

## CURRICULUM VITAE

Timothy A. Shahan

### **ADDRESS**

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### **EDUCATIONAL HISTORY**

1998 Ph.D. Department of Psychology, West Virginia University  
1996 M.A. Department of Psychology, West Virginia University  
1994 B.A. Department of Psychology West Virginia University

### **POSITIONS HELD**

2008- *Chair*, Experimental and Applied Psychological Science Graduate Program,  
Department of Psychology, Utah State University  
2011- *Professor*  
Department of Psychology, Utah State University  
2007-2011 *Associate Professor*  
Department of Psychology, Utah State University  
2003-2007 *Assistant Professor*  
Department of Psychology, Utah State University  
2000-2003 *Research Assistant Professor*,  
Department of Psychology, University of New Hampshire  
1998-1999 *Postdoctoral Research Fellow*,  
Human Behavioral Pharmacology Laboratory  
Department of Psychiatry, University of Vermont

### **AWARDS**

2007 *Researcher/Scholar of the Year*  
College of Education and Human Services, Utah State University  
2006 *B.F. Skinner Young Researcher Award*  
American Psychological Association: Division 25  
2004 *Karl Lashley Distinguished Alumnus Award*  
Department of Psychology, West Virginia University  
1998 *The Phillip E. Comer Award for Outstanding Graduate Teaching*  
Department of Psychology, West Virginia University  
1998 *The Don Hake Award for Outstanding Graduate Career*  
Department of Psychology, West Virginia University

### **PROFESSIONAL SERVICE, EDITORIAL ACTIVITIES, AND ORGANIZATIONS**

#### Appointed Member of National Institutes of Health Grant Review Study Section

2009-2013 National Institutes of Health: Biobehavioral Regulation, Learning  
and Ethology (BRLE)

#### Ad Hoc Federal Grant Reviewer

2010 National Institute of Health: ARRA Special Emphasis Panel (ZRG1 BBBP-R85)  
2008 National Institutes of Health: Biobehavioral Regulation, Learning and Ethology  
Study Section (BRLE)

- 2008 National Institute on Alcohol Abuse and Alcoholism: Special Emphasis Panel (ZAA1 CC (02)
- 2007 National Institute on Drug Abuse: Training and Career Development Subcommittee (NIDA-K)
- 2007 National Institutes of Health: Biobehavioral Regulation, Learning and Ethology Study Section (BRLE)
- 2007 National Institute of Mental Health: Special Emphasis Panel (ZMH1 ERB-H-04)
- 2006 National Institutes of Health: Special Emphasis Panel (ZRG1 BBBPJ-02)
- 2006 National Institute on Drug Abuse: Special Emphasis Panel (ZDA1-MXO-O-20)
- 2006 National Institute on Drug Abuse: Training and Career Development Subcommittee (NIDA-K)
- 2006 National Institutes of Health: Biobehavioral Regulation, Learning and Ethology Study Section (BRLE)
- 2006 National Institutes of Health: Special Emphasis Panel (ZRG1 BBBPJ-04)
- 2005 National Institute on Drug Abuse: Training and Career Development Subcommittee (NIDA-K)
- 2005 National Institute on Drug Abuse: Special Emphasis Panel (ZDA1-MXs-M07)
- 2005 National Institute on Drug Abuse: Special Emphasis Panel (ZDA1-MXs-M08)
- 2003 National Institutes of Health: Biobehavioral and Behavioral Processes 1 Study Section (BBBP-1)

#### Editorial Activities

##### *Associate Editor*

*Journal of the Experimental Analysis of Behavior* (2010-2013)

##### *Lead Editor* (2009-2012)

*Behavioural Processes: Proceedings of the Meeting of the Society for the Quantitative Analyses of Behavior* (SQAB)

##### *Co-Editor:* (2008)

*Behavioural Processes: Proceedings of the Meeting of the Society for the Quantitative Analyses of Behavior* (SQAB)

