SQAB

Society for the Quantitative Analyses of Behavior

Minneapolis

36th Annual Meeting, May 23 - May 25, 2013

Hilton Minneapolis (Minneapolis, Minnesota)

The Society for the Quantitative Analyses of Behavior (SQAB) was founded in 1978 by M. L. Commons and J. A. Nevin to present symposia and publish material which bring a quantitative analysis to bear on the understanding of behavior. This International Society holds its annual meeting in conjunction with the Association for Behavior Analysis International (ABAI). Talks at SQAB focus on the development and use of mathematical formulations to: characterize one or more dimensions of an obtained data set, derive predictions to be compared with data, and generate novel data analyses.

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Welcome to SQAB 2013

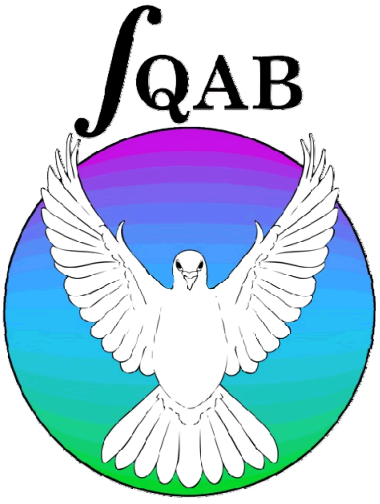
Thursday Evening, May 23 – Marquette Ballroom
1st Poster Session*, Cash Bar & Registration* (5:00-8:00 pm)

(Poster abstracts begin on page 11)

Friday, May 24 – Marquette Ballroom

7:00-8:30 am Registration, Coffee & Pastries

8:30 am President's Introduction
Timothy Shahan
Utah State University (USA)



Contextual Control

8:45-9:20 am The Many Roles of Context in Learning and Acquired Behavior

Ralph R. Miller[1] & Gonzalo P. Urcelay[2]
[1]State University of New York at Binghamton (USA) and [2]University of Cambridge (UK)

Context refers to sensory experiences, both external and internal, that are extended in space and time (as opposed to discrete). Moreover, they are usually complex, multimodal stimuli (as opposed to unimodal). We will review the several roles of the training context in what gets learned and the several roles of the test context in determining acquired responding. Importantly, contexts can act both as eliciting stimuli (i.e., conditioned cues) and as Pavlovian occasion setters and instrumental discriminative stimuli. Additionally, contexts further act like cues in that they inform subjects concerning base rates of reinforcement (p[reinforcement|no-cue]), which strongly influences responding to signals for reinforcement. Moreover, contexts can distract or direct attention to other stimuli present during both training and testing. These various roles of context are not necessarily mutually exclusive; however, recent research has identified some of the variables that influence the strength of each role played by context. Among them are intertrial interval, cue duration, and contiguity.

9:20-9:55 am Contextual Control of Free and Discriminated Operant Behavior

Mark E. Bouton[1], Travis P. Todd[1] & Samuel P. León[2]
[1]University of Vermont (USA) and [2]University of Jaén (Spain)

The results of many earlier experiments suggest that changing the context after simple Pavlovian conditioning can have little effect on responding to the conditioned stimulus. In contrast, recent research in this laboratory suggests that changing the context after operant conditioning can disrupt responding that has been reinforced on a Variable Interval schedule of reinforcement (Bouton, Todd, Vurbic & Winterbauer, 2011; Todd, 2013). Here we report several new experiments with rats that analyzed this effect in more detail. They demonstrate that a context switch also reduces an operant response that has been continuously reinforced, analogous to the conditions typically used in Pavlovian conditioning. They also tested the effects of changing the context on a discriminated operant, that is, responding that was reinforced on a multiple VI 30 EXT schedule. This treatment was of interest because, superficially analogous to a Pavlovian paradigm, responding and reinforcement delivery became confined to the presence of a stimulus (a 30-s discriminative stimulus) that could theoretically block or overshadow the context. The results indicated, however, that a discriminated operant is also disrupted by context change. Interestingly, the modulating effects of the discriminative stimulus transferred across contexts, while the response itself did not. The results suggest that the context has surprisingly privileged access to the operant response. Several possible mechanisms will be discussed.

9:55-10:30 am A Propositional Perspective on Context Effects in Human Associative Learning

Jan De Houwer
Ghent University (Belgium)

Propositional models of associative learning postulate that the impact of stimulus pairings on behavior should depend not on the pairings themselves but on what the pairings imply about the relation between stimuli. Hence, context manipulations that change the implications of stimulus pairings should moderate associative learning effects. We review several experiments in which this idea was tested in the context of evaluative conditioning (i.e., effect of stimulus pairings on liking). Results show that relational information (i.e., information about how stimuli are related) can influence evaluative conditioning under certain conditions. The results are compatible with dual process and propositional models of associative learning but are difficult to accommodate by simple association formation models.

