of the newly formed research and development program at BEST Consulting, Inc. and Sierra Autism Services is to conduct research projects that develop autism services toward quality, long-term outcomes and to expand capacity to serve the entire communities in which we provide services and to reach other communities where services are lacking, in the United States and Abroad. The Scientist/Practitioner model of a behavior analyst is a difficult title to achieve in the "real" world. As a graduate student I was involved in a relatively extensive amount of research. As a practitioner I struggle many times to manage management, much less produce research worthy of presentation or submission for publication in a peer-reviewed journal. However, producing research of this caliber is one of the primary goals for BEST Consulting, Inc. and Sierra Autism Services. The studies presented in this symposium are part of our initial efforts to establish a sustainable research and development program, with our primary mission as a guide, within and throughout the organizations and affiliated sites.

#468 Tutorial

5/25/2009
3:30 p.m. - 4:20 p.m.
West 301 CD
AUT; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Mark L. Sundberg, Ph.D., BCBA

Why Children With Autism Often Fail to Acquire a Functional Intraverbal Repertoire
Chair: William H. Ahearn (New England Center for Children)

MARK L. SUNDBERG (Sundberg and Associates)

Dr. Mark L. Sundberg received his doctorate degree in Applied Behavior Analysis from Western Michigan University (1980). He is the author of the Verbal Behavior Milestones Assessment and Placement Program (the VB-MAPP), and the co-author of The ABLLS; Teaching Language to Children with Autism or Other Developmental Disabilities; and A Collection of Reprints on Verbal Behavior. He has published over 45 professional papers, including a chapter titled "Verbal Behavior" in Cooper, Heron, & Heward (2007). He is the founder and past editor of the journal The Analysis of Verbal Behavior, a twice past-president of The Northern California Association for Behavior Analysis, a past-chair of the Publication Board of ABAI, and was a member of the committee that developed the BACB Task Lists. Dr. Sundberg has given over 500 conference presentations and workshops, and taught 80 college courses on behavior analysis, verbal behavior, sign language, and child development. His awards include the 2001 "Distinguished Psychology Department Alumnus Award" from Western Michigan University.

Abstract: Many children with autism acquire an extensive vocabulary of mands, tacts, and listener discriminations, but have difficulty answering WH questions or engaging in meaningful conversational behavior. In addition, the intraverbal behavior they do have may be rote, scripted, or irrelevant to the preceding verbal context. This tutorial will present several examples of intraverbal problems experienced by children with autism along with an analysis of why these problems are occurring and suggestions for possible intervention programs. It will be proposed that the stimulus control relevant to intraverbal behavior involves primarily verbal conditional discriminations where one antecedent verbal stimulus alters the evocative effect of another antecedent verbal stimulus, and that this type of discrimination requires special training for many children with language delays. It will also be suggested that intraverbal development in typically developing children can serve as a guide for sequencing these complex discriminations for purposes of intraverbal assessment and intervention.

#469 Invited Presenter

5/25/2009
3:30 p.m. - 4:20 p.m.
West 301 AB
OBM; Applied Behavior Analysis
BACB CE Offered. CE Instructor: John Austin, Ph.D.

OBM Research and OBM Practice: Shall Ever the Two Meet Again?
Chair: Alicia M. Alvero (Queens College, CUNY)

JOHN AUSTIN (Western Michigan University)

Dr. John Austin is an internationally recognized expert in providing behavior-based solutions to organizational challenges. He is a Professor of Psychology at Western Michigan University. He has conducted research and consulted with organizations to improve productivity and safety in various industries including: aviation health care and hospitals, chemical higher education, construction, public accommodations, food service transportation glass and plastics manufacturing utilities and government retail. John has experience in occupational safety, motivation, performance measurement, leadership development, coaching, and organizational change management. In the area of improving human performance he has published more than 85 articles and chapters, delivered nearly 200 presentations at regional, national, and international conferences, and has published three books, Organizational Change, Handbook of Applied Behavior Analysis, and Mindfulness at Work.
John has taught college and graduate level courses and conducted research in the areas of occupational safety, organizational performance improvement, consultation, motivation, and behavior change for 15 years. He earned his BA from the University of Notre Dame, and his MS and PhD from Florida State University. He served as Editor of the Journal of Organizational Behavior Management from 2000-2008, Associate Editor of Behavior Analysis and Practice, and is on the board of editors for four other comparable scientific journals, including the Journal of Applied Behavior Analysis. John is a leading member of the UK & USA based BMT Federation, a group of independent consultants that specialize in using behavioral science techniques to improve business performance.

Abstract: Early OBM applications appeared in the late 1960's and early 1970's and were largely characterized by the application of feedback, reinforcement, and systems analysis to solve organizational problems and improve performance. Soon after the initial studies, The Journal (Journal of Organizational Behavior Management) was founded in 1977 by Aubrey Daniels, with Larry Miller serving as Managing Editor (Dickinson, 2000). At the first MABA and ABA conferences there was a strong presence from members of the University of Kansas and BSI (a consulting firm headed by Aubrey Daniels) (Dickinson). Since that time, OBM presence at universities, in consulting firms, and inside organizations has grown steadily, although not dramatically. In the early days, research and practice were essentially one in the same – as evidenced by the applied nature of most early articles appearing in JOBM . However, it appears to me that the link between the research we publish and the OBM practice in which we engage has become increasingly faint. I will discuss this issue, give some ideas for how it might be remedied, and discuss some things about practice that I have learned as a researcher of 15 years.

#470 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 124 B
AUT/EDC; Applied Behavior Analysis
BACB CE Offered. CE Instructor: Paula Braga-Kenyon, M.A., BCBA

Skill Acquisition: Alternatives for Teaching Tooth Brushing to Children Diagnosed With an Autism Spectrum Disorder

Chair: Paula Ribeiro Braga-Kenyon (New England Center for Children)
Discussant: Cynthia R. Blackledge (UHS Schools, Inc.)

Abstract: Tooth brushing is an important skill for increasing independence among individuals diagnosed with an autism spectrum disorder. Commonly used training methods for teaching tooth brushing include forward or backward chaining but are not always effective. The current symposium will describe three teaching procedures for training teenagers diagnosed with autism to brush their teeth. The first study describes the use of frequent training sessions and a modified task analysis, one that isolates a few steps from the total sequence to be taught. The second study evaluates whether isolating skill deficits prior to training the tooth brushing sequence would be helpful. Deficits identified were problems with fine motor skills and the occurrence of an incompatible behavior. The third study evaluates the utility of video prompting for teaching tooth brushing. All three studies have positive results.

Tooth Brushing: Overcoming Interfering Behaviors. LEAH KARA (New England Center for Children), Sorrel Ryan (New England Center for Children), Paul Mahoney (New England Center for Children), Paula Ribeiro Braga-Kenyon (New England Center for Children)

Abstract: The current study presents a method for training tooth brushing for two teenagers diagnosed with autism. The participants engaged in stereotypy (e.g., water play and turning on and off faucets) that interfered with skill acquisition. Tooth-brushing task analyses were modified by excluding tooth-brushing preparation steps (e.g., turning on the water and applying toothpaste). In addition, participants were required to complete multiple trials per day. Task analyses were conducted every hour during the school day. Results indicated that the inclusion of mass trials and removal of preparatory tooth-brushing steps resulted in both participants efficiently acquiring the steps of a tooth-brushing task analysis. The steps that were removed from the task analysis during skill acquisition are currently being re-introduced as part of the routine, and both students continue to make progress.

