SEABA

The Southeastern Association for Behavior Analysis, founded in 1984, is a regional scholarly organization and an affiliate of the Association for Behavior Analysis. It exists primarily to promote scholarly interchange in behavior analysis through its annual convention. Membership is open to anyone with a scholarly interest in Behavior Analysis.

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30th Annual Meeting

of the

Southeastern Association for Behavior Analysis

Sheraton Myrtle Beach Convention Center

Myrtle Beach, SC

October 24-26, 2013

SEABA is a Regional Affiliate
of the
Association for Behavior Analysis International

Thursday, October 24 – Ballroom E

7:00 – 11:00 p.m. **Opening Reception/Registration**
Social with Cash Bar

Friday, October 25 – Ballroom D

8:00 a.m. **Registration: Coffee and Pastries**

8:45 a.m. **OPENING REMARKS**
Wendy Donlin Washington, President
University of North Carolina Wilmington

9:00 a.m. **ACCESSIBLE E-LEARNING FOR ALL: UNIVERSAL DESIGN MEETS BEHAVIORAL INSTRUCTION**
Philip N. Chase
University of Massachusetts, Shriver Center
Chair: Billie Klein, University of North Caroline Wilmington

An auditing tool (ID Audit) will be presented that assists the development and evaluation of instructional websites, particularly those in health and behavioral health. The ID Audit was designed in accordance with the principles and practices of applied behavior analysis (ABA) and the principles of universal design and accessibility. There are 8 domains of the audit: Learning and Motivation; Data Collected and Reported; Plain Language and Readability; Use of Technology; Transformability; Multi-modality; Focus and Structure; and Assistive Technology. Each domain in the ID Audit is expanded to a set of features. Each feature is used to inform development or evaluation of online instruction. The presentation will describe the value of using an ID Audit, describe illustrative domains and features of an ID Audit, apply illustrative domains and features to instructional materials, and discuss evidence-based standards being used to develop this instrument.

10:00 a.m. **THE HORSE BEFORE THE CART: ON METHODS AND THE FUTURE OF APPLIED BEHAVIOR ANALYSIS**
Timothy R. Vollmer
University of Florida
Chair: Apral Foreman, West Virginia University

The presenter will review complex societal issues that would be considered "high" on most social validity scales but rarely appear as topics in behavior analysis journals. He will make a case that historically our methods have in some ways driven our research questions (the cart before the horse). He will

40 **Behavioral Economics of Nicotine Self-Administration: Are Increasing Cost and Decreasing Dose Equivalent Manipulations?**
Tracy T. Smith, Rachel L. Schassburger, Alan F. Sved, & Eric C. Donny (University of Pittsburgh)

41 **Reduced Gababr Expression and Impaired Prefrontal Cortical Function in Aging.**
B. Sofia Beas, Cristina Banuelos, Barry Setlow, & Jennifer L. Bizon (University of Florida Departments of Neuroscience & Psychiatry, College of Medicine, Gainesville, FL)

42 **Increased Glutamate Release and Memory Deficits in a Mouse Model of Alzheimer's Disease.**
Holly C. Hunsberger, Carolyn C. Rudy, & Miranda N. Reed (West Virginia University)

43 **Duration of Sickness Behavior Following Endotoxin in Aged and Adult Animals.**
Sharay Setti, Carolyn Diaz, Amanda Jones, & Rachel A. Kohman (University of North Carolina Wilmington)

PROGRAM POSTERS

A **Behavior Analysis at West Virginia University.**
Karen Anderson, Regina Carroll, Elizabeth Kyonka, Kennon Lattal, Michael Perone, & Claire St. Peter (West Virginia University)

B **Behavior Analysis at University of North Carolina Wilmington.**
Melanie H. Bachmeyer, Wendy Donlin Washington, Christine Hughes, Mark Galizio, Carol Pilgrim, Raymond C. Pitts, & Carole Van Camp (University of North Carolina Wilmington)

