For the Record

Greetings! As you are aware, publication of the Division 25 Recorder has been on hiatus for quite some time. The Recorder has historically served as a forum of communication between the Division 25 Executive Board and the Division 25 membership. Moreover, the Recorder has served as a medium to highlight the recipients of various Division 25 awards and honors and to provide updates on the annual meeting of the Division at the APA convention. We are honored and humbled to continue in the rich history of this newsletter and welcome feedback and suggestions from readers on how to improve the format, content, and/or dissemination of the newsletter.

In this issue, we are pleased to present a new format. As you have undoubtedly noticed, we have updated the “look” of the newsletter (e.g., updated the masthead of the newsletter with new fonts and color). In addition, in an effort to reduce costs, resources, and delays in dissemination, the newsletter will be solely offered in electronic format. Moving forward, each issue will publish news and happenings within both behavior analysis and the American Psychological Association. We plan to also include interviews with prominent scholars on interesting and novel works, as well as invited commentaries.

We thank the Division 25 Executive Committee for appointing us as Editors. Moreover, we appreciate and acknowledge the comments, suggestions, and guidance provided to us by Thomas Critchfield, Sherry Serdikoff, Dorothea Lerman, and Christine Hughes. This work would not be possible without the gracious aid of our editorial assistants: Jason Hirst, Veronica Howard, Sarah Hyman, Brent Kaplan, and Kristyn Echterling Savage.

-Derek Reed & Florence DiGennaro Reed (Co-Editors)
Interview with Dr. Gregory J. Madden

For this issue we interviewed Dr. Gregory Madden about his translational research program applying behavioral economics to children’s old and who have admirable qualities (e.g., they are super-heroes). The Food Dudes are featured in brief video episodes watched by elementary school children. In the videos the Food Dudes derive their super powers by eating either a fruit or a vegetable. In the videos and letters from the Food Dudes (read by the teacher) the children are encouraged to eat fruits and vegetables to help the Food Dudes in their never-ending battle against their arch nemesis, General Junk.

If this were the only component of the Food Dudes program, it would probably be of limited utility. However, in the videos and letters, the Food Dudes inform the participating elementary school children that if they taste their fruits and vegetables, they will earn Food Dudes prizes. For the first couple of days of the intervention, the children taste a new fruit and vegetable each day, and prizes are awarded accordingly. On subsequent days, the amount that must be consumed to earn a prize is increased. Once children are consuming whole portions of fruits and vegetables, the tangible rewards are gradually reduced in frequency as the children have identified fruits and vegetables that they enjoy eating.

The published data on the Food Dudes program is impressive. The program has nearly doubled fruit and vegetable consumption in elementary schools throughout the United Kingdom.”

Dr. Madden, thank you for taking some away time from your busy schedule to contribute to the Division 25 Recorder. We understand you are beginning a study involving the “Food Dudes” program. Please tell us a little bit about what the program consists of, and how it was developed.

The Food Dudes program was developed by behavioral psychologists Fergus Lowe and Pauline Horne of the University of Bangor in Wales. Drs. Lowe & Horne will be familiar names to many behavior analysts because of their important work in human operant behavior and stimulus equivalence. Lowe and Horne developed the Food Dudes program to address widespread concerns about obesity and poor diets in those living in the UK. Based on a number of studies conducted by dieticians, Lowe and Horne reasoned that the best chance of impacting diet choices was to address these in young children. The program they developed has three primary components: role models, repeated tasting, and rewards.

Based on modeling research showing that young children are more likely to imitate the behavior of slightly older children whom they admire, Lowe and Horne created the Food Dudes – four children who appear to be about 12 years old and who have admirable qualities (e.g., they are super-heroes). The Food Dudes are featured in brief video episodes watched by elementary school children. In the videos the Food Dudes derive their super powers by eating either a fruit or a vegetable. In the videos and letters from the Food Dudes (read by the teacher) the children are encouraged to eat fruits and vegetables to help the Food Dudes in their never-ending battle against their arch nemesis, General Junk.

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Gregory J. Madden, Ph.D

Dr. Madden is an Associate Professor in the Department of Psychology at Utah State University.

Dr. Madden earned a Master’s degree in Behavior Analysis from the University of North Texas in 1992, a Ph.D. in Psychology from West Virginia University in 1995, and completed a post-doctoral research fellowship at the University of Vermont in 1998. In the ensuing years he was privileged to work with outstanding groups of teachers and researchers at the University of Kansas and the University of Wisconsin - Eau Claire.

Dr. Madden served as Associate Editor of the Journal of the Experimental Analysis of Behavior from 2002-2008, and is the Editor-Elect of this prestigious journal (2011-2014). He is the Executive Editor of the APA Handbook of Behavior Analysis (forthcoming). He has served on a number of decision making bodies, including his current appointment on the Executive Council of the Association for Behavior Analysis International. He frequently reviews grant proposals for the National Institutes of Health and, every once in a while, he skis, mountain bikes, and hikes with his family.
and vegetable consumption in elementary schools throughout the United Kingdom. The Irish government was so impressed with the results of a study conducted there (Horne et al., 2009) they adopted the program for use in all elementary schools in Ireland (over 3,000 schools). The program has been recognized by the World Health Organization, was awarded the Gold Medal Award by the prestigious Royal London College of Physicians, and was highlighted in a position paper by David Cameron’s conservative party.

This seems to be a bit of a departure from your traditional line of work. What motivated you to become involved with this study and what are you planning to research?

This is indeed a departure from my previous research. I believe the move owes in part to my experiences at the University of Kansas. There I witnessed so much meaningful, high-quality research being conducted to improve the human condition. After so many colloquia by my colleagues and visiting scholars I began to wonder if my research would ever make a difference in the lives of people.

In 2010, I decided to join the faculty in the Psychology Department at Utah State University. Two weeks later, I was approached by Dr. Heidi Wengreen of Utah State University’s Department of Advanced Nutrition Science. She brought to my attention a call for grant proposals on Behavioral Economics and human nutrition. With the aid of Fergus Lowe, we crafted a Food Dudes grant proposal that was funded for three years by the USDA.

Is funding necessary for this kind of research? If so, tell us about the funding you’ve received.