Tooth Brushing: Overcoming a Fine Motor Skill Deficit and an Incompatible Behaviors. PAUL MAHONEY (New England Center for Children), Paula Ribeiro Braga-Kenyon (New England Center for Children), Leah Kara (New England Center for Children), Sorrel Ryan (New England Center for Children)

Abstract: The current study presents alternatives for teaching tooth brushing to one 9-year-old female diagnosed with autism. The participant was being trained on a tooth brushing sequence using a forward chain task analysis. The participant presented fine motor deficits that interfered with acquiring the step of turning the toothbrush from bottom teeth to upper teeth. In addition, the participant engaged in the incompatible behavior of sucking on the toothbrush. The specific tooth brushing steps associated with poor performance were isolated and re-trained, using a new strategy to turn the tooth brush (rolling the toothbrush on fingers instead of moving wrist); and the sequence was trained multiple times per day in a different setting, the classroom. Removal of the water was also implemented to address sucking on the toothbrush. After the two identified steps were trained to criteria, and the student met mastery criteria in the new setting, the entire task, including preparatory and terminal steps, was transferred to the natural environment; and water was again added to the sequence. Results of this study showed that identifying deficits in performance and modifying the training program to target there areas led to independent acquisition of the tooth brushing task analysis for this participant.

Tooth Brushing: Overcoming Lack of Motivation Related to a Task.SORREL RYAN (New England Center for Children), Paul Mahoney (New England Center for Children), Paula Ribeiro Braga-Kenyon (New England Center for Children) Leah Kara (New England Center for Children)

Abstract: The current study evaluated the utility of video prompting to teach a 9-year-old boy diagnosed with autism to complete the steps of a tooth brushing chain. Forward and backward chaining procedures had been attempted and found ineffective. It was hypothesized that lack of motivation and attention to the stimuli were interfering with acquisition. At times, the student would also engage in incompatible behaviors, such as biting on the toothbrush. Direct observation indicated that the student enjoyed watching videos, suggesting the use of video prompting. Results showed that the participant learned to

perform most of the steps of the tooth brushing behavior chain independently using the video prompts. In addition, progress was faster than previously attempted procedures and mastered steps were maintained over time.

#471 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 124 A
AUT/VRB; Service Delivery
BACB CE Offered. CE Instructor: Michael Miklos, M.S., BCBA

Practice-Based Evidence in Public Education: Ssystematic On-site Consultation and Special Education for Students with Autism.
Chair: Michael Miklos (Pennsylvania Training and Technical Assistance Net)

Abstract: Technical support to special education teachers often consists of verbal "stand and deliver" trainings removed from classroom environments. Teachers often attend didactic trainings in order to receive continuing education credit without a systematic process for transferring verbal training to actual repertoires in the classroom setting. The brief reports included in this symposium will highlight efforts to provide direct on-site training to special education staff. Each report will review components of a system of technical support driven by procedural integrity and supporting data based systems of instruction. Data summarizing a variety of consultative efforts will be presented. Primary emphasis of discussion will be on explicit procedural processes for instructional staff that generate evidence of individual student performance. The range of processes to be discussed include training in single subject design to enhance instructional skills of teachers, use of procedural descriptions of consultation to improve instructional fidelity, third party review of instructional implementation as a system of classroom organizational management, and explicit feedback as a means to training instructional fidelity for discrete trial instruction.

Getting the Analysis in Public Special Education Through Single-Subject Case Study Requirements. MICHAEL MIKLOS (Pennsylvania Training and Technical Assistance Net)

Abstract: This presentation will review data collected for formal case studies completed over the past two years within Pennsylvania public education autism support classes participating in the Pennsylvania Verbal Behavior Project. Approximately 40 case studies per year have been developed in participating classrooms. Summary data for case studies from the past two years will be discussed. The case studies have required public education classrooms to develop, implement and review case studies with increasingly empirical designs. The process to be reviewed involves submission of a case study proposal including consideration of study design to demonstrate functional relations, verification of both dependent and independent variable definitions, and steps to ensure treatment fidelity. The proposal is then implemented in the classroom. Case studies are summarized and an informal review with public presentation of findings is completed. The case study format allows teachers and other special education staff to come in contact with the process of scientific verification of instructional interventions.

Systematic Feedback and Procedural Descriptions of Consultation Outcomes: the Value of Written Consultation Reports in Relation to Student Outcomes. AMIRIS DIPUGLIA (PaTTAN/ PA Verbal Behavior Project)

Abstract: Multiple written procedural descriptions derived from data based observations will be described in relation to student performance in autism support classes within the Pennsylvania Verbal Behavior Project. Procedures for classroom organization, teaching mands, tacts, and intraverbals as well as problem behavior reduction plans will be highlighted. The session will include description of the integration of assessment systems used in consultation with formal observation, data review, and intervention development. Included will be a description of a format for consultative reports that specifies the consultative issues in objective terms while requiring relevant behavioral data review, an interpretation of the data, and specific recommendations based on the data. The report format serves to reduce ambiguity in the consultative process while increasing the probability of consultation functioning

to alter student repertoires. Several examples of the written reports from actual classroom consultations will be presented. The value of written notes as means of increasing procedural compliance will be discussed.

Formal Site Review of Classroom Implementation and its Relation to Planning Instructional Delivery: Does Telling Them What They Do Lead to Changes in What They Do? DEBRA NAMEY (Pa Verbal Behavior Project)

Abstract: Through the process of delineating performance criteria for classroom teachers serving students with autism, targeted priorities for behavioral consultation can be developed. Outcomes suggesting the relation between site review data, specific instructional design, consultation and changes in classroom practice will be summarized. The PA Verbal Behavior Project site review form includes ratings of:
1. Classroom organization
2. Data systems
3. Consultation and training processes
4. Instruction including mand training, intensive teaching, group instruction, and social skills
5. Problem behavior interventions.
Ratings in each domain specify instructional behaviors that, if not in place for participating classrooms, are targeted for development through systematic consultation.
Data on the reliability of the site review process and change in levels of implementation will be presented. The session will describe how the information from site reviews is used to guide the behavior of consultants in the PA Verbal Behavior Project. Implications for planning individual student programming will be considered.