C **Behavioral Neuroscience at West Virginia University.**
Melissa Blank, Steven Kinsey, Hawley Montgomery-Downs, & Miranda Reed (West Virginia University)

D **Jmu Psychological Sciences Behavior Analysis Concentration.**
Dan Holt, Jessica Irons, Bryan Saville, Trevor Stokes, & Tracy Zinn (James Madison University)

26 **Using Go-No-Go Procedures to Investigate Symmetry in Rats.**
Ashley Prichard, Danielle Panoz-Brown, Katie Dyer, Samantha Hess, Erin Lackey, Melissa Deal, Megan Halloran, Courtney Anderson, Mark Galizio, & Katherine E. Bruce (University of North Carolina Wilmington)

27 **Desensitization and Counter-Conditioning of Thunder Phobia in Pet Dogs.**
Alexandra Protopopova[1] & Clive D. L. Wynne[2] (University of Florida[1] & Arizona State University[2])

28 **Acquisition of Discrimination in a Pigeon Slot Machine Analog Is a Three-Stage Process.**
Nathaniel Rice, Alexander Ward, & Elizabeth G. E. Kyonka (West Virginia University)

29 **Unequal Preference with Equal Time to Food.**
Shrinidhi Subramaniam & Elizabeth Kyonka (West Virginia University)

30 **Lever-Press Acquisition with Delayed Reinforcement in Pair-Housed Lewis and Fischer 344 Rats.**
Marissa Turturici & Karen G. Anderson (West Virginia University)

31 **Session Length and Gambling.**
Alexander Ward & Elizabeth Kyonka (West Virginia University)

32 **Effects of Sub-Chronic Ketamine on Odor Span Task Performance in Rats.**
Courtney A. Anderson, Melissa Deal, Kim Frey, Scott Hannah, Danielle Panoz-Brown, Remy Welch, & Mark Galizio (University of North Carolina Wilmington)

33 **Chronic Exposure to Cocaine in Adolescence Alters Coupling in Adulthood.**
Steven R. Boomhower, Derek A. Pope, & M. Christopher Newland (Auburn University)

34 **Effects of Pre-Session Feeding and D-Amphetamine Administration on Pigeons' Response Rates under a Multiple Fixed-Ratio Fixed-Interval Schedule of Food Reinforcement.**
Vanessa Minervini, Molly Hankla, & Marc N. Branch (University of Florida)

35 **The Effects of Ketamine ("Special K") on Sensitivity to Reinforcement of Delay under a Rapid Acquisition Procedure: Implications for Impulsive Behavior.**
Taylor Ochalek, Christine E. Hughes, & Raymond C. Pitts (University of North Carolina Wilmington)

36 **Testing Theories of Timing with Methylmercury, Isradipine, and Balb/C Mice.**
Derek A. Pope & M. Christopher Newland (Auburn University)

37 **Effects of Methylphenidate in a Delayed Non-Matching- to-Sample List Procedure in Rats.**
Elizabeth Rigsbee, Christine Hausmann, Katherine E. Bruce, & Mark Galizio (University of North Carolina Wilmington)

38 **Attenuation of Incremental Repeated Acquisition Learnings Deficits.**
Carolyn C. Rudy, Holly C. Hunsberger, & Miranda N. Reed (West Virginia University)

39 **A Multiple Schedules Incremental Acquisition Procedure Reveals Effects of D-Amphetamine and Ketamine.**
Andrew Nathanael Shen & M. Christopher Newland (Auburn University)

then make a case that we should be designing our studies based upon the question (the horse before the cart). He will use examples from the literature and from his own research to demonstrate. Some examples will include sex offending, running away from home, and fitting in with a foster family.