10:30-10:55 am Break-Refreshments

10:55-11:30 am Predicting Individual Differences in Learning-Related Generalization Shifts
Matthew G. Wisniewski, Eduardo Mercado III & Barbara A. Church
University at Buffalo, State University of New York (USA)

Learning to discriminate one stimulus (the target) from a similar stimulus on the same dimension (non-target) often causes peak and area shifts in generalization such that novel stimuli are strongly responded to as if they were the target. These learning-related shifts can vary largely between individuals given comparable discrimination training. Computational models make specific predictions about how an individual's performance during discrimination learning should affect shift, but these predictions have not been well tested. In this paper, we evaluate the ability of popular relational and associative models to predict trends in individual differences previously reported in humans. Although some model predictions are inconsistent with the data, simulations with a simple single-layer perceptron and a multilayer connectionist model containing a non-associative hidden layer reproduced behavioral trends. Learning-related shifts can be explained by a number of theoretical mechanisms, often making behavioral results ambiguous as to the mechanisms behind shift. Our analysis suggests that examining individual differences in datasets may be able to resolve that ambiguity.

11:30-12:05 pm Continuous and Discrete Contextual Stimuli
Russell M. Church & Kathryn L. Kalafut
Brown University (USA)

Contextual stimuli are usually defined as relatively permanent stimuli that are present during an experimental condition. The problem was to compare the effects of contextual stimuli that were presented continuously throughout an experimental condition, and stimuli that were presented discretely. Twelve Sprague-Dawley rats were trained daily in a 64-second random interval schedule in a lever box with 45-mg pellets as the reinforcer. Each rat had four daily 90-minute sessions with four different contexts. Although there were some response rate and pattern changes due to modality (houselight and white noise) and the interstimulus interval between discrete contextual stimuli, both continuous and discrete stimuli served well as contextual stimuli.

12:05-1:45 pm Lunch

The SQAB Executive Committee will meet during lunch

1:45-2:20 pm Double Dissociation between Pitch Chroma and Height Perception in Humans and Chickadees
Ronald Weisman
Queen's University (Canada)

Octave equivalence occurs when notes are separated by an octave (a doubling in frequency) are judged perceptually similar in chroma. Considerable evidence points to the importance of chroma in music and speech. Songbird species are highly proficient at classifying pitches based on their height (which depends on similarity in log frequency independent of chroma). We studied octave equivalence and pitch height perception in humans and black-capped chickadees. We trained subjects from both species in an operant go/no-go discrimination among three ranges of four notes each, spanning Octave 4. We then tested for transfer in a novel octave (Octave 5) with the same or a reversed pattern of reinforcement in Octave 5. Humans transferred easily to discrimination of the same pattern of reward in Octave 5 but failed to learn the reversed pattern. Chickadees gave exactly the opposite pattern of transfer. We interpret the results in terms of a double disassociation between chroma and height perception, with the first predominating in humans and the second in chickadees.

2:20-2:55 pm Visual Discrimination and Object/Picture Recognition in Hens
Renee C. R. Railton[1], Mary T. Foster[2] & William Temple[2]
[1]Cancer Council Victoria (Australia) and the [2]University of Waikato (New Zealand)

A series of experiments were conducted to examine different aspects of hens' visual behaviour, and to assess whether hens responded to photographs in the same way they do to real objects. Firstly, the critical flicker fusion frequency of hens was examined using a descending method of limits procedure. Hens were then trained to discriminate steady images presented on a TFT screen, and tested for transfer of that discrimination to a CRT monitor set at different refresh rates, on which the images were assumed to appear flickering. The degree of transfer decreased as refresh rate decreased. Hens were also trained with flickering images and showed relatively high transfer to steady images. A procedure was also developed to assess whether hens transferred a discrimination of 3D objects to 2D photographs of those objects, and vice versa. Six hens were trained to discriminate stimuli (either objects or photographs) of different colours, or of different shapes, and were tested for transfer to the alternate stimulus. The hens showed transfer only when differently coloured shapes were used. When the stimuli differed only in shape, only three of the six hens showed discrimination to any degree, and none transferred this discrimination to photographs or objects. It was concluded that hens do not respond to objects depicted in pictures in the same way they do to the real objects. It is important that the method of stimulus presentation used in research is species appropriate if images are to be used as representatives of real world stimuli.