Integration of Manualization and Direct Feedback Processes for Training Intensive Teaching of the Verbal Operants. MARY L. BARBERA (PA Verbal Behavior Project)

Abstract: Through transcription of instructional behavior, direct feedback can be provided to instructors in relation to established discrete trial procedures. Examples of this process will be provided. This report will describe implementation of a system for feedback based on direct observation of teacher behavior as a training system and its relation to student skill acquisition. The model of discrete trial instruction used includes interspersed trials, with balanced high probability and low probability tasks, errorless procedures for instructional acquisition targets, and focuses primarily on acquisition of the verbal operants as identified in Skinner, 1957. The transcription process involves coding instructional behavior of discrete trial instructors in relation to student behavior with formalized codes. The staff training procedure to be described here will include four components:
1.Viewing and documenting a training DVD which specifies the components of the discrete trial teaching process.
2.Practicing presenting discrete trials with guided practice
3.Receiving direct feedback on actual teaching practice with data derived from the transcription process
4.Continuous process of student acquisition of skills taught through the discrete trial teaching.

#472 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 126
AUT/CBM; Applied Behavior Analysis
BACB CE Offered. CE Instructor: John M. Guercio, Ph.D., BCBA

Contemporary Assessment and Treatment Interventions for Autism Spectrum Disorders
Chair: Melanie Mills (Judevine Center for Autism)
Discussant: Rebecca Rubie (Judevine Center for Autism)

Abstract: The assessment and treatment of autism spectrum disorders are becoming increasingly more relevant given the drastic increase in the diagnosis of the disorder. The following symposium will target some

key issues in the assessment process that will lead the clinician to the implementation of more efficacious interventions. In addition to addressing key assessment issues, the symposium will also target the parenting aspect of effective autism interventions. Parent training is a crucial aspect of autism treatment that helps to facilitate generalization and maintenance of behavioral gains. This topic will be discussed in the context of competency based training and testing, as well as video and audio coaching strategies for parents of children with autism. The final talk in this symposium will detail a behavioral system for providing behavior analytic services in a public school system, discuss barriers to successful implementation, as well as show clear clinical improvements in individual students – when the organizational system is in sync with clinical goals.

Assessing Preference for Attention in Children Diagnosed with Autism. JODI NUERNBERGER (University of Wisconsin-Eau Claire), Cierra Ann Micke (University of Wisconsin-Eau Claire), Kelly Paulson (University of Wisconsin-Eau Claire), Carrie Haessly (University of Wisconsin-Eau Claire), Kevin J. Schlichenmeyer (University of Wisconsin-Eau Claire), Matthew Newquist (University of Wisconsin-Eau Claire), Kevin P. Klatt (University of Wisconsin-Eau Claire)

Abstract: The social skills of children with autism are an area of focus for most professionals working in this population. Some of the core deficits of children that are on the autism spectrum include a lack of spontaneous eye contact or joint attention skills. Children with autism will typically fail to seek out social attention or to share in social experiences with peers or family. The following project will assess the preferences that children with autism have as it relates to attention. Given some of the deficit areas of this disorder and how they impact the level of attention that is requested can be key determinants of tretament strategies for children that are on the spectrum. Issues with joint attention have been shown to be related to the intensity of the social skills deficits that some of these kids demonstrate. The manner in which attention is delivered and the types of attention were examined in this study.

Competency Based Parent Training for Autism Spectrum Disorders. JOHN M. GUERCIO (Judevine Center for Autism), Melanie Mills (Judevine Center for Autism), Brooke Diane Walker (SIU Carbondale)

Abstract: The project will assess the effects of a 3-week staff/parent autism training program. The program is comprised of a series of workshops, videotaped modeling, and feedback geared towards successful intervention with individuals with an autism spectrum disorder. Each module of the training is accompanied by a competency based post test. Each trainee had to score at or above a pre-set criterion score in order to move on to the next module. The teaching skills of each of 3 parent dyads will be assessed via a multiple baseline design across parents. A variety of dependent measures will be used to assess treatment efficacy for the parent training package described above. The measures that will be used will include the frequency of specific contingency statements, correct implementation of reinforcement protocols, and the frequency of inappropriate responding observed across 20 minute therapy sessions. Results showed that each family dyad demonstrated an increase in appropriate teaching and therapeutic scales as well as decreases in subjective measures of stress and anxiety.

Performance Management in Schools Serving Children with Autism CHRISTINA A. WEISE (Southern Illinois University Carbondale), Mark R. Dixon (Southern Illinois University), Dawn J. Scheff (Southern Illinois University - Carbondale)

Abstract: Clinical interventions for children with autism have been highly successful over the past decade. Demand is increasing as well as the supply of BCBAs. Unfortunately, the organizational system that needs to adopt the newly developed behavioral programming is often far from adequate to support the increased work requirements of teachers and associated staff. This presentation will present a behavioral system for providing behavior analytic services in a public school system, discuss barriers to successful implementation, as well as show clear clinical improvements in individual students – when the organizational system is in sync with clinical goals.

#473 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 125
AUT/TBA; Service Delivery

Using Video-Based Instruction to Train Stakeholders of Children with Autism in Evidence-Based Practices.
Chair: Suzanne Robinson (California State University, Fullerton)
Discussant: Jan S. Weiner (California State University, Fullerton)

Abstract: Despite the progress the field has made toward developing empirically supported treatments for children with autism and other disabilities, there remains a research-to-practice gap as most of these evidence-based practices are conducted by highly trained and supervised clinicians. Given that students with disabilities spend the majority of their time with parents and teachers, it seems particularly important that these stakeholders be provided with adequate training. This symposium will present the findings of 3 studies that utilized video-based instructional programs for the purposes of offering effective, efficient, and socially-valid training programs for parents, teachers, and paraprofessionals. Specifically with respect to parents, the use of an interactive DVD with manual (a self-directed learning program) was shown to improve parents' fidelity of implementation of PRT, parent-provided opportunities for language, observed parent confidence, and child functional verbalizations. With respect to school staff, the use of video-based feedback has resulted in teacher and paraprofessional fidelity of implementation of PRT and other behavioral techniques, improved levels of involvement, as well as improvements in students' social communicative behavior and observed affect. Implications and future directions will also be discussed.

Using a Self-Directed Learning Program to Train Parents of Children with Autism in PRT.
NICOLETTE NEFDT (STAR)

Abstract: As a result of the increased incidence of autism spectrum disorders, the gap between the current need and availability of empirically supported treatments (EST) has widened. Researchers facing this need vs. services discrepancy with clinical populations other than ASD have been successful at using self-directed learning models as an effective and cost efficient way to educate parents about how to implement effective intervention methods. Despite its potential there is very little published research evaluating the use of self-directed learning models to teach parents to provide intervention for their child with autism. This study evaluated, through a randomized clinical trial, the use of a self-directed learning program (an interactive DVD with manual). Results indicated significant differences between treatment and control groups at posttest on all of the dependent measures: fidelity of implementation, parent opportunities for language, observed parent confidence and child functional verbalizations. The data suggest the efficacy and effectiveness of a self-directed learning program as an introduction for parents on the implementation of an empirically supported treatment as part of a comprehensive intervention plan for children with autism. Limitations and directions for a programmatic line of research are discussed.