##### *Member, Board of Editors:*

*Journal of the Experimental Analysis of Behavior* (2001-2004), (2006-2009)  
*The Behavior Analyst* (2007-2010)

##### *Ad Hoc Reviewer for:*

Alcoholism: Clinical and Experimental Research  
Animal Cognition  
Behavioural Brain Research  
Behavioural Pharmacology  
Behavioral Processes  
Experimental Analysis of Human Behavior Bulletin  
Experimental and Clinical Psychopharmacology  
International Journal of Comparative Psychology  
Journal of Applied Behavior Analysis  
Journal of the Experimental Analysis of Behavior  
Journal of Experimental Psychology: Animal Behavior Processes  
Journal of Pharmacology and Experimental Therapeutics

Learning and Behavior  
 Life Sciences  
 Pharmacology, Biochemistry and Behavior  
 Psychonomic Bulletin & Review  
 Psychopharmacology  
 Revista Mexicana de Analisis de la Conducta (*Mexican Journal of Behavior Analysis*)

### Organizational Service

*Program Chair & President Elect:* Society for Quantitative Analyses of Behavior (2009-2011)  
*Chair:* APA Division 25 Basic Research Dissertation Award Committee (2007)  
*Reviewer:* APA Division 25 Basic Research Dissertation Award (2005)

### Member

American Psychological Society  
 Association for Behavior Analysis  
 Society for Neuroscience  
 Society for the Quantitative Analyses of Behavior  
 International Study Group for the Investigation of Drugs as Reinforcers

<b>RESEARCH</b>
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### GRANTS

#### Current Grants

Principal Investigator	<p><i>“Behavioral Momentum of Alcohol Self-Administration”</i>          (R01AA016786)          National Institute on Alcohol Abuse and Alcoholism          Project Dates 04/01/08 – 03/31/13          Total Costs \$1,104,000</p>
Principal Investigator	<p><i>“Behavioral Momentum of Cocaine Self-Administration”</i>          (R21DA026497)          National Institute on Drug Abuse          Project Dates 08/01/09 – 07/31/2012          Total Costs \$374,944</p>
Co-Investigator (PI for USU subcontract)	<p><i>“Behavioral persistence: Basic, Translational, and Clinical Studies”</i>          (RO1 HD064576) John A. Nevin, Principal Investigator          National Institute of Child Health and Human Development          Project Dates 4/10/11 – 1/31/16          Total Costs \$ 1,662,559 (costs at USU = \$350,000)</p>
Co-Investigator	<p><i>“Understanding delay discounting in cigarette smokers”</i>          (R01DA029100) Amy Odum, Principal Investigator          National Institute on Drug Abuse          Project Dates 4/01/10 – 3/31/15          Total Requested Costs: \$1,400,000</p>

Co-Investigator            *“Experimental Manipulations of Impulsivity: Effects on Gambling and Drug Taking”*  
 (R01DA029608) Gregory Madden, Principal Investigator  
 National Institute on Drug Abuse  
 Project Dates 08/15/10 – 06/30/15  
 Total Costs \$989,298

### **Completed Grants**

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Principal-Investigator:    *“Discrimination, Reinforcement, and Resistance to Change”*  
 (Subcontract of R01MH65949, John A. Nevin PI)  
 University of New Hampshire/National Institute of Mental Health  
 Project Dates 2/15/06 – 12/31/10  
 Total Costs at USU \$325,516

Principal Investigator      *“Behavioral Momentum of Alcohol Self-Administration—  
 Undergraduate Summer Research Fellowship Supplement”*  
 (R01AA016786-02S1)  
 National Institute on Alcohol Abuse and Alcoholism  
 Project Dates 06/18/09 – 08/31/10  
 Total Costs \$20,020

Principal Investigator:    *“Divided Attention and Reinforcement Variables”*  
 (R01MH072621)  
 National Institute of Mental Health  
 Project Dates 07/01/05-04/30/09  
 Total Costs \$462,000