2:55-3:15 pm Break-Refreshments

3:15 pm Contextual Cueing in Pigeons
Edward A. Wasserman & Yuejia Teng
University of Iowa (USA)

Repeated pairings of a specific visual context with a specific location of a target stimulus facilitate target search in humans. We explored an animal model of such contextual cueing. Pigeons had to peck a target stimulus which could appear in one of four possible locations on four possible color photographs of real-world scenes. On 80% of the trials, each of the four scenes was uniquely paired with one of the four different target stimulus locations; on the other 20% of the trials, each of the four scenes was randomly paired with the three remaining target stimulus locations. In Experiment 1a, four pigeons exhibited robust contextual cueing when the context preceded the target stimulus by 2 s, with reaction times to the target stimulus being shorter on correctly-cued trials than on incorrectly-cued trials. In Experiment 2a, the same four pigeons evidenced reliable contextual cueing across context-target delays ranging from 0 to 8 s. Experiments 1b and 2b paralleled Experiments 1a and 2a, but with four different pigeons and with uniformly colored backgrounds instead of photographic backgrounds; we closely replicated our earlier contextual cueing effects. These and other findings confirm the effectiveness of animal models of contextual cueing and underscore the important part played by associative learning in producing the effect.

3:50-4:25 pm On the Dynamics of Stimulus Control in Guided Skill Learning
Alliston K. Reid
Wofford College (USA)

Guided skill learning in non-humans (learning behavior chains) appears to share characteristics with Pavlovian conditioning using compound stimuli. Performance during guided skill learning depends upon two interacting sources of cues: predictive environmental stimuli such as panel lights, and progressively reliable "practice cues" produced by repetitions of the behavior pattern as the motor skill is mastered. Pavlovian conditioning models normally assume competition between cues, which may lead to blocking or overshadowing. Yet instructors seem to facilitate learning in humans, rather than block the development of "practice" cues. Our central question is, "Do the available cues during guided skill learning interact the same way as observed in Pavlovian conditioning?" We describe a series of experiments with rats and pigeons that measured the dynamics of stimulus control, as well as the improvement in behavioral autonomy with practice, of a simple left-right response skill. By manipulating environmental guiding cues (key lights and panel lights), two experiments asked, "Do environmental cues facilitate or compete with stimulus control by practice cues?" and "How does this influence depend upon serial learning?" Experiment 3 asked, "Which leads to better control by practice cues (behavioral autonomy), easy or more complex environmental cues?"

5:00 pm Business Meeting – All SQAB members are welcome (Marquette Ballroom)

6:30-9:00 pm 2nd Poster Session & Cash Bar, Marquette Ballroom (6:30-9:00 pm)

8:30-9:05 am Stimulus Control in Discounting: Data Collection Method and Type of Outcome Being Discounted

Jeffery N. Weatherly
University of North Dakota (USA)

Discounting is the change in the subjective value of an outcome because its delivery is either delayed or uncertain. Rates of discounting have shown to have potential utility in advancing our understanding of a number of problematic behaviors. However, observed rates of discounting may be controlled by factors outside of what some might consider the construct of "discounting." For instance, in working with several "short-form" methods of measuring discounting, we have documented that rates of discounting vary systematically as a function of method and we have subsequently identified what aspects of those methods are controlling responding. Likewise, we have also been studying discounting of outcomes other than the oft-studied outcome of a hypothetical amount of money. Results from that research indicate that discounting is not only controlled by the type of outcome being discounted, but so too are some reliable effects (e.g., the magnitude effect) typically observed in studies on discounting. Until we are able to identify, and hopefully quantify, how such factors control observed rates of discounting, our understanding of discounting and its applications will be incomplete.

9:05-9:40 am Behavior in Transition: Contextual Cues and Discriminative Stimuli

Elizabeth G. E. Kyonka
West Virginia University (USA)

Reinforcing value is a dynamic property of recurring events. Research based on the matching law has demonstrated empirically that the physical and temporal properties of the events, the context in which they occur and the signals that mark them in space and time all contribute to the determination of value. In dynamic environments, rates of change of each factor may also contribute to the determination of value, the trajectory of adjustment, or both. In this talk, I will present results of experiments in which the temporal properties of food delivery were changed across sessions or across conditions. Pigeons pecked in concurrent-chain schedules with fixed-interval terminal links. Occasional nonreinforced terminal links of extended duration were embedded to record stop times, measures of temporal discrimination. By the ends of sessions, initial-link response allocation virtually always favored the shorter terminal link. The rate of adjustment of response allocation matched the rate of change of immediacy ratios. Response allocation and relative expected immediacy covaried, indicating modulation of value determination by temporal discrimination processes. However, the degree of modulation depended on temporal context, for reasons that are not yet clear.