Using Video-Based Feedback to Train Paraprofessionals of Students with Autism in PRT.
SUZANNE ROBINSON (California State University, Fullerton)

Abstract: Despite the development of effective intervention approaches for treating autism, there remains a research-to-practice gap as most of these evidence-based practices are conducted by highly trained and supervised clinicians in home and clinic settings. Given that students with autism spend the majority of their days in the school setting, largely supported by paraprofessionals, it seems particularly important that the school staff receive adequate training to implement these treatments. Unfortunately, most paraprofessionals begin and continue their work with little to no training. In-service workshops, a common training model provided by school districts, are quite ineffective in producing sustained behavior change, thus researchers are calling for effective training models. A training package consisting

of modeling and video-based feedback as a means of training paraprofessionals to implement PRT in the inclusive school setting was examined using a multiple baseline across participants design.The findings indicate that the training package was effective and efficient in improving paraprofessional fidelity of implementation, paraprofessional levels of involvement, and the social-communication target behaviors of the students with autism. Additionally, the paraprofessionals reported high satisfaction with the training, and the affect of the students with autism either maintained or improved as a result of the paraprofessional training.

Using Video-Based Training to Address Teachers' Perceived Barriers to Inclusion. JANICE MYCK-WAYNE (California State University, Fullerton)

Abstract: Researchers and practitioners alike have recognized the significant gap that exists between what has been found to be effective instructional practices in the research, and what teachers are actually doing in their classrooms on a daily basis (King-Sears, 2001; Snell, 2003). Given the recent emphasis in the law (e.g., No Child Left Behind Act of 2001) on qualified educators and the use of research-based instruction, there is a renewed sense of urgency for researchers to close the gap by establishing reliable, efficient ways of ensuring that effective instructional techniques get infused into teachers' repertoires (Kohler et al., 1999). To accomplish this end, researchers have examined a variety of training techniques however, there is limited research on the efficient use of these strategies within the general education classroom, and fewer still have documented teacher implementation (i.e., the actual use of the instructional skills), skill generalization (i.e., the ability to use the skills in new situations), skill maintenance (i.e., the ability to maintain the learned skills over time), teacher perceptions of the training program, and the overall utility of video-based instruction.

#475 Panel Discussion

5/25/2009
3:30 p.m. - 4:50 p.m.
North 224 A
CBM; Service Delivery

Behavioral Intervention With Special Tobacco Addiction Population
Chair: Sherman Yen (Asian American Anti-Smoking Foundation)

SHERMAN YEN (Asian American Anti-Smoking Foundation)
ALLISON Y. LORD (Tobacco Outreach Technology, Inc.)
MICHELE MATTSON (Asian American Anti-Smoking Foundation)
ANDY CHENG (Asian American Anti-Smoking Foundation)

Abstract: A form of simple behavior analysis, but including other forms of tobacco cessation techniques, such as nicotine replacement therapy, green tea therapy, computer therapy, etc. will be the focus. Several cases, which compared the clinical effectiveness of the above mentioned tobacco cessation techniques will be reported. A-B-A designs were utilized in the data collection process. Tobacco users' unique backgrounds, such as history of other drugs used, including heroin, cocaine, and alcohol, which affected tobacco cessation treatment success, will be discussed. Being Asian American, an immigrant, ethnic, or culturally different and its effect on treatment outcome will be reported. The non-smoker's spouse, children, and other social supportive roles will also be discussed. Utilizing adjust clinical intervention procedures, such as information on high blook pressure and diabetes will be included in the reported case discussion.

#476 International Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 222 C
CBM/EDC; Service Delivery
BACB CE Offered. CE Instructor: Daniel J. Moran, Ph.D., BCBA

ACT and RFT: New Directions in Clinical and Educational Work
Chair and Discussant: Chad Drake (Portland Psychotherapy Clinic, Research, and Train)

Abstract: Acceptance and Commitment Therapy and Relational Frame Theory have made significant strides in applied science endeavors of significant social concern and interest. The technology involved in Acceptance and Commitment Therapy and Relational Frame Theory assists in understanding complex issues such as the influences on high risk behaviors and fantasizing responses. In addition, Acceptance and Commitment Therapy and Relational Frame Theory concepts and applications can demonstrate how value directed behavior can improve academic achievement. Each of the presenters will show how experiential avoidance can influence individuals to engage in various clinically relevant behaviors. The presenters from each team will also describe the relational conditioning processes that set the occasion for complex human repertories. The discussion among all of the presenting teams will have focus on how normal verbal processes lead to psychological struggle and seemingly unconventional and high risk behavior. Where relevant, treatment implications will be discussed as well as avenues for further research.

A Relational Frame Theory Account of the Emergence and Maintenance of Rape Fantasies.
FAWNA STOCKWELL (The Chicago School of Professional Psychology), Daniel J. Moran (Trinity Services)

Abstract: A sexual fantasy is a series of private events which either evoke or increase sexual arousal. Current research indicates that as many as 33% of women report experiencing at least one sexually arousing rape fantasy in their lifetime, and 10% engage in this fantasy as often as once a month (Shulman & Horne, 2006). This paper will provide a primer on Relational Frame Theory and how the normal processes involved in classical, operant, and relational conditioning can build more complex repertoires that eventually influence the emergence of private stimuli, which may appear taboo or unconventional, to take on reinforcing properties. The influence of metaphorical relating will be discussed. This presentation will develop an account of how sexual fantasy is a type of covert verbal responding which can lead to more complex repertoires, and how rape fantasies can be a selected feature of a person's repertoire as a result of normal verbal processes.

Experiential Avoidance and At-Risk Behavior Patterns SUSAN E. CLARKE (Dorset Healthcare NHS Trust), Jessica Kingston (University of Southampton), Bob Remington (University of Southampton)

Abstract: Many maladaptive behavior patterns (e.g., deliberate self-harm, drug use, risky sexual practices, excessive exercise, binge eating) are of social concern. Well documented risk factors for such problem behaviors include childhood trauma (an environmental risk factor) and negative affect intensity (a temperamental risk factor). According to Acceptance and Commitment Therapy (ACT), however, the relationship between such risk factors and maladaptive behavior is mediated by Experiential Avoidance (EA), the tendency to avoid unwanted private events (e.g., thoughts, feelings, memories). This study used a cross-sectional design to test these hypothesized relations using Structural Equation Modeling (SEM). An opportunity sample of 690 volunteers completed the Acceptance and Action Questionnaire (AAQ), the Maladaptive Behavior Questionnaire (MBQ), a reliable and validated composite measure of problem behaviors developed by the authors, and two self-report measures of key risk factors (the Affect Intensity Measure-Negative Intensity Scale and the Childhood Trauma Questionnaire). SEM analysis revealed that EA fully mediated the relationship between negative affect intensity and the MBQ scores, and partially mediated the relationship between childhood trauma and the MBQ measure. These findings implicate EA as a key process through which childhood adversity and negative affect intensity impacts on maladaptive behavior.