11:00 a.m. **Break**

11:15 a.m. **AGING ACROSS MULTIPLE COGNITIVE DOMAINS**
Jennifer Bizon
University of Florida
Chair: Kathryn Teixeira, Auburn University

Expectations of longevity have increased two-fold in the last century resulting in unparalleled numbers of individuals who will live to experience age-associated cognitive impairments. Indeed, in addition to the 13% of individuals over age 65 who will face dementia associated with Alzheimer's disease, the vast majority of seniors will show decline in cognitive processes such as attention, learning, memory and executive functions. Rats provide an excellent and reproducible system in which to study neurocognitive function and in which to investigate the behavioral and neurobiological consequences of advancing age. Data from aged rodent studies reveal marked individual differences in neural signaling and behavioral deficits associated with different cognitive domains such as memory, executive functions and cost-benefit decision-making. These data support that age-related cognitive decline is a multifactorial problem and that potential treatment strategies for improving cognitive outcomes should take into account domain-specific neural and behavioral deficits. Approaches for identifying the mechanisms whereby the brain is able to effectively adapt for loss of function will be highlighted, as will hypotheses regarding strategies for optimizing cognition across domains impaired at advanced ages.

12:15 p.m. **Lunch**

2:00 p.m. **THE IMPORTANCE OF MOTIVATION IN INTERVENTIONS FOR CHILDREN WITH ASD**
Alice Shillingsburg
Emory University School of Medicine; Marcus Autism Center
Chair: Bradley Joachim, West Virginia University

Autism spectrum disorder (ASD) results in impairments in reciprocal social interaction and communication as well as high rates of ritualistic and stereotyped behavior (APA, 2003). The Centers for Disease Control and

Prevention (CDC) estimates 1 in 88 children in the United States are diagnosed with ASD (CDC, 2012). Given these staggering estimates, considerable attention has been directed to research on etiology, assessment, and treatment services for children diagnosed with ASD. Significant interest has emerged from professionals and parents to determine effective treatments that can remediate deficits characteristic of ASD and promote maintenance in the natural environment. Increasingly there has been an emphasis on the social impairments associated with ASD as the hallmark characteristic for the disorder. These social deficits have been described as an impairment in the social reward system and can impede skill acquisition and heighten problem behaviors given the emphasis on social reinforcers in the natural environment. Interventions aimed at addressing language and social deficits associated with ASD that are based in applied behavior analysis have been shown to produce significant improvements in both domains. The current presentation will discuss the importance of social reinforcers and motivation across a variety of treatment strategies to address the deficits and problem behaviors associated with ASD. Specific strategies to assess and enhance motivation during intervention with children with ASD will be presented.

3:00 p.m. **ANALOG BEHAVIOR MEASUREMENT AND THE CONCEPT OF THE OPERANT**

Jonathan Pinkston
University of North Texas

Chair: Steven Boomhower, Auburn University

Our lab has begun recently to explore the close relationship between theory and measurement. In the first portion of the talk, I will explore traditional approaches to measuring operant behavior in the laboratory and its impact on the concept of the operant. Operant behavior traditionally has been defined by switch closures, such as lever and button presses, chain and plunger pulls. There are undeniable advantages to the overall strategy, but simultaneously it results in behavior becoming "digitized", an on/off quantity shrunk down to a single point in time. The digital characterization of operant behavior ends up excluding an important portion of the activity of organisms—the behavior itself. In their important book, Notterman & Mintz (1965) outlined an approach to behavior that relies upon analog measurement and the explicit examination of the response in its execution. In the second portion, I will outline our lab's work to revive Notterman & Mintz's strategy with respect to response force/effort. Typically, the literature has reported that increasing force/effort requirements decreases response output, and results have been interpreted as evidence for aversive functions of effort. Using an analog measurement approach, however, our findings suggest that increasing effort requirements may increase response output and indicate a better account the role of response effort lies within an economic theory. Our data show the