9:40-10:00 am Break-Refreshments

10:00-10:35 am Neurological Markers of Contacted and Derived Reinforcer Effects
Mark R. Dixon
Southern Illinois University Carbondale (USA)

The present series of experiments will showcase data illustrating the neurological markers of reinforcer delivery. Using pathological gamblers as subjects, a variety of reinforcer dimensions were explored which included magnitude, extinction, function, stimulus generalization, and derived relations. Results suggest that the brain-behavior relationship does not need to be reductionistic and that correlated neurological activity may have operant utility.

10:35-11:10 am Suboptimal Choice by Pigeons: A Model of Human Gambling Behavior
Thomas R. Zentall
University of Kentucky (USA)

Pigeons show the kind of suboptimal choice that is characteristic of human gambling behavior. They prefer signals for a high payoff that occur infrequently over signals for a low payoff that occur frequently, even when choice of the low payoff results is considerably more food. The suboptimal preference appears to result from the overvaluation of conditioned reinforcers and the undervaluation of conditioned inhibitors. Furthermore, this suboptimal choice is greatly reduced by low levels of food restriction as well as environment enrichment (periods of group housing in a large cage).

11:10 am Joseph V. Brady Impactful Research Award
Gregory Madden
Utah State University (USA)

11:15 am Closing Remarks
Timothy Shahan
Utah State University (USA)

SQAB Preeminent Tutorials will be held in Auditorium Room 1 Convention Center as part of the annual meeting of the Association for Behavior Analysis International

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1:00-1:50 pm SQAB Tutorial: Bringing Pavlov's Science to Behavior Analysis

Daniel Gottlieb
Department of Psychology
Sweet Briar College

Recent research in Pavlovian conditioning has led to an increasingly expansive view of Pavlovian processes and a growing appreciation for their sophistication. Unfortunately, there has been relatively little progress in applying this knowledge toward the promotion of mental and physical well-being. It is clear, however, that Pavlovian processes are important for more than phobias and drug relapse. Their influence extends to a variety of biological systems important for maintaining homeostasis and fighting illness, and they appear to play an important but overlooked role in response allocation. This tutorial will describe a variety of health-relevant Pavlovian phenomena from a contemporary perspective. The discussion will involve a description of the different types of Pavlovian stimuli, the circumstances that establish them, how to identify them, and what is known about the ability to modify them through intervention. Although behavior analysts have had great success in modifying behavior through principles of reinforcement and punishment, it is only when Pavlov's science is also brought into the fold that the full promise of behavioral intervention can be achieved.

2:00-2:50 pm SQAB Tutorial: Reinforcement: History and Current Status

John W. Donahoe
Department of Psychology
University of Massachusetts Amherst

The following topics will be among those discussed: (1) implications of Darwinian thinking (selectionism) for selection by reinforcement, (2) the problem of "circularity" and its treatment by the probability-differential (Premack) and response-deprivation (Timberlake & Allison) hypotheses, (3) the Rescorla-Wagner model of conditioning and its conceptual problems, (4) experimental evidence relating to the Unified Principle of Reinforcement (UPR), (5) the operant-respondent distinction as viewed by UPR, (6) implications of UPR for phenomena such as those identified in studies of behavioral momentum, conditioning of behavior-systems, and temporal coding, (7) issues in the experimental analysis of the free-operant procedure and their implications for the molar-molecular debate, (8) neural-networks as a means of interpreting the effects of reinforcement, and (9) the role of neuroscience in the formulation of the reinforcement principle.

3:00-3:50 pm SQAB Tutorial: Impulsivity, Impatience, and Risk Taking: How Many Impulsivities? A Discounting Perspective

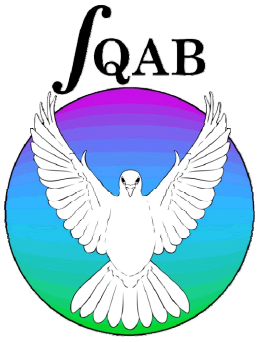
Leonard Green & Joel Myerson
Department of Psychology
Washington University in St. Louis

People discount the value of delayed or uncertain outcomes, and the same mathematical function describes both delay and probability discounting. The degree to which individuals discount is thought to reflect how impulsive they are. From this perspective, steep discounting of delayed outcomes (which fails to maximize long-term welfare) and shallow discounting of probabilistic outcomes (which fails to adequately take risk into account) reflect similar decision-making processes and also the same trait of impulsivity. However, several manipulations selectively affect delay and probability discounting, and correlational studies show that how steeply one discounts delayed rewards is relatively independent of how steeply one discounts probabilistic rewards. Thus, referring to both delay and probability discounting as measures of 'impulsivity' may serve only to indicate that real behavioral problems can involve either kind of discounting. This tutorial will highlight the similarities and differences between delay and probability discounting as well as the implications of both experimental and correlational findings on discounting and impulsivity.