Psychological Flexibility, Academic Success, and Valued Living. AMANDA NICKI JEAN (University of Mississippi), Emily Kennison Sandoz (University of Mississippi), Kelly G. Wilson (University of Mississippi), Kate Kellum (University of Mississippi)

Abstract: College is a difficult venture. Increased academic, social, and practical demands associated with the adjustment to college make academic success a challenge for most. The significant implications

of successfully navigating those demands likely make it worse. Behavior analysis has had a hand in improving educational environments for all ages and academic levels. Through operant and relational conditioning processes, school can come to exert aversive control, which can make avoidance increasingly likely, and success increasingly elusive. The authors will discuss how experiential and emotional avoidance can have a significant impact, not only on vaule directed behavior, but also on important academic achievement scores. Emerging behavior therapies (e.g., Acceptance and Commitment Therapy) suggest that interventions on school success might be improved by focusing on increasing flexibility with school-related stimuli, and contact with chosen values. The current study examines the relationship between psychological flexibility, academic success, and valued living. Further directions will be discussed.

#477 International Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 132 BC
DEV/TPC; Theory

Peter Harzem: A Legacy of Steel and Velvet
Chair: Martha Pelaez (Florida International University)
Discussant: M. Jackson Marr (Georgia Tech)

Abstract: Peter Harzem died this last year after an extended illness. For nearly 40 years he was a significant contributor to the conceptual and historical foundations of behavioral science. Reflecting both broad and deep scholarship in the experimental, historical, and philosophical literature, he was a steely and trenchant critic of some of the most common assumptions and practices of basic and applied behavior science. He thus kept mindful behavior analysts on their toes in either acceding to his judgments or vigorously defending their own--in either case, he could not be ignored. Yet, he was equally skilled at velvety persuasion through his extraordinary wit and charm. His many talents and skills not only inspired students and colleagues alike, but found powerful expression in the organization and dissemination of behavior analysis world wide. This symposium will honor his memory and contributions

Harzem's Contributions to the Analysis of Behavioral Development. HAYNE W. REESE (West Virginia University)

Abstract: This paper is a review and critique of Peter's many contributions to developmental psychology, which came mainly from his conceptual analyses of issues in that field. Peter did not disvalue conceptual analysis, as indicated by a remark he made at the 1980 meeting of ABA. I had criticized the use of "hyphenated reinforcers," and he replied "Won't you allow us any hypotheses?" By extension from the actual uses of hyphenated reinforcers, conceptual analyses are hypotheses and they are scientifically worth while if they are well-justified generalizations from prior empirical research, in this case behavior analytic research, and if they are at least potentially susceptible to empirical tests

On Peter's Intellectual Heritage to Psychology. MARTHA PELAEZ (Florida International University), Jacob L. Gewirtz (Florida International University)

Abstract: Peter Harzem reflects both broad and deep scholarship in the experimental, historical, and philosophical literature. He kept mindful behavior analysts on their toes in either acceding to his judgments or vigorously defending their own. The authors discuss some of Peter's intellectual challenges and heritage, in particular, his arguments on the 'disasters' that have derailed psychology.

A Bridge Between Europe and USA. PAOLO MODERATO (IULM University ITALY)

Abstract: Peter Harzem was a bridge between Europe and USA. Born In Turkey he went to UK, first to London and then to Bangor, where he established the Department of Psychology. Then he crossed the Atlantic ocean to land in Alabama. When he invented and developed the series "Conference on

Behaviorism and Sciences of Behavior" his spirit brought him back to Europe (Italy, Spain,and Swiss) and not only: Japan and Taiwan. Unfortunately, due to nine eleven, he coudn't accomplish the last mission, bringing the conference to his hometown, Instanbul

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#478 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 225
EAB/BPH; Experimental Analysis

Fixed-Ratios, Delay-to-Reinforcement & Signals: Methodological Issues and Extension
Chair: David P. Jarmolowicz (West Virginia University)

Abstract: The effects of delay-to-reinforcement have been examined on a variety of schedules of reinforcement such as variable interval schedules (e.g., Lattal, 1984), differential reinforcement of low rate schedules (e.g., Lattal & Ziegler, 1982) and on fixed-ratio (FR) schedules (e.g., Kendall & Newby, 1978). Since Lattal and Gleeson (1990) published their seminal article on acquisition with delay-to reinforcement, delay to reinforcement on FR1 schedules has received considerable attention. For example, experiments have examined the effects of delay duration (e.g., Sutphin, Byrne, & Poling, 1998), signals (e.g., Lattal, 1984), and the use of these schedules to examine the effects of various drugs (e.g., LeSage, Byrne & Poling, 1996) and strain differences (animal models of various disorders; e.g., Anderson & Elcoro, 2006). The work presented in the present symposium builds upon previous work using delay-to-reinforcement on FR1 schedules by examining the effects of end-of-delay stimuli on acquisition with delay to reinforcement and by evaluating acquisition with delayed reinforcement with Spontaneously Hypertensive Rat (a purported model of ADHD). Procedural issues in the use of acquisition with delay-to-reinforcement are then reviewed; and work extending from FR1 to a range of FR schedules is presented.

Further Failure to Demonstrate Blocking of Response Acquisition with Delayed Reinforcement with End-of-Delay Stimuli. ANDREW T. FOX (Central Michigan University), Mark P. Reilly (Central Michigan University)

Abstract: Previous research has shown that stimuli at the end of long response-reinforcer delays can attenuate acquisition of lever-pressing in rats. The explanation for this result is that the intervening stimulus "blocks" (in a Pavlovian sense) the response-reinforcer association. Several attempts to replicate this finding in our lab have failed. Two such experiments are reported here. In the first, a houselight was explicitly paired with food reinforcement before acquisition sessions under a 30-s non-resetting delay condition were conducted. This arrangement was more explicitly analogous to a Pavlovian blocking preparation. Blocking did not occur; all subjects in all conditions acquired lever pressing. In the second, one of the major differences (manner of food restriction) between our experiments and the previous ones was explored. Two types of food restriction (2-hour access versus 85% free-feeding weight) were imposed on the subjects during response acquisition sessions with end-of-delay stimuli. Five of six subjects gained weight when given 2-hour access to chow and only one subject acquired lever pressing. When the same rats were subsequently restricted to 85% of their free-feeding weights, all acquired lever pressing, precluding unequivocal interpretation of the failure to acquire lever-pressing in the 2-hour access phase in terms of Pavlovian blocking.

Response Acquisition with Signaled Delayed Reinforcement in a Rodent Model of Attention-Deficit/Hyperactivity Disorder. DENNIS HAND (Central Michigan University), Andrew T. Fox (Central Michigan University), Mark P. Reilly (Central Michigan University)

Abstract: Impulsivity has been characterized as a hypersensitivity to delayed reinforcement, and this characteristic has been proposed to contribute to the learning deficits reported in children diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). The Spontaneously Hypertensive Rat (SHR), a purported model of ADHD, has been shown to exhibit this hypersensitivity to reinforcer delay. Previous research by Hand, Fox and Reilly (2006) showed that response acquisition was retarded in SHRs relative

to control rats when unsignaled delays of 15 s separated responses from food delivery. To further explore the variables that underlie this sensitivity to delayed reinforcement, the present study exposed SHR and Wistar-Kyoto rats to signaled, response-reinforcer delays of 15 s (chain FR 1, DRO 15 s). The present study tested the idea that signaled delays should facilitate response acquisition in SHRs thus resulting in no strain differences: The signal should function as an immediate conditioned reinforcer and thus reduce the overall effect of the delay. As predicted, response acquisition was similar between strains. Although SHRs averaged slightly more responses and DRO resets, the number of pellets earned was identical. Thus, signaling response-reinforcer delays eliminated previously demonstrated differences in response acquisition deficits between SHRs and Wistar-Kyoto rats under 15-s resetting delays of reinforcement.