12 **The Persistence of Reinforcement History on Progressive Ratio Performance.**
Brian Coleman, Michael Mathews, Savanna Daughtry, Denise Masten, & Wendy Donlin Washington (University of North Carolina Wilmington)

13 **Delay-of-Reinforcement Gradients with Fixed and Mixed Delays in Steady-State and Progressive-Delay Arrangements.**
James E. Cook & Kennon A. Lattal (West Virginia University)

14 **Autoshaping Performance in Mice: The Role of Age, Strain, and Reinforcer Type.**
Craig W. Cummings & M. Christopher Newland (Auburn University)

15 **Progressive Ratio Breakpoints Are Sensitive to Free Food.**
Savanna Daughtry, Michael Mathew, Denise Masten, Yu Lee, Kwame Freeman, Brian Coleman, & Wendy Donlin Washington (University of North Carolina Wilmington)

16 **The Effects of Prior Pavloavian Conditioning to an Odor on Resistance to Disruption of a Discrimination Involving That Odor in Dogs.**
Nathaniel J. Hall[1] & Clive D.L. Wynne[2] (University of Florida[1] & Arizona State University[2])

17 **Variable-Ratio and Yoked-Interval Timeout from Positive Reinforcement.**
Ezra G. Hall & Kennon A. Lattal (West Virginia University)

18 **Response Factors in Delay Discounting: A Replication and Extension.**
Daniel D. Holt, Andrew M. Tiry, Julia Santos, Ryne Skytta, Sean Ward, Alexander Bureau, Jonny Novgrod, Rebecca Keegan, Kathryn Anderson, Hannah Hardin, & Drew Williams (James Madison University)

19 **Effects of Inter-Response and Inter-Trial Interval Durations on Reinforced Behavioral Variability.**
Carrie Jackson, Ann I. Galizio, & Adam H. Doughty (College of Charleston)

20 **Schedule Thinning from Rapid to Gradual: Pigeons Still Match.**
Stephanie Kincaid & Kennon A. Lattal (West Virginia University)

21 **Utilizing a Cubic Polynomial to Test for Randomness in a Set of Acquired Residual Values. .**
Bryan Klapes, Nick Calvin, Ari Frankel, & Jack J. McDowell (Emory University)

22 **Effects of Signaling on Temporal Control in Response-Initiated Fixed-Interval Schedules.**
Dwight A. Lastinger[1], Adam E. Fox[2], & Elizabeth G. E. Kyonka[1] (West Virginia University[1] and St. Lawrence University[2])

23 **Further Evidence That Equivalence-Class Formation Requires Its Testing.**
Lesley W. Leake, M. Lee Stoudemire, & Adam H. Doughty (College of Charleston)

24 **Using a Fading Procedure to Teach "Self-Control:" a Systematic Replication of Mazur and Logue (1978).**
Sean O'Brien, Grace Cowen, Christine E. Hughes, & Raymond C. Pitts (University of North Carolina Wilmington)

25 **C57bl/6 Mice Are Less Impulsive Than Balb/C Mice… Sometimes.**
Derek A. Pope[1] & [2] Blake A. Hutsell[1] (Auburn University[1] & Virginia Commonwealth University[2])

Poster Presentations – *Ballroom E*

1 **Further Examination of the Role of Positive Reinforcement in the Treatment of Food Refusal.**
Diane P. Berth, Melanie H. Bachmeyer, Emily Blinn, Brianna L. Bursch, Lindsay E. Gordon, Jonathan V. Mariano, & Courtney R. Mauzy (University of North Carolina Wilmington)

2 **Preparing Children with Multiple Disabilities to Take a Hearing Test: A Technology-Transfer Project.**
Carol Cummings, Yusuke Hayashi, Kate Saunders, & Dean Williams (University of Kansas)

3 **Recycling Behavior and Discounting of Monetary Rewards.**
Amanda F. Devoto[1] & Daniel D. Holt[2] (University of North Carolina Wilmington[1] & James Madison University[2])