Extramural funding is critical to our ability to conduct the Food Dudes research currently underway. The USDA provided $350,000 to conduct a one-year pilot project and a larger project in the second year. The latter experiment will be conducted next year and will involve six elementary schools. Thus far, the pilot project is going well; although the data we have collected thus far are preliminary. For example, self-reported fruit and vegetable consumption has significantly increased (as have skin carotenoid levels – a biological measure of fruit and vegetable consumption), and most parents report that their children are eating more fruits and vegetables at home. However, analyses of photographs taken of trays before and after eating lunch are still underway. Parent surveys are mostly positive and include many heartwarming stories shared about their children eating new fruits and vegetables that they previously thought they would hate.

How does your previous experience with human operant and non-human basic research tie into this project?

My human operant research with concurrent schedules of reinforcement (e.g., Madden & Perone, 1999) has helped to conceptualize the work we are doing in which children make choices as the foods to consume in the cafeteria where fruits and vegetables must compete head-to-head against better tasting foods such as hamburgers, tater-tots, and cookies. Understanding quantitative models of qualitatively different reinforcers not only helps conceptualize what we are doing, but it has proven useful in explaining the translational qualities of our research to the USDA.

Where could interested readers obtain more information on the Food Dudes program, and where can they find literature on the kind of research you’re doing?

A Google Scholar search of C. Fergus Lowe and Pauline Horne will reveal several studies of the Food Dudes program. A search of my name will reveal studies on impulsivity, drug-self administration, gambling, concurrent schedules, behavioral economics, etc. Our nutritional intervention research will probably not appear in peer reviewed outlets for another year.
Commentary:
The Divorce of Behavior Analysis and Psychology: Think of the Children!
Benjamin J. Lovett, Ph.D.
Elmira College

Like most people, I occasionally find myself angry over news items. Unlike most people, though, it’s never about politics. Last month, it was the science section of the New York Times; a friend linked me to an article with the headline, “To Really Learn, Quit Studying and Take a Test” (Belluck, 2011). The article reports on a study published in Science (Karpicke & Blunt, 2011) finding that forcing yourself to recall information from a passage you’ve read is better than other studying methods at promoting recall a week later. After reading the original study as well as the NYT write-up, I don’t have any problems with the methodology of the study, and I trust the results. But to be honest, I was a bit angry that this was a news item—and a publication in the most prestigious journal in the sciences. What bothered me most was the framing of the findings as if no one had ever suspected that practice making a response strengthens the response.

My anger flared again the following week; this time, it hit the news that rewards can strengthen behavior. I’m serious; while web-surfing, I came across a study just published in Psychological Science, a top empirical journal (Cooke et al., 2011), finding that rewarding kids for eating disliked vegetables led to increased consumption even after the reward was withdrawn. This study has been picked up by mass media outlets as well (e.g., Bates, 2011). In the actual article, the investigators concluded, with apparent surprise, that “external rewards do not necessarily produce negative effects.”

Of course, Edward Thorndike wouldn’t have been surprised by either of these studies. A century ago (precisely; Thorndike, 1911) he wrote about the laws of effect and exercise, which predict the phenomena these studies showed. He summarized them thus: “We can, as a rule, get an animal to learn a given accomplishment by getting him to accomplish it, rewarding him when he does...[or] by getting him to accomplish it much oftener than he does any other response to the situation” (p. 245). And as readers of the Recorder know, 20th century learning theory is built on these and similar principles; although they may have been forgotten by mainstream psychology, they are far from the novel discoveries that the newspapers make them out to be.

As I’ve said, sometimes I get angry at this state of affairs, but more often I find it depressing. I suppose that these are the emotions that are generated when you come from a broken intellectual home, and when your parents refuse to speak to each other. Trained in school psychology, with equal parts of behaviorism and other perspectives, I find myself surprised that many psychologists (both researchers and applied practitioners) lack a real understanding of how learning works. I don’t just mean that they confuse terms like punishment and negative reinforcement; instead, they don’t consider simple associative processes between stimuli, or
think about which reinforcers may be maintaining behaviors of interest. Even when their experimental results are predictable based on learning theory, they hasten to offer nonbehavioral explanations of their findings. And so when the New York Times contacted the researchers who conducted the “testing as studying” experiments, one of them described his results as evidence that learning is “all about reconstructing our knowledge.”

Of course, even if these scholars don’t give sufficient credit to earlier learning theory, at least they don’t deny its basic truths. In fact, the authors of the second article even cited Thorndike. But the real reason why the studies are news items is that many other mainstream psychologists are in denial when it comes to learning theory. Claims about the dangerous, unavoidable side effects of extrinsic reinforcement abound, and many education scholars rail against pedagogical techniques that emphasize frequent direct practice of the responses to be made later in an assessment situation. The denial in applied areas saddens me because learning theory is a remarkably powerful tool for modifying behavior, something that most people count among their goals, whether or not they think of themselves as “teachers.” In more basic research areas, the denial concerns me because it leads to avoidably worse science—explanations of behavior that could be better if learning theory were considered.

I suspect that many Recorder readers share the concerns that I’ve been outlining, being scholars and practitioners of behavior analysis. But might tendencies toward narrowness and dismissiveness be present on the side of behavior analysts as well? Here, as before, my evidence is primarily anecdotal, but I suspect that my claims will resonate with many. I begin with the popular learning theory textbook *Elementary Principles of Behavior*. In the edition that I own (Malott, Malott, & Trojan, 2000), the final chapter gives advice about graduate school, discussing the question of whether a student would benefit from an eclectic graduate program. After admitting that it seems reasonable, they say:

> But most often eclecticism is like trying to mix oil and water. And most often, to try to “apply behavior analysis” where it best fits and to try to “apply traditional approaches” where they best fit means that you don’t really understand either. And, furthermore, it means that you’ve not committed yourself enough to any one approach to attain the level of expertise you will need to be an effective professional who can really help people. (p. 481, italics in the original)

I understand where Malott et al. are coming from. I’ve worked in clinical settings where a behavior analyst would compromise with non-behavioral service providers and offer a watered down behavior program as the only politically viable solution. And I’ve met folks who have some knowledge in too many areas without expertise in any one of them. (In some people’s minds, I might fit that description.) But it bothers me that Malott et al. rule out, *a priori*, the possibility of integrating different approaches to understanding behavior. To them, there’s behavior analysis (the scientific view), and then there’s everything else, which isn’t scientific. It should be obvious that this type of dogmatism leads to bad science.