Drug Effects on Response Acquisition with Delayed Reinforcement: Procedural and Definitional Issues. ALAN D. POLING (Western Michigan University), Thomas P. Byrne (MCLA)

Abstract: Several studies from our laboratory and elsewhere have examined the effects of a number of drugs on response acquisition under conditions where neither shaping nor autoshaping were arranged and putative reinforcers were delayed by different intervals. This presentation will summarize work in this area, with particular emphasis placed on methodological issues. Although procedures involving response acquisition with delayed reinforcement have some appealing features for studying drug effects on learning, their use is fraught with difficulty.

Fixed-Ratio Schedules: Effects of Delay-to-Reinforcement. DAVID P. JARMOLOWICZ (West Virginia University), Kennon A. Lattal (West Virginia University)

Abstract: A number of studies have examined the effects of signaled and unsignaled delays-to-reinforcement on behavior on FR1 schedules (e.g., Critchfield & Lattal, 1993; Sutphin, Byrne, & Poling, 1998); however, notably less is known about the effects of reinforcement delays on other FR schedules (e.g. Kendall & Newby, 1978). The current experiments examined some effects of a range of signaled and unsignaled delays to reinforcement on behavior maintained by FR schedules. In Experiment 1, behavior maintained on a FR50 schedule was rapidly exposed to a range of delays-to reinforcement (i.e., 1-s to 320-s). In Experiment 2 behavior maintained on a range of FR schedules (i.e., FR10 to FR400) was exposed to delays of various durations. In general, negative relations between rate and delay and positive relations between delay and post reinforcement pause were observed.

#479 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 122 A
EDC/CSE; Experimental Analysis
BACB CE Offered. CE Instructor: Abigail Calkin, Ph.D., BCBA

Language: Its Role in Indigenous Education, Poverty, and Culture
Chair: Abigail B. Calkin (Calkin Consulting Center)

Abstract: Indigenous and minority education has not kept pace with the educational progress of Western Europeans in the same regions. Confronted by language and cultural losses, indigenous and minority people try to meld yet retain their way of life. Looking at the circumpolar nations' practices as well as Native and minority cultures, we notice that cultural practices and language have often been snatched away in favor of the more dominant, western way of life. These small groups and the governments around the Northern Hemisphere have begun to look at the impact of these practices and how to preserve Native integrity while blending into the local, national pot. Is this even possible? Yes, but the results and potential for success hinge on the role central government plays and on increasing the present low language skills through programs such as Direct Instruction and Language for Learning. The participants, who work with the education of minority groups, will share standardized and standard celeration charted data from their work with Native Americans, First Nations, African Americans, and Hispanics. Data collected and analyzed from thousands of students show that we can educate people at the 80th percentile while retaining cultural heritages.

Indigenous Education in the Far North and the Lower 48. ABIGAIL B. CALKIN (Calkin Consulting Center)

Abstract: Tribe in Canada's Yukon Territory asked what were the academic achievement levels of other peoples in the Circumpolar Regions. This question has many answers—some areas have high achievement, others do not, and on top of any answer given is the cultural overlay. In the Far North of Russia, Alaska, Canada, Greenland, and Scandinavia, education systems have been used to acculturate native populations as well as destroy the local native culture. Even though countries do not use the same yardstick, we can begin to glimpse cross-national and cross-cultural comparisons by using standard scores, researched, authoritative opinions, and achievement test scores. In an effort to help indigenous populations in the Far North and southern areas cross the bridge to Western culture and achievement, village and tribal schools in many areas have used the Morningside Academy model. Two schools showing significant achievement growth are in British In 2003, Chief Darren Isaac of the Selkirk First Nations band of the Northern Tutchone Columbia and Oklahoma.

The Intersection and Culture. KRISTINE F. MELROE (Morningside Academy)

Abstract: Native nations in the US are facing a critical juncture to assimilate or maintain their culture. Historically, education, a discipline that can have a profound effect on social change, has played a destructive role in U.S. Native cultures and languages. Two saving options are to become proficient in English and move off the reservation to be economically stable, or stay on the reservation with few job opportunities yet surrounded by native culture. In order to move forward into positive educational and cultural developments, we offer a historical review of the role educational systems have played.

This presentation examines the effects that the loss of language has on culture. Through surveys and interviews, we share the concerns of parents and community and their vision of the role education should play in saving the language and culture. We compare this to what has been written about the various cultures and languages. The behavior analyst's understanding of human behavior places us in a unique position to make substantial contributions in creating an array of successful interventions for social change.
An applied behavior analysis approach to education helps determine the appropriate interventions that support the culture and language so students can move between the cultures.

Low Language Skills = Low Learning. DEBORAH L. BROWN (SCOE/Morningside Academy)

Abstract: The cultural and educational history of bilingual students often shows they have low language skills and proficiency in both languages. Because of these low skills, their social and academic achievement are the lowest in the country. In Hart & Risley's longitidunal study, the lower the socio-economic status, the lower the oral language. In early childhood, meaning is often communicated within a common social context and understanding. When contextual language is used out of context, e.g., in a bilingual situation, however, language cannot be understood. Therefore these young people are not prepared to interact in an educational setting with the context of language and cannot comprehend written text. As a result, the vocabulary gap between professional people and lower SES groups is huge and continues to grow larger.

Language for Learning. CATHY L. WATKINS (California State University, Stanislaus)

Abstract: Language for Learning is a Direct Instruction language development program designed to teach language, concepts, information, and knowledge that will benefit children in the classroom. The program was designed to address the needs of children who entered the school system without having mastered 'the language of instruction.' Language for Learning is used to teach oral language skills to children whose language is inadequately developed, including students for whom English is their second language, special education students, and children in speech/language classes. There is a strong foundation of research supporting both the Direct Instruction method and the Language for Learning

program. This presentation will provide an overview of the content of Language for Learning and outcomes for various learners.

#480 Symposium

5/25/2009
3:30 p.m. - 4:50 p.m.
North 127
VRB/AUT; Applied Behavior Analysis

Teaching Verbal Behavior and Language Pragmatic Skills to Children with Autism
Chair: Vincent Joseph Carbone (Carbone Clinic)
Discussant: Patrick E. McGreevy (Patrick McGreevy, Ph.D., P.A.)

Abstract: Many children with autism fail to develop vocal behavior as their primary method of communication. In addition, many in this group of children also fail to develop the pragmatic skills that typically accompany verbal responses and make their verbal responses more effective. In the first paper the authors will describe methods of vocal shaping with young children with autism. Procedures for phonetically transcribing utterances to establish shaping criteria will be discussed. A system for classifying vocal productions as they improve toward adult form will be described. In the second paper the authors will present a behavioral analysis of eye contact as a language pragmatic skill. Procedures, derived from the analysis of eye contact as a pragmatic skill in young children with autism will be described and illustrated through video. The authors of the final paper will describe procedures for making data-based decisions within the context of teaching verbal behavior to young children with autism. Data along with video illustrations will accompany each paper.