4 **Pausing of Children During Rich-to-Lean Transitions.**
Apral Foreman & Claire St. Peter (West Virginia University)

5 **Increasing Physical Activity of Children During Recess: An Evaluation of Self-Management and Reinforcement.**
Lynda Hayes, Carole Van Camp, Callie Caudill, Shana Hall, & Hana Kuwabara (University of North Carolina Wilmington)

6 **Descriptive Assessment of Physical Activity During Elementary School Recess.**
Lynda Hayes, Carole Van Camp, Matt Eckard, David Ragan, Lea Crusen, & Kaitlin Holloway (University of North Carolina Wilmington)

7 **Further Examination of the Treatment of Multiply Controlled Inappropriate Mealtime Behavior.**
Caitlin A. Kirkwood, Melanie H. Bachmeyer, Courtney R. Mauzy, Amanda L. Gibson, Jonathan V. Mariano, & Lindsay E. Gordon (University of North Carolina Wilmington)

8 **Contingency Management for Physical Activity: Will People Work for Their Own Money?**
Denise Masten, Derek McMullen, Alex Martin, Amanda Devoto, Savanna Daughtry, Amanda L. Gibson, & Wendy Donlin Washington (University of North Carolina Wilmington)

9 **An Evaluation of Different Magnitudes of Differential Negative Reinforcement to Treat Food Selectivity.**
Courtney R. Mauzy, Melanie H. Bachmeyer, Caitlin A. Kirkwood, Diane P. Berth, Jonathan V. Mariano, & Lindsay E. Gordon (University of North Carolina Wilmington)

10 **Behavior Dynamics: Tracking in Pigeons on Alternating Sessions "Ramp-up" and "Ramp-Down" Reinforcement Schedules.**
Morgan N. Avery[1], Billie J. Klein[1], Christine E. Hughes[1], Raymond C. Pitts[1], & M. Jackson Marr[2] (University of North Carolina Wilmington[1] & Georgia Institute of Technology[2])

11 **Analyzing the Effects of Learning on Delayed Gratification (Aeldg).**
Shir Boger, Casey Smith, Jigisha Srivastav, Luqman Croal-Abrahams, Milad Emamian, Spencer Ollayos, Avi Packer, Jennifer Rottenberg, Sina Shahamatdar, David Teitelbaum, & Louis Wolff (Gemstone Program University of Maryland College Park)

analog approach provides an important piece missing from the traditional approach to behavior measurement that complements our understanding of operant behavior.

4:00 p.m. **Break**

4:15 p.m. **PAVLOVIAN CONDITIONING AND BEHAVIORAL ANALYSIS**
Michael Domjan
The University of Texas at Austin
Chair: Shrinidhi Subramaniam, West Virginia University

Following B. F. Skinner's dismissal of Pavlovian conditioning as just the conditioning of reflexes, much of applied behavior analysis has ignored Pavlovian processes. My talk will discuss the numerous ways in which Skinner's approach to Pavlovian conditioning has turned out to be both incorrect and counterproductive. Early focus on simplex reflex conditioning (such as conditioned salivation or eyeblink conditioning) missed the broader biological significance of Pavlovian conditioning, which has since been explored in numerous studies of fear conditioning, drug conditioning, and sexual conditioning. These experiments have encouraged the view that Pavlovian conditioning not only produces an anticipatory reflex response but also enables organisms to interact more effectively with significant biological events or unconditioned stimuli (USs). Pavlovian conditioning produces a wide range of behavioral and physiological adjustments that enable the organism to deal with an US more effectively at both the behavioral and physiological level. Thus, Pavlovian conditioning produces a reorganization of the biobehavioral system that is activated by the US. I will also describe how contemporary research in Pavlovian conditioning has provided novel techniques for the modification of instrumental behavior. These developments have important implications for applied behavior analysis that await future development and exploration.