Consider an important theory of personality, reinforcement sensitivity theory (RST; Corr, 2004). RST proposes that an important source of stable individual differences in behavior is differential sensitivity to appetitive and aversive stimuli. Acknowledging both the tremendous importance of conditioning as well as individual differences in its effectiveness, RST is a scientific approach in every conceivable sense. It has evidence from animal studies, psychopharmacological research, and many other laboratory paradigms. I’ve even used it in applied work, to predict which students will benefit from a feedback-based intervention (Lovett & Eckert, 2009). But RST does make reference to systems in the brain that control our approach and avoidance tendencies, so perhaps Malott et al. would cry, “Medical model!” and dismiss it all as circular nonsense.

Worse still, I’m not convinced that the approach Malott et al. advocate is always best in practical settings. Even if training technicians is our goal (something I would argue against in the case of...
graduate school), would Malott et al. really claim that pure, unadulterated behavior analysis could be used successfully with every client? Do they not worry at all about producing clinicians who will force a round peg into a square hole? They might argue that a sophisticated behavior analysis adapts to each client’s needs, but I would reply that such a behavior analysis is able to be adaptive because it sneaks in other perspectives. And even if they’re right, shouldn’t applied professionals be exposed to the strongest arguments from alternative perspectives to understand what they will be arguing against when they’re working with colleagues from nonbehavioral backgrounds?

Perhaps I’m making too much of a deliberately humorous, polemical textbook (one that I enjoy, in fact). But are Malott et al. really any less ecumenical than the hero of behavior analysis, B. F. Skinner? Speaking of people who didn’t give credit to Thorndike, it’s well known that Skinner didn’t really acknowledge his debt to Thorndike when he penned The Behavior of Organisms (Skinner, 1938), the first text explicitly devoted to operant conditioning. (Skinner wrote a letter of apology to Thorndike, but only after a book reviewer took him to task; see Jončich, 1968.) More generally, Skinner had a habit of citing either his own books (or, at times, a dictionary) to make what were actually tendentious points. And he was known to discourage his students from reading the psychological literature, saying that it “only poisons the mind” (Lykken, 1990). Finally, Skinner was less than fully open to revisions and extensions to his ideas, while also claiming that new developments actually had been anticipated by his earlier work (e.g., Skinner, 1977).

I admit that these failings do little to detract from Skinner’s extraordinary accomplishments, but followers who lack his brilliance and industry may be even more insular than Skinner was. Skinner had thoughtful and intriguing things to say about many of the major issues in 20th century learning theory. How many behavior analysts today can tell you much about Clark Hull or Edwin Guthrie? For that matter, how many can say anything about more recent major accomplishments, such as the Rescorla-Wagner theory of classical conditioning or the response deprivation hypothesis in reinforcement theory? I don’t necessarily expect behavior analysts to agree with the common interpretations of recent work, but I’m disappointed when they can’t speak to the work at all. I agree with the cognitive psychologist Henry Roediger’s call (reprinted in these pages; Roediger, 2004) for all psychologists to read Skinner’s (1953) Science and Human Behavior, a striking work that does indeed repay careful study. But there are many other books and articles on the science of human behavior, and some of these are just as important. How many behavior analysts regularly read—or even skim—mainstream psychology books and periodicals, even those on learning?

Several years ago, I was speaking at a conference at Harvard University, and went to the psychology building, William James Hall, just to see it. There are no behaviorists in Harvard’s psychology department anymore, but I happened to need to use the restroom, and was directed by a guard to the basement, where I found, just outside the men’s room, a small display case about B. F. Skinner. Somehow it seemed like an apt metaphor, hiding Skinner away in the basement. It saddens me that a prestigious psychology department with a rich history has nothing to do with such an important theoretical perspective. Some of the country’s top psychology students are probably not being exposed to learning theory except in the form of straw-man caricatures. But I don’t think it’s rational to expect that to change on its own. Might it be time to ask what behavior analysts—especially those in Division 25—can do to rehabilitate the relationship with the rest of psychology? Don’t do it for yourselves; think of the children!

D25

References
The Council meeting dealt with many issues but the most important one from my point of view was the change in membership dues. As you all know, those members who are also members of various science organizations have until now received a 25% reduction of dues. Recently, states and provincial representatives asked that their members also receive a special reduction, claiming that they, like the science members, are required to be members of other organizations (in their case of states organizations) as do our science members who need to be members of specialty organizations, such as Psychonomics and ABAI. The Board of Directors and Council at first responded by changing the scientists’ dues reduction from 25% to $25. When this issue returned to Council at this meeting, I tried to restore the scientists’ dues reduction by moving that the states’ members like the scientist members receive a 25% reduction. Unfortunately, my motion was defeated by arguments that the APA cannot afford this and instead, beginning in 2012, all members will have their dues reduced by $40 (from $287 to $247). The argument that there should be no discounts for special groups but a general and equal reduction for all won the day. An evaluation of dues revenue and membership retention rates will be conducted prior to Council’s consideration of the dues rates for 2015.

As to the general financial state of the APA, it is quite good. The association budget that Council approved included a forecast of $106,857,300 in operating expenses with a revenue forecast of $106,877,300. Close but we’re definitely in the black.

Given the favorable financial condition of the APA, it is of interest to see what a major money maker of the APA does. In this regard, Council received an update on Publications and Communications (P&C) Board activities. The P&C Board met twice in 2010, May 21–23 and October 22–24. The P&C Board reported that sales of the sixth edition of the APA Publication Manual exceeded $11 million in 2010. APA Books also released a fifth book in its suite of style products: Reporting Research in Psychology: How to Meet Journal Article Reporting Standards. In 2010, APA Books released the three-volume APA Handbook of Industrial and Organizational Psychology, the first multi-volume reference set in the new APA Handbooks of Psychology™ series. APA Books released 62 new titles, 12 new psychotherapy videotapes, and 11 new Magination Press titles. In 2010 APA books expanded delivery of direct-to-consumer electronic content and released 37 eBooks to Kindle. In 2010, APA Books Subsidiary Rights Office negotiated 89 licenses for the translation of APA Books into Spanish, Portuguese, Greek, Turkish, Arabic, Korean, Japanese, Simple and Complex Chinese, Polish, Norwegian, and German. In 2010, APA Journals printed and mailed all 2010 issues in 2010, publishing more than 36,000 pages in 59 journals. This is just part of the report but shows how the publications part of the APA is responsible for a very large part of its income, definitely larger than the income from membership dues.

Council also voted to approve Division 43’s proposal to develop and launch a new journal, titled The Family Psychologist, to be published by APA through the Educational Publishing Foundation.