Teaching Language Pragmatic Skills to Children with Autism. KRISTIN M. ALBERT (Carbone Clinic), Leigh Mariano O'Brien (Carbone Clinic), Claire Hesse (Carbone Clinic), Vincent Joseph Carbone (Carbone Clinic)

Abstract: One of the defining characteristics of children with autism is their failure to engage others in reciprocal social interaction. The absence of eye gaze is frequently one of the first indicators of the disorder. As children with autism develop verbal behavior they frequently do not make eye contact when addressing their communicative partner's or listene's. The purpose of this paper is to provide a behavioral analysis of eye contact as a language pragmatic skills. A case study of the implementation of procedures based upon the analysis will be presented. The effects of the treatment on the eye gaze of a three and one-half old child will be discussed. Video illustrations and performance data will presented to support the treatment methods.

Shaping the Vocal Production of a Child with Autism. CLAIRE HESSE (Carbone Clinic), Heather Ventrella (Carbone Clinic), Kristin M. Albert (Carbone Clinic), Vincent Joseph Carbone (Carbone Clinic)

Abstract: About 50 percent of children with autism fail to develop vocal verbal behavior as their primary form of communication. Consequently, effective treatments to teach vocal responding to children with autism may have substantial benefits for many children. The purpose of this paper is to provide and case study illustrating the benefits of the evidence-based behavior analytic methods based upon B. F. Skinner's analysis of verbal behavior. The case study involves a young boy with autism starting at about age three to about age 6. The author will discuss the use of manual sign language and differential reinforcement to support vocal production. The effects of sign mand training, time delay and shaping procedures will be illustrated. The implementation of a phonetic coding method for transcribing phoneme production during treatment sessions will be highlighed. Video illustrations and learner data will be presented in support of the methods used.

Data-based Decision Making in a Center Based Program for Children with Autism. EMILY SWEENEY KERWIN (Carbone Clinic), Margaret Murdoch Hagerty (Carbone Clinic), Kristin M. Albert (Carbone Clinic), Vincent Joseph Carbone (Carbone Clinic)

Abstract: The use of learner performance data to inform instructional decisions is as hallmark of Applied Behavior Analysis. Many reports have documented the benefits of objectively defining outcomes, measuring progress, displaying the progress on a line graph, setting decision rules, analyzing the data sets against the pre-determined standards and then changing instructional practices when appropriate. The purpose of this paper is provide the participants with case study data showing the implementation of the data based decision making process as outlined above within a center based program for the treatment of children with autism. Video illustrations of the implementation of each step will be provided. In addition, learner performance data and subsequent instructional decisions and changes will be highlighted.

#481 Paper Session

5/25/2009
4:00 p.m. - 4:50 p.m.
North 226 AB
EAB

Non-Standard Lab Animals
Chair: James Kopp (University of Texas at Arlington)

Effects of Reinforcing with Combined Food and Praise on Eating and Weight Gain in Dogs.
(Applied Behavior Analysis) MARY E. TRAVERS (Hofstra University), Richard M. O'Brien (Hofstra University)

Abstract: Food and praise are often combined in training. Such pairing might establish food as a conditioned reinforcer even when the oganism is no longer food deprived. This would to lead to weight gain. To test this proposition, 40 small dogs (4-25 lbs.) were randomly distributed among four regimens for training. The reinforcers used were: 1. food, touch and praise, 2. food only, 3. praise and touch only, and 4. a no training control. Appropriate groups were given equvalent non-contingent food and praise as a control. Weight and food intake were measured thoughout the five phases of the study: 1. Free feeding baseline, 2. Restricted feeding baseline, 3. Training with restricted feeding, 4. Return to free feeding baseline, and 5. Food satitated training of a new response. Mean weight differences subtracting end of baseline from end of the return to baseline were +1.02 for Food and Praise, +.35 for Food Only, -.07 for Praise Only and -.47 for no training. By ANOVA and paried comparisions, the combined group differed significantly from the praise only and no training groups. The difference with food only approached significance ($p.<.08$). Learning under satiation also differed between groups. These results suggest that food paired with praise, may become a conditioned reinforcer.

Reinforcement Control in the Zebrafish Using Readily Available Materials to Detect and Reinforce Swimming Behavior.
(Experimental Analysis) Tara N. McKelvy (University of Texas at Arlington), JAMES KOPP (University of Texas at Arlington)

Abstract: In an earlier report (Kopp, Ferguson, Magee, & Mueller 1999), the rate of a swimming response breaking a photobeam infrared light sensor in zebrafish was shown to increase when the fish's response turned off a light behind a piece of semi-silvered glass (making the glass into a mirror) in the fish's immediate vicinity. This has recently been replicated using the presentation of live, conspecific fish in an adjoining tank as a reinforcing stimulus (Al-Imaria & Gerlai, 2008). The present experiment replicates the Kopp, et al study with the Danio rerio species of zebrafish (wild type AB strain) using a commercially available photobeam apparatus (Med Associates ENV 253) along with a one-way mirror made of automotive anti-glare glass instead of the more expensive, and harder to locate, semi-silvered glass. Rates of beam breaking in the fish were higher during 30 minute FR1 sessions than they were during 30 minute extinction sessions. Rates were also higher during FR1 sessions lasting 24 hours as opposed to 24 hour extinction sessions.

#482 Panel Discussion

5/25/2009
4:00 p.m. - 4:50 p.m.
North 120 D
OTH/CSE; Service Delivery
BACB CE Offered. CE Instructor: Michael Weinberg, Ph.D., BCBA

Licensing of Behavior Analysis: Protecting the Profession and the Public
Chair: Michael Weinberg (Orlando Behavior Health Services, LLC)

MICHAEL F. DORSEY (The Vinfen Corporation and Endicott College)
THOMAS L. ZANE (Sage Colleges)
MICHAEL WEINBERG (Orlando Behavior Health Services, LLC)

Abstract: Panelists in this presentation will discuss future directions for the field with regard to licensure of behavior analysts. The panel will discuss why the time has come in the evolution of the field to pursue licensure as the next step in the process. An examination and discussion of legal and ethical issues will be presented along with how to pursue proposing and passing licensure legislation, how licensure ensures protection of the public, and requirements and standards being proposed for becoming licensed as a behavior analyst. The presentation will include activities to date by the Practice Board to achieve licensure status, as well as discuss ways to achieve third party payment for behavior analysis services.