4:00-4:50 pm SQAB Tutorial: Behavioral Mechanisms of Drug Action: What Are They, How Will We Know One When We See It, and How Might Quantitative Models Help?

Raymond C. Pitts
Department of Psychology
University of North Carolina Wilmington

Over 45 years of research in Behavioral Pharmacology has shown quite clearly that environmental variables are powerful determinants of the behavioral effects of drugs. Unfortunately, providing a coherent, behavior-analytic framework within which to characterize the roles of environmental context, behavioral history, schedule of reinforcement, type of reinforcer, and deprivation level (to name a few) has proven to be quite a challenge. It has been suggested that effects of these and the myriad other environmental determinants might be viewed within a conceptual framework referred to as "behavioral mechanisms" of drug action. In this tutorial, I describe the notion of behavioral mechanisms of drug action and review some of the sorts of data that have been said to illustrate them. I focus on the potential for quantitative models as a set of tools for elucidating behavioral mechanisms. I conclude by exploring the applied/translational implications of the concept.



1. The Matching Law Applied to Randomly Distributed Data
Pier-Olivier Caron
Université du Québec à Montréal (Canada)

2. Session Length and Deprivation in Closed Systems with Rats as Experimental Subjects
AnaCarolina Franceschini & MariaHelena Hunziker
Universidade de São Paulo (Brazil)

3. Low-Cost Hardware and Open-Source Software for Animal Behavioral Research
Nicolas Rossger & Gerson Yukio Tomanari
Universidade de São Paulo (Brazil)

4. Comparing Models of Delay Discounting in Lewis and Fischer 344 Rats
Carlos F. Aparicio
Savannah State University (USA)

5. Discounting of Hypothetical Monetary Outcomes that are Both Delayed and Probabilistic
Ariana Vanderveldt, Leonard Green & Joel Myerson
Washington University in St. Louis (USA)

6. The Effect of Symbolic Information on Delay Discounting in Humans Using Real Liquid Rewards
Sangil Lee, Mark A. Povich, Leonard Green & Joel Myerson
Washington University in St. Louis (USA)

7. On the Time Course of Delay-Of-Reinforcement Effects
David P. Jarmolowicz, Jennifer L. Hudnall & Alexandria C. Darden
University of Kansas (USA)

8. A Procedure for Personalizing Delays Presented in a Delay Discounting Task During Brain Imaging or Other Time-Sensitive Studies
Mikhail N. Koffarnus & Warren K. Bickel
Virginia Tech Carilion Research Institute (USA)

9. Impulsive Choice Mechanisms: A Reductionist Approach
Andrew Marshall, Tiffany Galtress & Kimberly Kirkpatrick
Kansas State University (USA)

10. The Effect of Recency of Reinforcement Experience on Resurgence
Shun Fujimaki &Takayuki Sakagami
Keio University (Japan)

11. Extending the Decision Model to Delay Discounting
Blake Hutsell & Derek Pope
Auburn University (USA)

12. Token Reinforcement and Resistance to Change
Eric A. Thrailkill & Timothy A. Shahan
Utah State University (USA)

13. Affect and Delay Discounting: The Impact of Emotional Control on Temporal Preference
William DeHart & Amy Odum
Utah State University (USA)

14. Temporal Discounting in an Unpredictable Environment: Effects of d-Amphetamine and Delay-Specific Stimuli.
Derek A. Pope, Blake A. Hutsell & M. Christopher Newland
Auburn University (USA)

15. Dividing the Pie: Group Size Effects on Foraging Behavior
Lavinia Tan &Timothy Hackenberg
Reed College (USA)

16. Reducing Operant to Respondent Conditioning Using the Model of Hierarchical Complexity
Sagun P. Giri[1] & Michael Lamport Commons[2]
[1]Dare Institute (USA) & [2]Harvard Medical School (USA)

17. Understanding Value and it Discount in Static and Changing Schedules of Reinforcement
Sagun P. Giri[1], Michael Lamport Commons[2], Timothy Barry-Heffernan[3], Robin Gane-McCalla[1], Nicholas Commons-Miller[3, 4], Leonard S. Miller[5], Alexander Pekker[6], Andrew M. Richardson[7] & Michael Woodford[8]
[1]Dare Institute (USA), [2]Harvard Medical School (USA), [3]Harvard University (USA), [4]Tufts University (USA), [5]University of California at Berkeley (USA), [6]University of Texas (USA), [7]Salem State University (USA) & [8]Columbia University (USA)