Principal Investigator:    *“Alcohol Cues: Opioid Antagonism and Behavioral Economics”*  
 (R21AA013576)  
 National Institute on Alcohol Abuse and Alcoholism  
 Project Dates 04/01/03 – 03/31/07  
 Total Costs \$437,000

Principal Investigator:    *“Behavioral Economics of Conditioned Alcohol Cues”*  
 (R03AA12892)  
 National Institute on Alcohol Abuse and Alcoholism  
 Project Dates 8/15/00 – 8/1/03  
 Total Costs \$142,900

Co-Investigator:            *“Discrimination, Reinforcement, and Resistance to Change”*  
 (Subcontract of R01MH65949, John A. Nevin PI)  
 National Institute of Mental Health / University of New Hampshire  
 Project Dates 7/01/02 – 2/15/06  
 Total Costs at USU \$94,518

Co-Investigator            *“The Physiological and Behavioral Effects of Environmental Vibration  
 on Mice”*  
 Aaron Olsen, Principal Investigator  
 American Association for Laboratory Animal Science  
 Project Dates 5/01/09 – 4/30/10    Total Costs \$21,571

Principal Investigator: “*Developing an Animal Model of Methamphetamine Abuse*”  
 Utah State University Community/University Research Initiative  
 Project Dates 5/01/07 – 12/31/08  
 Total Costs \$24,419

Principal Investigator: “*The Persistence of Attending: Role of Reinforcement Context*”  
 Utah State University New Faculty Grant  
 Project Dates 5/01/04 – 5/01/05  
 Total Costs \$11,270

## PUBLICATIONS

### Under Review

Pyszczynski, A. D., & **Shahan, T. A.** Loss of non-drug reinforcement produces resurgence of alcohol-maintained behavior in a different context.  
 Thrailkill, E. A., & **Shahan, T. A.** Resistance to change and relapse of observing.

### Book Chapters

**Shahan, T. A.** (in press). Attention and conditioned reinforcement. In G.J. Madden (Ed.) *Handbook of Behavior Analysis*. American Psychological Association.

### Peer-Reviewed Articles in Press

Nevin, J. A., **Shahan, T. A.**, Odum, A. L., & Ward, R. D. Delayed matching to sample: Reinforcement has opposite effects on resistance to change in two related procedures. *Learning & Behavior*  
 Podlesnik, C. A., Thrailkill, E. A., & **Shahan, T. A.** (in press). Differential reinforcement and resistance to change of divided attention performance. *Learning & Behavior*.  
 Jimenez-Gomez, C. & **Shahan, T. A.** (in press) Concurrent chains performance maintained by alcohol and alcohol-associated conditioned reinforcement. *Journal of the Experimental Analysis of Behavior*  
 Nevin, J. A., & **Shahan, T. A.** (in press). Behavioral momentum theory: Equations and applications. *Journal of Applied Behavior Analysis*.

### Peer-Reviewed Articles in Print

(50) Wacker, D. P., Harding, J. W., Berg, W. K., Lee, J. F., Schieltz, K. M., Padilla, Y. C., Nevin, J. A., & **Shahan, T. A.** (2011). An evaluation of persistence of treatment effects during long-term treatment of destructive behavior. *Journal of the Experimental Analysis of Behavior*, 96, 261-282.  
 (49) Podlesnik, C. A., Jimenez-Gomez, C. Thrailkill, E. C. & **Shahan, T. A.** (2011). Temporal context, preference, and resistance to change. *Journal of the Experimental Analysis of Behavior*, 96, 191-213.  
 (48) Quick, S. L., Pyszczynski, A. D., Colston, K. A., & **Shahan, T. A.** (2011). Loss of alternative non-drug reinforcement induces relapse of cocaine seeking: Role of dopamine D<sub>1</sub> receptors. *Neuropsychopharmacology*, 36, 1015-1020.  
 (47) **Shahan, T. A.**, & Sweeney, M. M. (2011). A model of resurgence based on behavioral momentum. *Journal of the Experimental Analysis of Behavior*, 95, 91-108.  
 (46) Pyszczynski, A. D., & **Shahan, T. A.** (2011). Behavioral momentum and relapse of