In addition, Council voted to 1) adopt as APA policy the Principles for Quality Undergraduate Education in Psychology; 2) approve February 2021 as the expiration date for the guidelines; and 3) archive the Principles for Quality Undergraduate Psychology Programs.

ABA International
Don Hake Translational Research Award
Thomas S. Critchfield, Ph.D.
Illinois State University

I'm interested in how basic research methods can be used to address problems of everyday importance, and how this process can enhance the status of basic behavioral research (Critchfield, 2011; Mace & Critchfield, 2010). Among the studies that are needed to accomplish this, some can be inspired by applied problems but focus on better understanding relevant basic principles, and others can apply the fruits of basic research toward better understanding specific applied problems. I'll illustrate the flavor of the latter by reference to a recently-begun program of studies focusing on self-detection of the symptoms of melanoma, a particularly virulent form of skin cancer.

Melanoma is almost always detected visually, and almost always by someone other than a dermatological expert (often a patient). Research indicates mainly that self-detection of melanoma symptoms is notoriously unreliable. Behavior analysis can help in two ways: (1) by providing precise ways to measure detection ability; and (2) by suggesting ways to improve this ability. In both cases it may be fruitful to think of self-detection as a problem in stimulus control. To support early studies, we've used morphing software to create fine gradations between images showing asymptomatic and symptomatic skin lesions, and have begun to explore conditions under which detection of changes is more or less precise (e.g., Dalianis et al., in press).

Medical "intervention" with patients at risk for melanoma consists mainly of showing them images that depict asymptomatic and symptomatic states, and telling them to watch for changes from the asymptomatic. Among the preliminary issues to be understood is the extent to which generalization occurs from these benchmark stimuli. For example, in as-yet unpublished work, we've found evidence that the admonition to watch for changes in lesions can shift generalization of "normal" judgments toward more-symptomatic stimuli. Although why this happens, at the level of basic principles, remains to be determined, in practice this effect might make individuals less likely than usual to detect changes.

Behavior analysis offers many lessons for improving discrimination, but the mechanics of applying these to melanoma self-detection remain to be worked out and empirically validated. In work now under way, we are examining the effects of "errorless" and other discrimination training protocols on the signal detection properties of self-detection behavior. A signal detection analysis allows the precise mapping of both sensitivity in discrimination and response biases, both of which have practical implications in medical settings.

None of the above counts as "clinical" research per se, but consistent with the lessons of the MammaCare® system for improving breast-cancer self-examination (Pennypacker et al., 1982), a good understanding of the stimulus control issues involved in melanoma self-detection is likely to provide the basis for successful technology development.  D25
I started my career at Virginia Tech in 1969 and earned tenure and promotion to Associate Professor on the basis of my programmatic research and scholarship in cognitive psychology. However, in the mid-1970s I became concerned this research focus had limited potential for helping people and conflicted with my personal mission to make large-scale difference in people’s quality of life.

Given my conviction that applied behavior analysis has the greatest potential for solving real-world problems, I added behavior-based psychology to my research agenda. Inspired by the first Earth Day in April 1970, I worked with students to develop, evaluate, and refine a number of community-based techniques for increasing environmentally responsible behaviors. This prolific research program culminated with the 1982 Pergamon Press publication of Preserving the Environment: New Strategies for Behavior Change, co-authored by Richard A. Winett and Peter B. Everett.

Throughout my career, I applied behavior-based psychology to a number of other problem areas, including prison administration, school discipline, community theft, transportation safety, alcohol abuse, alcohol-impaired driving, and infant health in a third-world country.

In 1978, I began researching techniques to increase the use of vehicle safety belts, which led to a focus on the application of behavioral science to prevent unintentional injuries in organizational settings. I coined the term behavior-based safety and disseminated research-based principles and practical procedures in this domain with a variety of books, training manuals, DVDs, and audio programs. These materials have enabled thousands of organizations worldwide to prevent workplace injuries and save lives. As a result, I was listed as one of the most influential safety leaders of the past decade in Occupational Hazards (2009) and EHS Today (2010).

I am currently an Alumni Distinguished Professor at Virginia Tech and Director of the Center for Applied Behavior Systems (since 1987), consistently attempting to live up to the University’s motto “Ut Prosim” (“That I may serve”). I was honored with a university-wide teaching award, as well as with the three University Alumni Awards for Research, Outreach, and Graduate-student Advising. In 2005, I was awarded the statewide Virginia Outstanding Faculty Award by the State Council of Higher Education. In 2009, The American Psychological Foundation honored my accomplishments with the Gold Medal Award for Life Achievement in Psychology in The Public Interest.

Throughout my 41-year career, I have consistently bridged the gap between ivory-tower academia and real-world practicality through the design, application, evaluation, and dissemination of socially valid behavior-change interventions.

Throughout my 41-year career, I have consistently bridged the gap between ivory-tower academia and real-world practicality through the design, application, evaluation, and dissemination of socially valid behavior-change interventions. Illustrative accomplishments include (a) obtaining a total of $6.5 million of extramural financial support from a number of corporations and government agencies; (b) serving as Editor of the Journal of Applied Behavior Analysis (1989-1991), Associate Editor of Environment and Behavior (1983-present) and current Consulting Editor for Behavior and Social Issues, Journal of Safety Research, Journal of Organization Behavior Management, the Behavior Analyst Digest, and EHS Today; (c) developing and delivering intervention strategies in video and DVD training programs for Tel-A-Train, Prime media, Inc., J.J. Keller and Associates, and Coastal Training Technologies Corporation; (d) writing a monthly article for “Psychology of Safety” column in Industrial Safety and Hygiene News (1990-2009), which has over 75,000 subscribers; (e) co-founding and supporting (since 1991) Safety Performance Solutions, a leading-edge training and consulting firm specializing in behavior-based safety; (f) chairing 47 master’s theses and 37 doctoral dissertations, all but 4 of them addressing the development and/or evaluation of strategies to improve socially relevant behavior; (g) founding Make-A-Difference, Inc. (in 1987), which sponsors intervention-focused research, scholarship, and leadership events at Make-A-DiffRanch in Newport, VA; and (h) authoring, co-authoring, or editing 36 books, 52 book chapters, 38 training manuals, 237 magazine articles, and 300 research articles addressing the development, evaluation, and dissemination or behavior-focused interventions to improve quality of life.
Med Associates Distinguished Contribution to Basic Behavior Analysis Award
Timothy D. Hackenberg, Ph.D.
Reed College

It is a great honor to receive the Division 25 award for contributions to basic research, one I accept in humble recognition of the list of past awardees (all intellectual heroes of mine). As a behaviorist, of course, I cannot accept credit for scholarly accomplishments. Rather, I must give credit where it is due—to my social environment, specifically, to my wonderful teachers, mentors, and students. I have had the good fortune to be taught by skilled and caring mentors: Jane Howard, Phil Hineline, and Travis Thompson in my undergraduate, graduate, and postdoctoral years, respectively; and Marc Branch, Ed Malagodi, and Hank Penny-packer in my junior faculty days at the University of Florida.