18. Environmental Enrichment Specifically Reduces Essential Value of Cocaine within a Threshold Procedure
Joshua Beckmann, Justin Yates & Michael Bardo
University of Kentucky (USA)

19. Delay Discounting and Depression in College Cigarette Smokers and Non-smokers
Ángel Jiménez[1], Perla Vargas[2] & Elias Robles[2]
[1]Universidad de Guadalajara (MX) & [2]Arizona State University (USA)

20. Exponential Demand and Empirical Public Policy: Applying Behavioral Economics to Preventative Health Initiatives
Derek D. Reed[1], Brent A. Kaplan[1], Scott W. Partington[1], Jonathan R. Miller[1], Peter G. Roma[2] & Steven R. Hursh[2]
[1]University of Kansas & [2]Institutes for Behavior Resources; Department of Psychiatry and Behavioral Sciences at Johns Hopkins University School of Medicine

21. Evaluation of Progression Sizes in a Hypothetical Purchase Task
Brent A. Kaplan[1], Derek D. Reed[1], Peter G. Roma[2], Steven R. Hursh[2], Scott W. Partington[1] & Jonathan R. Miller[1]
[1]University of Kansas (USA) & [2]Institutes for Behavior Resources & Department of Psychiatry and Behavioral Sciences at Johns Hopkins University School of Medicine (USA)

22. Differential Reinforcement of Lever Holding in Rats: Assessing the Effects Of Probabilistic Reinforcement on Temporal Discounting in a Single Manipulandum Procedure
Charles Frye[1], Eric Jacobs[1] & Michael Young[2]
[1]Southern Illinois University (USA) & [2]Kansas State University (USA)

23. Reward Contrast Effects on Timing and Impulsive Choice Behavior
Aaron Smith, Tiffany Galtress & Kimberly Kirkpatrick
Kansas State University (USA)

24. Effects of Response Requirement and Delay on Pigeons' Choice Between Smaller Sooner and Larger Later Reinforcers
Vanessa Minervini, Jesse Dallery & Marc N. Branch
University of Florida (USA)

25. The Effects of Relative Gains and Losses on Probabilistic Choice in Rats
Jeffrey Hyder, Andrew Marshall & Kimberly Kirkpatrick
Kansas State University (USA)

26. The Effects of Working Memory Training on Delay Discounting in Rats
Renee Renda, Jeffrey Stein, Kennan Liston & Gregory Madden
Utah State University (USA)

27. Rats Foraging in a Rapidly Changing Environment
Eric French, Charles Frye, Amanda Baumgartner & Eric Jacobs
Southern Illinois University Carbondale (USA)

28. Internal Consistency of Area Under the Curve as a Measure of Discounting
Todd L. McKerchar
Jacksonville State University (USA)

29. Generalization of the Gambler's Fallacy Bias
Travis Hungreder & J. Mark Cleaveland
Vassar College (USA)

End of First Poster Session

1. Guilt by Association and Honor by Association: The Role of Acquired Equivalence
Holly C. Miller[1] Mikaël Molet[2], Jessica P. Stagner[3], Thierry Kosinski[2] & Thomas R. Zentall[3]
[1]KU Leuven (Belgium), [2]University of Lille (France) & [3]University of Kentucky (USA)

2. The Five Properties of Arousal
Estêvão G. Bittar
Universidade de São Paulo (Brazil)

3. A Parametric Analysis of the Effects of Reinforcer Magnitude Downshifts on Resurgence
Ciara Marshall, Andrew R. Craig & Timothy A. Shahan
Utah State University

4. Additional Alternatives, Additional Problems: Implications of More-Than-Two-Alternative Choice Data on Measures of Responding and Matching
Ludmila Miranda Dukoski & Joshua Bensemann
The University of Auckland (New Zealand)

5. Does Four-Alternative Choice Violate an Assumption of The GML?
Joshua Bensemann, Douglas Elliffe, Brenda Lobb & Christopher A. Podlesnik
The University of Auckland (New Zealand)

6. Are Pigeons and Humans Equally Sensitive to the Costs of Sunk-Costs?
Raul Avila & Eva M. Mota
National Autonomous University of Mexico (MX)

7. Matching Saccade Reaction Time in a Concurrent VI-VI Schedule
Laurent Madelain
Université Lille Nord de France and Institut de Neurosciences de la Timone - Centre National de la Recherche Scientifique (France)