5:15 p.m. **Business Meeting**

8:00 p.m. – **Ballroom E**
Midnight. **Poster Session & Social with Cash Bar**

Saturday, October 26 – Ballroom D

8:00 a.m. **Coffee and Pastries**

9:00 a.m. **IMPACT OF NEUROINFLAMMATION ON COGNITION AND NEURAL PLASTICITY**

Rachel Kohman
University of North Carolina Wilmington
Chair: Megan Arnold, Auburn University

Over the years it has become evident that the immune system can affect the function of the central nervous system (CNS), including altering cognitive processes. The impact of immune activation on the CNS is particularly important for aged individuals, as the brain's resident immune cells, microglia, are shifted toward an inflammatory phenotype. The low-grade chronic neuroinflammation that develops with normal aging may contribute to cognitive decline, deficits in neural plasticity, and a host of age-related pathologies. My current work assesses the contribution of age-related changes in microglia proliferation and activation to cognitive function and hippocampal neurogenesis. Aged subjects show exaggerated cognitive deficits following an immune challenge. Further, the dramatic reduction in hippocampal neurogenesis in aged subjects may, in part, be related to increased release of inflammatory molecules from microglia in the brain. Understanding why microglia show increased inflammatory activity (i.e., neuroinflammation) and identifying effective treatments to reduce microglia activation is expected to have beneficial effects on cognitive performance and measures of neural plasticity. However, microglia also participate in regenerative processes. Therefore effective treatments must dampen inflammatory activity while preserving microglia's neuroprotective function. Our most recent work indicates that exercise can attenuate microglia proliferation in aged subjects as well as enhance expression of factors associated with the neuroprotective phenotype. Identifying effective therapies to maintain normal microglia activity in the aged brain will likely translate to beneficial effects on cognitive ability and measures of neuroplasticity.

10:00 a.m. **CHOICE-MAKING TREATMENT OF PROBLEM BEHAVIOR IN CHILDREN WITH DISABILITIES: A PROPOSED DECISION-MAKING PROTOCOL**

Stephanie M. Peterson
Western Michigan University
Chair: Sara Keane, University of North Caroline Wilmington

Based on our previous choice-making research, a decision-making model for determining the best treatment for escape-maintained problem behavior at various points in the intervention process will be presented. Strategies for determining when to evaluate intervention progress and when intervention components can be faded or removed will be discussed. Participants will be provided with a weblink where they can download the decision making model in its entirety and video models shown in the talk, along with data sheets, so that they can immediately put these strategies into practice.

11:00 a.m. **Break**

10:15 a.m. **SOCIAL LEARNING AND DRUG SELF-ADMINISTRATION**

Mark Smith
Davidson College
Chair: Marissa Turturici, West Virginia University

Epidemiological studies consistently report that one of the most reliable predictors of whether an individual will use drugs is whether his or her friends use drugs. The reasons for the high concordance rate of substance use among members of peer groups are not known, but two types of theories have received the most attention. Selection theories suggest that individuals choose or self-select into social groups that are similar to themselves, whereas social-learning theories propose that members of a social group model substance use and other group members imitate that use. Very few experimental studies have examined the role of selection and social learning in substance use, possibly because of a lack of preclinical models that allow an animal to self-administer a drug when another animal is immediately present. Recently, we began using custom-built, operant conditioning chambers that permit multiple rats to be tested simultaneously in the same chamber. In a series of experiments, we are testing whether rats prefer other rats that share a similar self-administration history (as selection theories predict) and whether rats imitate the self-administration behavior of a peer (as social-learning theories predict). We have obtained data that support both theories, suggesting that the two models are not mutually exclusive. Specifically, we have found that rats prefer to be in close physical proximity to another rat with a similar behavioral history during periods of drug self-administration, and that drug self-administration can either be facilitated or inhibited based on the self-administration behavior of a peer.

12:15 –
12:30 p.m. **CLOSING CEREMONY**