An important lesson I have learned from all of my mentors is that there is no meaningful distinction between basic and applied research. Research can differ in its setting (lab, clinic, classroom) and its aims (analysis, application), but the boundary between basic and applied research is arbitrary, and maintaining it has had unfortunate consequences for the field. I recognize the irony (some may call it hypocrisy) of accepting an award for basic research while arguing against its existence (“My, what nice teeth this gift horse has”), but I genuinely believe it is time to move beyond the basic-applied distinction.

The field of token reinforcement is a case in point. Token reinforcement procedures are among the most successful technological applications in the history of behavior analysis, yet surprisingly little is known about their basic principles of operation—why they work as well as they do. We still know relatively little about the basic behavioral functions of tokens. One function long thought to be critical to the effectiveness of tokens is their generalizability—the menu of available reinforcers for which they can be exchanged. It is common in applied work on token economies to include a store in which tokens can be exchanged for an array of backup reinforcers (preferred items and activities). It is assumed—but rarely demonstrated—that such experiences are sufficient to establish the tokens as generalized reinforcers. And while one finds occasional recommendations to use a healthy variety of backup reinforcers, little research has been directed to the topic of generalizability per se. One might also expect a generalized reinforcer—because it is less dependent on a specific motivational condition—to hold its value across a wider range of conditions than non-generalized reinforcers; the inference is plausible, but again, little research has been done on the topic.

More research on these topics is badly needed. And the issues are of more than mere theoretical interest. A better understanding of how token systems work will tell us about how they can be used more effectively in application. Is such research basic or applied? Whatever one chooses to call it, it is the kind of research that is discovery based—it leads with analysis. When done in an applied context, this kind of discovery-based research can rapidly advance our knowledge of basic processes, while at the same time, spawning successful application. The usual role of applied research is that of a vehicle for extrapolations from the lab—a process normally viewed as unidirectional, originating in the lab and moving outward to application. This is the usual role of applied work in translational research. In the realm of token reinforcement, however, applied research can be on the leading edge of basic discovery-based science: it can help set the research agenda. And if, in the process, it blurs the distinction between basic and applied research, then so much the worse for the distinction, which will be subsumed by a new and productive research agenda.

D25

Dr. Tim Hackenberg stumbled upon Skinner and behavior analysis in a college course, and had the good fortune to work in a discovery-based applied research program directed by Jane Howard. This was the first of many happy accidents in his path to studying behavior analysis. While studying at the University of California, Irvine, he attended an APA meeting in Los Angeles, where he fell under the spell of Phil Hineline, and subsequently moved to Philadelphia to study with Phil at Temple. After a post-graduate year on the beach in Southern California gazing at his novel, Tim was lucky enough to find a post-doc with Travis Thompson at the University of Minnesota, which helped ground him in Midwestern populism and pragmatism. Splitting his time between the state hospital and the animal lab, he was further convinced that the basic-applied distinction was illusory. In 1990, he joined the faculty in the Behavior Analysis program at the University of Florida, where he learned much about science and behavior analysis from senior colleagues and students, and also developed a taste for Southern football and boiled peanuts. He returned to his West Coast roots in 2009, joining the faculty at Reed College in Portland, Oregon, where he enjoys small classes, coffee shops, and wearing plaid. His major research interests are in the area of behavioral economics and comparative cognition, with a particular emphasis on decision-making and token reinforcement systems. He is blessed with a talented and passionate cadre of students, and has the good fortune to teach courses he cares about.
I have been fortunate to have been trained by some of the world’s finest behavior analysts and researchers, beginning in 1995 when I started post-baccalaureate training at the Children’s Hospital of Philadelphia’s Children’s Seashore House. My initial training included collecting data and conducting sessions that were a part of clinical therapy and research. Over time, I have developed my own research interests and agenda that is both heavily focused on translational research and exclusively designed to solve problems of social significance. First, my most recent publications and ongoing research in early intervention have focused on developing assessment and intervention methods that are most likely to produce generalization of the instructed skills (i.e., the topography) to other untrained situations (i.e., the function). For example, there is voluminous literature showing that sometimes trained verbal operants (usually tacts and mands) generalize across verbal operants and sometimes they don’t. There is also literature showing that sometimes trained receptive or expressive skills generalize to the untrained. The target of my research is establishing the conditions under which generalization occurs so that one may select the most effective teaching strategy – rather than simply demonstrating the characteristic idiosyncratic nature of how generalization occurs with the early intervention population. Second, I have recently developed an interest in how motivational variables affect responding. Typically, clinicians and researchers either establish high levels of motivation (so that responding is likely) or low levels of motivation (so that responding is unlikely). These tactics often work very well in the context of a strategy to assess and treat severe problem behavior. However, there are still relatively unexplored areas, such as the interaction of motivating operation manipulations and reinforcement/response parameter manipulations (i.e., schedule, delay, quality, effort) and how responding in concurrent schedules might change as a function of dynamic motivational conditions. Finally, my research agenda includes systematic replication of basic research.

The goal of the systematic replication research is twofold. First I am always interested, as a clinician, to find new and improved ways to execute an effective treatment that is also robust (i.e., high external validity). Basic research provides novel potential ways to improve treatment. Second, I am deeply committed to advancing the science of behavior analysis – and that includes establishing the generality of basic principles that are often first studied in basic laboratories.