8. Contribution of Glutamate NMDA and AMPA Receptors in Delay and Probability Discounting
Justin R. Yates, Joshua S. Beckmann & Michael T. Bardo
University of Kentucky (USA)

9. Time Without Reinforcement Supersedes Tone and Light to Control Responding
Michael A. Brooks & Mark P. Reilly
Central Michigan University (USA)

10. Adaptation of Temporal Control to Signaled and Unsignaled Mid-Session Changes in a Rapid Acquisition Multiple Peak-Interval Procedure
Nathaniel Rice & Elizabeth G. E. Kyonka
West Virginia University (USA)

11. Dynamic Changes in Baseline Reinforcement Rates Hasten Extinction
Andrew R. Craig & Timothy A. Shahan
Utah State University (USA)

12. Discriminating Reinforcer-Ratio Reversals at a Fixed Time after the Previous Reinforcer
Sarah Cowie, Douglas Elliffe & Michael Davison
The University of Auckland (New Zealand)

13. Perceiving Opportunities for Action: Rats Passing Through Apertures
Felipe Cabrera, Pablo Covarrubias & Ángel A. Jiménez
University of Guadalajara –CUCI, Laboratory of Comparative Cognition and Behavior (MX)

14. Temporal Discrimination in Response-Initiated Fixed Intervals
Adam E. Fox & Elizabeth G. E. Kyonka
West Virginia University (USA)

15. Classical to Operant Transitions: Transference of the Learning Context
Sarahí Gallardo, Florente López & Marina Menez
Universidad Nacional Autónoma de México (MX)

16. Quantification of Overexpectation
Kathryn Kalafut & Russell Church
Brown University (USA)

17. Acquisition of Temporal Control in Aged Rats
Marina Menez, Sarahí Gallardo & Florente López
Universidad Nacional Autónoma de México (MX)

18. Effects of a Lesion to the Core of the Nucleus Accumbens on Concurrent Schedule Performances
Travis Smith, Charles Frye, Todd Peterson & Eric Jacobs
Southern Illinois University Carbondale (USA)

19. Resistance to extinction when an alternative response is reinforced: Deviations from Momentum Theory?
Paul Cunningham & Mark P. Reilly
Central Michigan University (USA)

20. An Abbreviated Delay Discounting Assay in Rhesus Monkeys
Carla Lagorio & Bryan Yanagita
University of Wisconsin-Eau Claire (USA)

21. Negative Reinforcement of Variability: A Procedure and Some Acquisition Data
Carlos Cançado & Maria Helena Leite Hunziker
Universidade de São Paulo (Brazil)

22. The Effect of Fear on Memory Processes in Human Timing
Erich K. Grommet[1], Rosemarie G. Sapigao[1], Paulina Kaczmarczyk[1], Yuliya Ochakovskaya[1, 2], Nancy S. Hemmes[1] & Bruce L. Brown[1]
[1]Queens College and the Graduate Center (CUNY), [2]Baruch College and the Graduate Center (CUNY) (USA)

23. Choice and Timing are Dissociated in Unchanging Environments and Interdependent in Unpredictably Changing Environments
Shrinidhi Subramaniam & Elizabeth Kyonka
West Virginia University (USA)

24. Elevated Oral Ethanol Self-Administration in Monkeys Following Relocation to a New Facility
Angeles Perez-Padilla, Scott MacCarter, Christa M. Helms & Kathleen A. Grant
Oregon National Primate Research Center - Oregon Health and Science University (USA)

25. The Fixed Minimum Interval (FMI) Schedule as a Method for Dissociating Motivation and Response Inhibition Capacity
Elizabeth Watterson & Federico Sanabria
Arizona State University (USA)

26. Nicotine and Impulsivity in an Animal Model of ADHD
Gabriel J. Mazur, Elizabeth Watterson, Gabriel-Wood Isenberg & Federico Sanabria
Arizona State University (USA)

27. Classical conditioning of up-regulation function of TNF-α II: Effects of naloxone and nor-BNI
Trista Sykes, Maxwell O. Rieger & Rodney D. Clark
Allegheny College (USA)

28. A Quantitative Analysis of "Mind" and "Behavior"
Javier Virues-Ortega & Joseph J. Pear
University of Manitoba & St. Amant Research Centre, University of Manitoba (USA)

29. Altruism and Social Discounting in a Modified Prisoner's Dilemma Game
Vasiliy Safin & Howard Rachlin
Stony Brook University (USA)

End of Second Poster Session

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RESEARCH ARTICLES

Dozier, Claudia L., Iwata, Brian A., Wilson, David M., Thomason-Sassi, Jessica L., and Roscoe, Eileen M. Does Supplementary reinforcement of stereotypy facilitate extinction?