- ethanol seeking: Non-drug reinforcement in a context increases relative reinstatement. *Behavioural Pharmacology*, 22, 81-86.
- (45) Podlesnik, C. A., & **Shahan, T. A.** (2010). Extinction, relapse, and behavioral momentum. *Behavioural Processes*, 84, 400-411.
- (44) **Shahan, T. A.** (2010). Conditioned reinforcement and response strength. *Journal of the Experimental Analysis of Behavior*, 93, 269-289. (Review paper invited by Editor).
- (43) Podlesnik, C. A., & **Shahan, T. A.** (2009). Behavioral momentum and relapse of extinguished operant responding. *Learning & Behavior*, 37, 357-364
- (42) Podlesnik, C. A., Ward, R. D., Jimenez-Gomez, C. & **Shahan, T. A.** (2009). Resistance to change and frequency of response-dependent stimuli uncorrelated with reinforcement. *Journal of the Experimental Analysis of Behavior*, 92, 199-214.
- (41) Gilbert-Norton, L. B., **Shahan, T. A.**, & Shivik, J. A. (2009). Coyotes: A model for success at tracking resources in variable environments. *Behavioural Processes*, 82, 178-183.
- (40) Quick, S. L., & **Shahan, T. A.** (2009). Behavioral momentum of cocaine self-administration: Frequency of reinforcement in a context affects resistance to extinction. *Behavioural Pharmacology*, 20, 337-345.
- (39) Jimenez-Gomez, C., Podlesnik, C. A. & **Shahan, T. A.** (2009). Effects of initial-link duration on preference and resistance to change in concurrent-chains schedules. *Behavioural Processes*, 81, 223-226.
- (38) Podlesnik, C. A., & **Shahan, T. A.** (2009). Reinforcer satiation and resistance to change of responding maintained by qualitatively different reinforcers. *Behavioural Processes*, 81, 126-132.
- (37) Nevin, J. A., Ward, R. D., Jimenez-Gomez, C., Odum, A. L., & **Shahan, T. A.** (2009). Differential outcomes enhance accuracy of delayed matching to sample but not resistance to change. *Journal of Experimental Psychology: Animal Behavior Processes*, 35, 74-91.
- (36) Nevin, J. A., **Shahan, T. A.**, & Odum, A. L. (2008). Contrast in delayed matching. *Quarterly Journal of Experimental Psychology*, 61, 1400-1409.
- (35) Jimenez-Gomez, C., & **Shahan, T. A.** (2008). Matching law analysis of rats' alcohol self-administration in a free operant choice procedure. *Behavioural Pharmacology*, 19, 353-356.
- (34) **Shahan, T. A.**, & Podlesnik, C. A. (2008). Conditioned reinforcement value and resistance to change. *Journal of the Experimental Analysis of Behavior*, 89, 263-298
- (33) **Shahan, T. A.**, & Podlesnik, C. A. (2008). Quantitative analyses of observing and attending. *Behavioural Processes*, 78, 145-157.
- (32) Podlesnik, C. A., & **Shahan, T. A.** (2008). Response-reinforcer relations and resistance to change. *Behavioural Processes*, 77, 109-125.
- (31) Nevin, J. A., Davison, M., Odum, A. L., & **Shahan, T. A.** (2007). A theory of attending, remembering, and reinforcement in delayed matching to sample. *Journal of the Experimental Analysis of Behavior*, 88, 285-317.
- (30) **Shahan, T. A.**, & Podlesnik, C. A. (2007). Divided attention and the matching law: Sample duration affects sensitivity to reinforcement allocation. *Learning & Behavior*, 35, 141-148.
- (29) Jimenez-Gomez, C., & **Shahan, T. A.** (2007). Resistance to change of alcohol self-administration: Effects of alcohol-delivery rate on disruption by extinction and naltrexone. *Behavioural Pharmacology*, 18, 161-169.
- (28) **Shahan, T. A.**, & Podlesnik, C. A. (2006). Divided attention performance and the matching law. *Learning & Behavior*, 34, 255-261.