Dr. Michael E. Kelley graduated from Louisiana State University in 2003 with a doctorate in School Psychology (emphasis in Applied Behavior Analysis) under the mentorship of Dorothea C. Lerman, Ph.D., BCBA-D. Dr. Kelley completed a pre-doctoral internship at The Marcus Institute and Johns Hopkins University School of Medicine and a post-doctoral fellowship at The Marcus Institute and Emory University School of Medicine, all under the supervision of Wayne W. Fisher, Ph.D., BCBA-D and Cathleen C. Piazza, Ph.D., BCBA-D. After graduation, Dr. Kelley joined the faculty at The Marcus Institute and Emory University School of Medicine (2004 – 2007). Dr. Kelley was on the faculty at the University of Southern Maine from 2007-2010. He is currently an Associate Professor and Director of the Severe Behavior Disorders Program in the Center for Autism Spectrum Disorders (CASD) at the University of Nebraska Medical Center’s Munroe-Meyer Institute. Dr. Kelley has co-authored over 30 peer-reviewed scientific papers. He is currently an Associate Editor of Journal of Applied Behavior Analysis (JABA).
B.F. Skinner New Researcher Award
Basic Research Award
Paul L. Soto, Ph.D.
Johns Hopkins University School of Medicine

My work involves two main areas – the behavioral functions of brain dopamine systems and the evaluation of potential pharmacotherapies for drug abuse and cognitive deficits. Regarding the behavioral functions of brain dopamine systems, I have conducted studies on the role of dopamine receptors in mediating the reinforcing and discriminative-stimulus effects of cocaine. I have also studied the effects of drugs acting at serotonin and dopamine receptors on cocaine’s discriminative-stimulus and reinforcing effects to identify potential candidates for the treatment of cocaine addiction.

Most recently, I have begun to apply the concepts and methods of behavioral economics to study how brain dopamine receptors mediate the rewarding effects of natural rewards. That work suggests that dopamine D2 receptors are involved in, but not necessary for, the reinforcing effects of food. Current studies are focused on determining the role of other D2-like receptors, D3 and D4 receptors, in mediating the reinforcing effects of natural rewards. I also conduct research evaluating drugs acting at gamma-aminobutyric acid (GABA) receptors for their potential as pharmacotherapeutics for cognitive deficits associated with neurological diseases such as Alzheimer’s disease. Current studies are focused on inverse agonists acting at a subtype of GABA receptors, called GABA-A receptors, because those receptors are preferentially located in brain regions associated with learning and memory, and importantly, are spared in the brains of Alzheimer’s patients.

Dr. Paul L. Soto is an Instructor in the Department of Psychiatry and Behavioral Sciences at Johns Hopkins University (JHU). He obtained his undergraduate degree in Psychology from the University of Florida with a focus in the experimental analysis of behavior and his Ph.D. in Psychology with a focus in psychobiology from Emory University. He completed a joint postdoctoral fellowship at the National Institute on Drug Abuse (NIDA) Intramural Research Program and Johns Hopkins University followed by a National Research Council fellowship at NIDA. In 2008, Dr. Soto joined the faculty in the Division of Behavioral Biology in the Department of Psychiatry and Behavioral Sciences at JHU.
SEAB Basic Dissertation Award
Matthew Weaver, Ph.D.
University of Pittsburgh

Doctoral Dissertation: Examination of relationships between response topography and the development of behavioral tolerance effects of cocaine with rats and pigeons

My dissertation focused on behavioral tolerance, defined as the attenuation of a drug effect following repeated or continuous exposure. The phenomenon of tolerance is multifaceted and closely related to drug addiction. The development of tolerance is dependent on physiological and behavioral factors. A need for behavioral mechanisms to describe tolerance is illustrated through the Before-After test of tolerance. In this test, two groups are subjected to the same experimental contingencies and drugs; however, the Before group receives the drug prior to experimental contingencies and the After group receives the drug following the contingencies. Therefore, the important independent variable is time of drug exposure. Typically, only the Before group develops tolerance, which shows that tolerance is contingent on a learning history while under the influence of drug. The finding, known as contingent tolerance, has been replicated using a variety of drugs, experimental arrangements, and animal species. Interestingly, contingent tolerance has not been exhibited in pigeons. This species-related anomaly may be a result of using species-typical responses (pecking) to test for tolerance. In contrast, similar studies using rats included species-arbitrary response (lever pressing) and contingent tolerance has been the typical result.

This examination addressed the role of response topography in the development of tolerance to the rate-decreasing effects of cocaine with two Before-After experiments. The first experiment required rats to use species-typical responses (licking) in an arrangement that paralleled previous experiments using pigeons that had resulted in tolerance for both Before and After groups. The second experiment employed pigeons and a species-arbitrary response (treadle pressing), an arrangement that paralleled experiments using rats that resulted in contingent tolerance. Experiment 1 resulted in tolerance for both the Before and After groups, which is consistent with the idea that response topography may influence the development of tolerance. Experiment 2 resulted in tolerance for both the Before and After groups, which is inconsistent with the idea that response topography was the confounding variable in pigeons’ development of contingent tolerance; however, the outcome was consistent with previous pigeon experiments. It was, therefore, concluded that factors other than the operant response topography are influencing the species differences in development of tolerance.
Congratulations to our other winners!

**Fred S. Keller Behavioral Education Award**  
Henry Pennypacker  
University of Florida

![Image of award presentation]

**SEAB Applied Behavior Analysis Dissertation Award**  
Jennifer L. Hammond  
University of Florida

![Image of award presentation]
APA Annual Convention
Division 25 Program Summary

Thursday 8/4/11

Invited Address: ABA International Don Hake Translational Research and Med Associates Distinguished Contributions to Basic Research Awards
9:00 AM - 9:50 AM Convention Center Room 209A

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Behavioral Economics of Reinforcer Pathology
Warren K. Bickel, PhD, Virginia Tech Carilion School of Medicine and Research Institute

What Do Reinforcers Really Do to Behavior?
Michael Davison, PhD, University of Auckland, New Zealand

Paper Session: Behavioral Advances in Psychopharmacology and Substance Abuse
10:00 AM - 11:50 AM Convention Center Room 208

Internet-Based Contingency Management Smoking Cessation Intervention: Eliminating Distance As a Barrier to Treatment
Bethany R. Raiff, PhD, National Development and Research Institutes, Inc., New York, NY
Jesse Dallery, PhD, University of Florida
Mikhail N. Koffarnus, PhD, Johns Hopkins University School of Medicine

Performance-Based Pay Increases Work Output and Work Satisfaction Compared to an Hourly Wage in a Therapeutic Workplace for Heroin Abuse
Kristen O'Reilly, BA, Johns Hopkins University School of Medicine
Kyle Wolfe, BA, Johns Hopkins University School of Medicine
Kenneth Silverman, PhD, Johns Hopkins University School of Medicine
Paul Soto, PhD, Johns Hopkins University