Lehardy, Robert K., Lerman, Dorothea C., Evans, Lindsay M., O'Connor, Alyson, and LeSage, Daniel L. A simplified methodology for identifying the function of elopement.

Iwata, Brian A., Deleon, Iser G., and Roscoe, Eileen M. Reliability and validity of the functional analysis screening tool (FAST).

COMMENT

Schlinger, Jr., Henry D., and Normand, Matthew P. On the origin and functions of the term "functional analysis."

REPORTS

Greer, Brian D., Neidert, Pamela L., Dozier, Claudia L., Payne, Steven W., Zonneveld, Kimberley L. M., and Harper, Amy M. Functional analysis and treatment of problem behavior in early education classrooms

.

Lambert, Joseph M., Bloom, Sarah E., Kunnavatana, S. Shanun, Collins, Shawnee D., and Clay, Casey J. Training residential staff to conduct trial-based functional analyses.

Kodak, Tiffany, Fisher, Wayne W., Paden, Amber, and Dickes, Nitasha. Evaluating the utility of a discrete-trial functional analysis in early intervention classrooms.

Fisher, Wayne W., Rodriguez, Nicole M., and Owen, Todd M. Functional assessment and treatment of perseverative speech about restricted topics in an adolescent with Asperger Syndrome.

Neidert, Pamela L., Iwata, Brian A., Dempsey, Carrie M., and Thomason-Sassi, Jessica L. Latency of response during the functional analysis of elopement.

Bowman, Lynn G., Hardesty, Samantha L., and Smith, Amber M. A functional analysis of crying.

Lang, Russell, Davenport, Katy, Britt, Courtney, Ninci, Jennifer, Garner, Jennifer, and Moore, Melissa. Functional analysis and treatment of diurnal bruxism.

Woods, Kathryn E., Luiselli, James K., and Tomassone, Shanon. Functional analysis and intervention for chronic rumination.

MacDonald, Jacquelyn M., Ahearn, William H., Parry-Cruwys, Diana, Bancroft, Stacie, and Dube, William V. Persistence during extinction: Examining the effects of continuous and intermittent reinforcement on problem behavior.

BRIEF REVIEWS

Schlichenmeyer, Kevin J., Roscoe, Eileen M., Rooker, Griffin W., Wheeler, Emily E. and Dube, William V. Idiosyncratic variables affecting functional analysis outcomes: A review (2001-2010).

Plavnick, Joshua B., and Normand, Matthew P. Functional analysis of verbal behavior: A brief review.

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Behavioural Processes

SQAB

Society for the Quantitative Analyses of Behavior

Special issue:

SQAB 2012: Timing

Guest Editors: Timothy Shahan and Lewis Bizo

SQAB 2013 at a Glance

Thursday Evening, May 23
Marquette Ballroom
1st Poster Session*, Cash Bar & Registration* (5:00-8:00 pm)

Friday, May 24
Marquette Ballroom

7:00 *Registration, Coffee & Pastries*

8:30 **Timothy Shahan,** President's Introduction

Contextual Control

8:45 **Ralph R. Miller & Gonzalo P. Urcelay**

9:20 **Mark E. Bouton, Travis P. Todd & Samuel P. León**

9:55 **Jan De Houwer**

10:30 *Break – Refreshments*

10:55 **Matthew G. Wisniewski, Eduardo Mercado III & Barbara A. Church**

11:30 **Russell M. Church & Kathryn L. Kalafut**

12:05 *Lunch*

1:45 **Ronald Weisman**

2:20 **Renee C. R. Railton, Mary T. Foster & William Temple**

2:55 *Break – Refreshments*

3:15 **Edward A. Wasserman & Yuejia Teng**

3:50 **Alliston K. Reid**

5:00 ***Business meeting*, Marquette Ballroom**

6:30 ***2nd Poster Session & Cash Bar***
6:30-9:00 pm

Saturday, May 25
Marquette Ballroom

7:15 *Registration, Coffee & Pastries*

8:30 **Jeffery N. Weatherly**

9:05 **Elizabeth G. E. Kyonka**

9:40 *Break – Refreshments*

10:00 **Mark R. Dixon**

10:35 **Thomas R. Zentall**

11:10 **Awards and Closing Remarks**

Saturday Afternoon, May 25:
Auditorium Room 1 Convention Center

∫QAB Invited Preeminent Tutorials:
From Basics to Contemporary Paradigms

1:00 Daniel Gottlieb
2:00 John W. Donahoe
3:00 Leonard Green
4:00 Raymond C. Pitts

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