- (27) Podlesnik, C. A., Jimenez-Gomez, C., & **Shahan, T. A.** (2006). Resurgence of alcohol seeking produced by discontinuing non-drug reinforcement as an animal model of drug relapse. *Behavioural Pharmacology*, *17*, 369-374.
- (26) Podlesnik, C. A., Jimenez-Gomez, C., Ward, R. D., & **Shahan, T. A.** (2006). Resistance to change of responding maintained by unsignaled delays to reinforcement: A response-out analysis. *Journal of the Experimental Analysis of Behavior*, *85*, 329-347.
- (25) **Shahan, T. A.**, Podlesnik, C. A., Jimenez-Gomez, C. (2006). Matching and conditioned reinforcement rate. *Journal of the Experimental Analysis of Behavior*, *85*, 167-180.
- (24) **Shahan, T. A.**, & Jimenez-Gomez, C. (2006). Effects of self-administered alcohol concentration on the frequency and persistence of rats' attending to alcohol cues. *Behavioural Pharmacology*, *17*, 201-211.
- (23) Nevin, J. A. Davison, M. & **Shahan, T. A.** (2005) A theory of attending and reinforcement in conditional discriminations. *Journal of the Experimental Analysis of Behavior*, *84*, 281-303.
- (22) **Shahan, T. A.** & Podlesnik, C. A. (2005). Rate of conditioned reinforcement affects observing rate but not resistance to change. *Journal of the Experimental Analysis of Behavior*, *84*, 1-17.
- (21) Odum, A. L., **Shahan, T. A.** & Nevin, J. A. (2005). Resistance to change of forgetting functions and response rates. *Journal of the Experimental Analysis of Behavior*, *84*, 65-75.
- (20) **Shahan, T. A.** & Lattal, K. A. (2005). Unsignaled delay of reinforcement, relative time, and resistance to change. *Journal of the Experimental Analysis of Behavior*, *83*, 201- 219.
- (19) Odum, A. L., & **Shahan, T. A.** (2004). D-Amphetamine reinstates behavior previously maintained by food: importance of context. *Behavioural Pharmacology*, *15*, 513-516.
- (18) **Shahan, T. A.**, & Burke, K. (2004). Ethanol-maintained responding of rats is more resistant to change in a context with added non-drug reinforcement. *Behavioural Pharmacology*, *15*, 279-285.
- (17) **Shahan, T. A.**, Magee, A., & Dobberstein, A. (2003) The resistance to change of observing. *Journal of the Experimental Analysis of Behavior*, *80*, 273-293.
- (16) Nevin, J.A., Milo, J., Odum, A.L., & **Shahan, T. A.** (2003). Accuracy of discrimination, rate of responding, and resistance to change. *Journal of the Experimental Analysis of Behavior*, *79*, 307-321.
- (15) **Shahan, T. A.** (2003). Stimuli produced by observing responses make rats' ethanol self-administration more resistant to price increases. *Psychopharmacology*, *167*, 180-186.
- (14) **Shahan, T. A.**, & Chase, P.N. (2002). Novelty, stimulus control, and operant variability. *The Behavior Analyst*, *25*, 175-190.
- (13) **Shahan, T. A.** (2002). Observing Behavior: Effects of rate and magnitude of primary reinforcement. *Journal of the Experimental Analysis of Behavior*, *78*, 161-178.
- (12) **Shahan, T. A.** (2002). The observing-response procedure: A novel method to study drug-associated conditioned reinforcement. *Experimental and Clinical Psychopharmacology*, *10*, 3-9.
- (11) Giordano, L , Bickel, W. K, **Shahan, T. A.** (2001) Behavioral economics of human drug self-administration: Progressive ratio vs. random sequences of response requirements. *Behavioural Pharmacology*, *12*, 343-347.
- (10) **Shahan, T. A.**, Bickel, W. K., Badger, G. J., Giordano, L. A. (2001). Sensitivity of nicotine-containing and de-nicotinized cigarette consumption to alternative non-drug reinforcement: A behavioral economic analysis. *Behavioural Pharmacology*, *12*, 277-284.
- (9) Doughty, A. H., **Shahan, T. A.**, & Lattal, K. A. (2001). Superstitious responding and reinforcement rate under concurrent variable-interval extinction schedules. *Behavioural Processes*, *53*, 163-170.