Contribution of A5gabaa Receptors to Performance of Rhesus Monkeys in a Delayed-Matching-to-Sample and Spatial Working-Memory Task and to the Effects of the Benzodiazepine Triazolam
Sundari Rallapalli, MS, University of Wisconsin—Milwaukee
James M. Cook, PhD, University of Wisconsin—Milwaukee
Nancy Ator, PhD, Johns Hopkins University
Michael R. Weed, PhD, Johns Hopkins University
Thursday 8/4/11 (continued)

Symposium: Interventions for Problematic Behavior in Children: Extending Behavior Analysis Beyond the Clinical Environment
2:00 PM - 3:50 PM Convention Center Room 140A

Chair: Henry S. Roane, PhD, SUNY Upstate Medical University
Discussant: Dorothea C. Lerman, PhD, University of Houston—Clear Lake

Family Behavior Analysis: An Approach Toward Integrating Families Into Behavior Analytic Practice
Henry S. Roane, PhD, SUNY Upstate Medical University
Heather J. Kadey, MS, SUNY Upstate Medical University
Niamh M. Doyle, PhD, SUNY Upstate Medical University

Assessment and Treatment of Pediatric Feeding Disorders
Cathleen C. Piazza, PhD, Munroe-Meyer Institute, Omaha, NE

Enhancing the Effectiveness of Function-Based Reinforcement Interventions for Problem Behavior Using Multiple Schedules
Wayne W. Fisher, PhD, Munroe-Meyer Institute, Omaha, NE
Alison M. Betz, PhD, Florida Institute of Technology
Eric Grady, MS, Munroe-Meyer Institute, Omaha, NE
Henry S. Roane, PhD, SUNY Upstate Medical University

Executive Committee Meeting:
4:00 PM - 5:50 PM Renaissance Washington Hotel Meeting Room 6

Friday 8/5/11

Invited Address: SEAB Dissertation Awards for Basic and Applied Research
8:00 AM - 8:50 AM Renaissance Washington Hotel Meeting Room 2

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Response Force Under Ratio Schedules and in the Context of Functional Analysis
Griffin W. Rooker, PhD, Kennedy Krieger Institute, Baltimore, MD

Role of Attending in the Acquisition of Conditional Stimulus Control
Blake A. Hutsell, PhD, Auburn University

Invited Address: B.F. Skinner Foundation Young Basic and Applied Researcher Awards
9:00 AM - 9:50 AM Renaissance Washington Hotel Meeting Room 2

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Battling the Bulge: Future Directions for Behavioral Research on Obesity
Matt Normand, PhD, University of the Pacific

Stimulus Context and Resistance to Change
Christopher A. Podlesnik, PhD, University of Auckland, New Zealand
Friday 8/5/11 (continued)

Presidential Address
11:00 AM - 11:50 AM Renaissance Washington Hotel Meeting Room 3

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Recent Trends in the Journal of Applied Behavior Analysis
Dorothea C. Lerman, PhD, University of Houston-Clear Lake

Symposium: Choice and Decision Making-Behavioral Economics in the Lab and the Field
4:00 PM - 5:50 PM Convention Center East Overlook Room

Chair: Donald Hantula, PhD, Temple University

Assessing Employee Preferences for Rewards
Byron J. Wine, MS, AdvoServ of New Jersey, Hewitt

Intelligence Analysts Are Information Foragers
Bess Puvathingal, MA, Temple University
Donald Hantula, PhD, Temple University

The Sunk Cost Effect Reconsidered
Donald Hantula, PhD, Temple University
Bess Puvathingal, MA, Temple University

Consumer Behavior Analysis: Behavioral Economics Meets the Market Place
Gordon Foxall, PhD, Cardiff University, Wales, United Kingdom
Valdimar Sigurdsson, PhD, Reykjavik University, Iceland
Jorge M. Oliveira-Castro, PhD, Universidade de Brasilia, Brazil

Saturday 8/6/11

Symposium: Translational Analysis and Treatment of Chronic Aberrant Behavior-Transition States, Behavioral Economics, and Idiosyncratic Functions
8:00 AM - 9:50 AM Convention Center Room 209A

Chair: Michael F. Cataldo, PhD, Kennedy Krieger Institute, Baltimore, MD
Discussant: Travis Thompson, PhD, University of Minnesota-Twin Cities

Transition State Analysis of Chronic Aberrant Behavior
Dean C. Williams, PhD, University of Kansas

Behavioral Economic Implications for the Treatment of Chronic Aberrant Behavior
Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD
Michelle A. Frank-Crawford, MA, Kennedy Krieger Institute, Baltimore, MD
Abbey B. Carreau, MS, Kennedy Krieger Institute, Baltimore, MD
Saturday 8/6/11 (continued)

Functional Analysis of Problem Behavior: Idiosyncratic Variables
Eileen M. Roscoe, PhD, New England Center for Children, Southborough, MA
Griffin W. Rooker, PhD, Kennedy Krieger Institute, Baltimore, MD
Sacha T. Pence, MS, West Virginia University
Arianne Kindle, MS, Kindle Center, Burlington, MA
Kevin Schlichenmeyer, MS, University of Massachusetts Medical School
William V. Dube, PhD, University of Massachusetts Medical School

Symposium: Intervening to Increase Prosocial Behavior-Naturalistic Studies in Groups, Schools, and on the Street
10:00 AM - 11:50 AM Convention Center Room 209A

Chair: E. Scott Geller, PhD, Virginia Tech University

Impact of Gossip on Interpersonal Trust and Commitment: A Protocol for Monitoring and Influencing Interpersonal Communication
Kathleen B. Snead, BS, Virginia Tech University
Patrick T. Coyle, MBA, Virginia Tech University
Emily C. Bowden, Virginia Tech University
Muriel J. Vinson, Virginia Tech University

A Study of Pedestrians' Risky Crosswalk Behavior: Relative Impact of Risk Compensation, Entitlement, and Social Conformity
Michael L. Ekema-Agbaw, MS, Virginia Tech University
Cory B. Furrow, BS, Virginia Tech University

A Classroom Study of Actively Caring: Uncovering Barriers to Recognizing a Stranger’s Prosocial Behavior
Matthew J. Foy, BS, Virginia Tech University
Shane M. McCarty, Virginia Tech University
Elizabeth A. Reichling, Virginia Tech University
Richard L. Price III, Virginia Tech University