#483 Paper Session

5/25/2009
4:00 p.m. - 4:20 p.m.
North 132 A
TPC

Traumatic Brain Injury: Assessment and Treatment
Chair: Ted G. Schoneberger (Stanislaus County Office of Education, Modesto, CA)

Functional Trials: A Behavior Analytic Approach to Assessment and Awareness-Building for Survivors of Traumatic Brain Injury. (Applied Behavior Analysis) CHRIS M. SCHAUB (ReMed Rehabilitation), Christina M. Peters (ReMeD Rehabilitation)

Abstract: This paper provides a preliminary but systematic introduction to and evaluation of the "Functional Trial Assessment Strategy," which has been developed and refined by clinicians at ReMed, in their work with individuals who have sustained a Traumatic Brain Injury.The strategy takes into account a more traditional definition of "function", and utilizes behavior analytic techniques in areas of assessment and skill building. It creates a framework in which a multidisciplinary team of clinicians can construct analog conditions to either test or work toward developing an individual's skills in a safe and structured manner. This study seeks to describe and explore the utility of this strategy in guiding the rehabilitation efforts with this unique population.The data generated within these assessments guide programming toward skill building and/or toward the modification of the individual's environment in order to promote safety and stability across critical areas of function. Concurrently, this methodology can play an important role in the treatment of a phenomenon known as anosognosia, or the lack of awareness of deficits; which presents this population and treating clinicians with a specific set of challenges.

#484 International Paper Session

5/25/2009
4:00 p.m. - 4:50 p.m.
North 131 BC
TPC

ABA as a Profession: Challenges Without and Within
Chair: Douglas S. Lee (Behavioral Solutions Inc.)

Analysis of Mainstream News Media as it Relates to Applied Behavior Analysis. (Theory) DOUGLAS S. LEE (Behavioral Solutions Inc.), Mike R. Johnston (Behavioral Solutions, Inc.), Cristin D. Johnston (Behavioral Solutions, Inc.)

Abstract: The term Applied Behavior Analysis (ABA) is becoming increasingly associated with a myriad of services and programs in the human service area (e.g., Positive Behavioral Support, Behavior Based Safety etc). Keeping track of how ABA is being linked with various endeavors and services is of benefit not only conceptually (how Behavior Analysis is doing as a science) but also for consistency amongst professional services described as having an ABA component (how Behavior Analysis is viewed as a profession). A sampling of mainstream news articles made possible through an ongoing Google search using "Google Alert" of Applied Behavior Analysis, Positive Behavior Support, Behavior Based Safety, Precision Teaching, Direct Instruction, and Behavioral Modification for a period of the past 24 months has been conducted. Data indicate a striking lack of reference to ABA across these service areas typically thought of as very closely linked to the field of Behavior Analysis. Our sampling to date also points to very limited public news awareness of several areas and outmoded and potentially misleading information is commonplace. Implications of this result as well as recommendations for improving this situation are discussed.

Our Growing ABA Field and its Players….How do YOU Play the Game? (Applied Behavior Analysis) THOMAS P. KITCHEN (Achievement Center / Mercyhurst College)

Abstract: Over the better part of the past decade, the ranks of professionals carrying the title "Behavior Analyst" and practicing within the field has grown considerably. This growth has presented the field with both tremendous opportunity and tremendous challenge. This paper will describe the divergent progressions established by this growth. On one hand, growth has brought new leaders of the field who are pushing behavior analysis into greater levels of scope and precision. On the other hand, the spawning of a large new generation of behavior analysts has arguably had a "watering down" effect on the entire ABA field, as the fastest-growing group includes those with the least amount of reverence for the scientific rigor and precision inherent in true behavior analysis. There is a growing majority of practitioners representing ABA who receive minimal training in advanced theoretical and scientific aspects of the field, and subsequently fail to realize the importance of the data-based analytical hallmarks of the field. Through presentation of common traits of such behavior analysts, the paper aims to discourage inconsistent implementation of both behavioral technology and behavioral philosophy.

#485 Paper Session

5/25/2009
4:30 p.m. - 4:50 p.m.
North 227 A
AUT

Applied Behavior Analysis in Autism
Chair: Edward K. Morris (University of Kansas)

Applied Behavior Analysis in Autism: Conceptual Confusions about Science and Essence.EDWARD K. MORRIS (University of Kansas)

Abstract: In this paper, I address conceptual confusions (a) about what applied behavior analysis (ABA) is in autism interventions and (b) in misrepresentations of ABA as an essentialist intervention. The conceptual confusions about ABA in autism arise in the distinctions among ABA as a subdiscipline of the discipline of behavior analysis, applied behavior-analytic interventions based on that subdiscipline, and Lovaas's particular style of ABA early intensive behavioral intervention (EIBI). ABA, for instance, is often identified solely as Lovass's ABA EIBI and vice versa. This is confusing to parents, policy makers, and journalists. I seek to clarify these distinctions. The misrepresentations of ABA as an essentialist intervention confuse the means of discovering interventions that work from interventions themselves. Just as Watson (1928) had no essentialist childrearing advice and Skinner (1948) had no utopian blueprint, ABA has no essentialist interventions in autism. I argue that the interventions are ever-evolving and dependent on context (e.g., clients, parents, cultures).

#486 Special Event

5/25/2009
5:00 p.m. - 5:50 p.m.
West 301 CD
BACB CE Offered. CE Instructor: Raymond G. Miltenberger, Ph.D., BCBA

Presidential Address
Chair: William L. Heward (Ohio State University)

Why Are We Not Acting to Save Lives? RAYMOND G. MILTENBERGER (University of South Florida)

Dr. Ray Miltenberger received his Ph.D. in clinical psychology from Western Michigan University in 1985 after completing a pre-doctoral internship at the Kennedy Institute at Johns Hopkins University School of Medicine. Currently, he is the director of the Master's Program in Applied Behavior Analysis at the University of South Florida. Dr. Miltenberger serves on the Executive Councils of ABAI and FABA and is a member of the board of directors of SABA. He is on the editorial boards of JABA, Behavioral Interventions, and Journal of Positive Behavioral Interventions and serves as an associate editor for Behavior Analysis in Practice and Education and Treatment of Children. Dr. Miltenberger's research focuses on teaching safety skills to children and individuals with mental retardation, analysis and treatment of repetitive behavior disorders, and functional assessment and treatment of problem behaviors. He has published over 175 journal articles and chapters, has co-edited a text on analysis and treatment of tics and repetitive behavior disorders, and has written a behavior modification textbook, now in its fourth edition. Dr. Miltenberger has received a number of awards for his teaching and research including the 2008 APA Division 25 Award for Distinguished Contributions to Applied Behavioral Research.

Abstract: Applied behavior analysis has a rich history of helping people change a wide range of socially significant behaviors. In spite of ABA's great success in changing behaviors to better people's lives, some life-or-death behaviors have not received as much attention from behavior analysts. Let's face it, many people regularly fail to engage in safe behaviors and instead, willingly engage in unsafe behaviors that can (and often do) end up killing them. Changing these behaviors has the potential not only to better people's lives but to save lives. If behavior analysts did a better job of saving lives, recognition of behavior analysis and its contributions to society would likely grow. In this address I will discuss what I believe to be important target behaviors for behavior analysts to address in future research and practice with the likely impact of saving lives. I will review some of my own work in safety skills training as an exemplar of this research and discuss important issues that need to be addressed in future research and dissemination efforts.