- (8) **Shahan, T. A.**, & Lattal, K. A. (2000) Choice, changing over, and reinforcement delays. *Journal of the Experimental Analysis of Behavior*, 74, 311-330.
- (7) Schaal, D. W., Odum, A. L. & **Shahan, T. A.** (2000) Pigeons may not remember the stimuli that reinforced their recent behavior. *Journal of the Experimental Analysis of Behavior*, 73, 125-139.
- (6) **Shahan, T. A.**, Odum, A. L., & Bickel, W.K. (2000) Nicotine gum as a substitute for cigarettes: a behavioral economic analysis. *Behavioural Pharmacology*, 11, 71-79.
- (5) **Shahan, T. A.**, Bickel, W. K., & Madden, G. J. (1999) Comparing the reinforcing efficacy of nicotine-containing and de-nicotinized cigarettes: A behavioral economic analysis. *Psychopharmacology*, 147, 210-216.
- (4) **Shahan, T. A.**, & Lattal, K. A. (1998). On the functions of the changeover delay. *Journal of the Experimental Analysis of Behavior*, 69, 141-160.
- (3) Schaal, D. W., **Shahan, T. A.**, Kovera, C. A., & Reilly, M. P. (1998). Mechanisms underlying the effects of unsignaled, delayed reinforcement on the key pecking of pigeons under variable-interval schedules. *Journal of the Experimental Analysis of Behavior*, 69, 103-122.
- (2) Bickel, W. K., & **Shahan, T. A.** (1998). Ethical and theoretical paradoxes in human behavioral pharmacology research: Comments on Fischman and Johanson. *Behavioural Pharmacology*, 9, 340-345.
- (1) Lattal, K. A., & **Shahan, T. A.** (1997). Differing views of contingencies: How contiguous? *The Behavior Analyst*, 20, 149-154.

#### Non-Peer Reviewed Publications

- Shahan, T. A.**, White, K. G. (2011). Preface. SQAB 2010: choice, discounting, and the future value of quantitative analyses. *Behavioural Processes*, 87, iv-v. (*Special Issue of Proceedings of the Meeting of the Society for the Quantitative Analyses of Behavior*)
- Shahan, T. A.**, White, K. G., & Grace, R. C. (2010). Preface SQAB 2009: Flying High. *Behavioural Processes*, 84, 353-355. (*Special Issue of Proceedings of the Meeting of the Society for the Quantitative Analyses of Behavior*)
- Reid, A. K., **Shahan, T. A.**, & Grace, R. C. (2009). Preface SQAB 2008: More than just the usual suspects. *Behavioural Processes*, 81, 149-153. (*Special Issue of Proceedings of the Meeting of the Society for the Quantitative Analyses of Behavior*)