Promoting a Pay-It-Forward Movement at a University Food Court
Cory B. Furrow, BS, Virginia Tech University
Shane M. McCarty, Virginia Tech University
Ryan C. Smith, BS, BA, Virginia Tech University
Jessica E. Miller, Virginia Tech University
Jessica N. Worthen, Virginia Tech University

Reducing Bullying Among Elementary School Students With a Positive Proactive Intervention
Shane M. McCarty, Virginia Tech University
Ryan C. Smith, BS, BA, Virginia Tech University
Laura K. Olah, Virginia Tech University
Taylor E. Gray, Virginia Tech University
Saturday 8/6/11 (continued)

**Paper Session: Conceptual Papers in Behavior Analysis**
1:00 PM - 1:50 PM Convention Center Room 144C

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Derek D. Reed, PhD, University of Kansas

Stimulus Equivalence and Graph Theory Applied to Sign Language Teaching: Rebuilding the Graph of Equivalent Stimuli
Celso S. Oliveira, PhD, UNESP, Bauru, São Paulo, Brazil

**Poster Session**
3:00 PM - 3:50 PM Convention Center Halls D and E

Affiliative Relationships and Reciprocity Among Adult Male Bonnet Macaques (Macaca radiata) at Arunachala Hill, India
Athman R. Adiseshan, Ramana Academy, San Jose, CA
Tara A. Adiseshan, No Degree, Stanford University

Sensation Seeking and Impulsivity As Predictors of Adolescents’ Risk Taking
Meagen A. Higgins, AA, California State University-San Bernardino
David V. Chavez, PhD, California State University-San Bernardino

Systematic Evaluation of the Autism (Gluten-Free, Casein-Free) Diet
Jessica L. Becraft, BA, Kennedy Krieger Institute, Baltimore, MD
Natalie Rolider, PhD, Kennedy Krieger Institute, Baltimore, MD
Nicole L. Hausman, MA, Kennedy Krieger Institute, Baltimore, MD

Preferences for and Reinforcing Value of Social and Nonsocial Stimuli for Children With and Without Autism
Michelle A. Frank-Crawford, MA, Kennedy Krieger Institute, Baltimore, MD
Melissa Goldberg, PhD, Kennedy Krieger Institute, Baltimore, MD
Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD
Louis P. Hagopian, PhD, Kennedy Krieger Institute, Baltimore, MD
Mandy M. Triggs, MA, Kennedy Krieger Institute, Baltimore, MD
Abbey B. Carreau, MS, Kennedy Krieger Institute, Baltimore, MD
Melissa J. Allman, PhD, Kennedy Krieger Institute, Baltimore, MD

Do Punishment Procedures Impact Mood? An Evaluation of Positive and Negative Affect in an Individual With Intellectual Disabilities
Mariana I. Castillo, MA, Kennedy Krieger Institute, Baltimore, MD
Lynn G. Bowman, MA, Kennedy Krieger Institute, Baltimore, MD
Samantha L. Hardesty, MA, Kennedy Krieger Institute, Baltimore, MD
Saturday 8/6/11 (continued)

Detrimental Effects of Extrinsic Reinforcement on Intrinsic Motivation: A Post Hoc Examination of Reinforcer Assessment Data
Abbey B. Carreau, MS, Kennedy Krieger Institute, Baltimore, MD
Allison Schultz, MA, Kennedy Krieger Institute, Baltimore, MD
Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD
Michelle A. Frank-Crawford, MA, Kennedy Krieger Institute, Baltimore, MD

Preliminary Analysis of the Use of the Aberrant Behavior Checklist With Children Under Age 5 Years
Jonathan D. Schmidt, PhD, Kennedy Krieger Institute, Baltimore, MD
John M. Huete, PhD, Kennedy Krieger Institute, Baltimore, MD
Michelle D. Chin, MS, Kennedy Krieger Institute, Baltimore, MD
Patricia F. Kurtz, PhD, Kennedy Krieger Institute, Baltimore, MD
Theodosia R. Paclawskyj, PhD, Kennedy Krieger Institute, Baltimore, MD

Relationship of Parent Locus of Control and Readiness to Change to Intensive Behavioral Services for Individuals With Intellectual Disabilities
John M. Huete, PhD, Kennedy Krieger Institute, Baltimore, MD
Jonathan D. Schmidt, PhD, Kennedy Krieger Institute, Baltimore, MD

Is Wait a Four Letter Word?
Angela J.C. La Sala, PhD, College of Southern Nevada

Using Multiple Schedules to Thin Reinforcement Delivery: Procedural Variations Within Differential Reinforcement Paradigms
Niamh M. Doyle, PhD, SUNY Upstate Medical University
Henry S. Roane, PhD, SUNY Upstate Medical University
Heather J. Kadey, MS, SUNY Upstate Medical University

Business Meeting
5:00 PM - 5:50 PM Convention Center Room 102A
Chair: Dorothea C. Lerman, PhD, University of Houston—Clear Lake

Sunday 8/7/11

Symposium: Using Hierarchical Complexity to Determine How Smart Animals Are
8:00 AM - 9:50 AM Convention Center Room 144C
Chair: Michael L. Commons, PhD, Harvard Medical School

First Three Stages of Development in Animals
Andrew M. Richardson, BS, Dare Institute, Cambridge, MA

Nominal and Sentential Stages: Examples of Concept Use and the Organization of Multiple Concepts in Animals
Patrice M. Miller, EdD, Salem State University

Preoperational Stage 6 and Primary Stage 7 Performances in Animals
Michael L. Commons, PhD, Harvard Medical School
Sunday 8/7/11 (continued)

The Highest Stage for Animals? Examples of Concrete Operational Animal Behavior
Nicholas H. Commons-Miller, AA, Tufts University

Invited Address: Fred S. Keller Behavioral Education Award and Award for Distinguished Contributions to Applied Behavioral Research
11:00 AM - 11:50 AM Convention Center Room 159

Chair: Iser G. DeLeon, PhD, Kennedy Krieger Institute, Baltimore, MD

Evidence-Based Practice: Opportunities and Challenges for Behavior Analysts
Timothy A. Slocum, PhD, Utah State University
Evaluation of Extinction-Based Treatments of Pediatric Feeding Disorders
Cathleen C. Piazza, PhD, Munroe-Meyer Institute, Omaha, NE

See you in DC!