#### **INVITED ADDRESSES**

- Shahan, T. A. (2011). Discussant for symposium entitled: Reinforcers as Signalling Events; M. Davison (Chair). Symposium conducted at the 37th annual meeting of the Association for Behavior Analysis, May 2010, Denver, CO.
- Shahan, T. A. (2011). Discussant for symposium entitled: Resurgence and Renewal; C. Cancado (Chair). Symposium conducted at the 37th annual meeting of the Association for Behavior Analysis, May 2010, Denver, CO.
- Shahan, T. A., & Sweeney, M. M. (2009). Behavioral Momentum and Quantitative Analyses of Relapse. Keynote address at the 1<sup>st</sup> Colloque Analyse du Comportement et Troubles du Developpement, December 2009, **Lille, France**.
- Podlesnik, C. A., & Shahan, T. A. (2009). Extinction, Relapse, and Behavioral Momentum. Invited address given at the annual meeting of the Society for the Quantitative Analyses of Behavior, May 2009, Phoenix AZ.
- Shahan, T. A. (2009). SQAB Preeminent Tutorial: Conditioned Reinforcement. Invited address given at the annual meeting of the Association for Behavior Analysis International, May 2009, Phoenix AZ.



- Shahan, T. A. & Podlesnik, C. A. (2007). Quantitative Analyses of Observing and Attending. Invited address given at the annual meeting of the Society for the Quantitative Analyses of Behavior, May 2007, San Diego, CA.
- Shahan, T. A. & Podlesnik, C. A. (2007). Conditioned Reinforcement and Quantitative Models of Behavior Allocation and Persistence. Invited address given in Focus Session at the annual meeting of the Winter Conference on Animal Learning and Behavior, February 2007, Winter Park Colorado.
- Shahan, T. A. (2006). Observing, Attending, and Quantitative Models of Operant Behavior. Invited address given at the annual meeting of the Southeastern Association for Behavior Analysis, October 2006, Greenville, SC.
- Shahan, T. A. (2006). Quantitative Analyses of Attending. Invited address given at the annual meeting of the Mid-American Association for Behavior Analysis, October 2006, Carbondale, IL.
- Shahan, T. A. (2006). Reinforcement and Attending. Invited address given at acceptance of B.F. Skinner Young Researcher Award presented at the annual meeting of the American Psychological Association, August, New Orleans, LA.
- Shahan, T. A. & Podlesnik, C. A. (2006). Divided Attention and the Matching Law. Invited address given at the annual meeting of the Winter Conference on Animal Learning and Behavior, February, 2006, Winter Park, CO.
- Shahan, T. A. (2005). Discussant for symposium entitled: Recent Developments in Conditioned Reinforcement and Drugs. B. Raiff (Chair). Symposium conducted at the 31st annual meeting of the Association for Behavior Analysis, May 2005, Chicago, IL.
- Shahan, T. A. (2004). Observing, Attending, and Reinforcement Variables. Invited address given at the annual meeting of the Mid-American Association for Behavior Analysis, October 2004, Indianapolis, IN.
- Nevin, J. A., Shahan, T. A., & Davison, M. (2004). A momentum-based model of attending and remembering. Invited address given at the annual meeting of the Society for the Quantitative Analyses of Behavior, May 2004, Boston, MA.
- Shahan, T. A., & Podlesnik, C. A. (2004). Observing, rate of conditioned reinforcement, and resistance to change. Invited address given at a Festschrift for John A. Nevin conducted at the University of New Hampshire. May 26, 2004.
- Shahan, T. A. (2004). The Persistence and Allocation of Attending. Invited Address given at the 22nd Annual Western Regional Conference on Behavior Analysis; California Association for Behavior Analysis. February 20, 2004, San Francisco, CA.
- Shahan, T.A. (2003). Discussant for symposium entitled: Analyses of Eye Movements, Observing Behavior and Stimulus Control. W. Dube (Chair). Symposium conducted at the 29th annual meeting of the Association for Behavior Analysis, San Francisco, CA.
- Chase, P.N., & Shahan, T.A. (2002). Novel Behavior and Operant Variability. In G. Hall (Chair), Abstract or Emergent Verbal Relations: Promoting Conceptual Integration. International Invited Event conducted at the 28th annual meeting of the Association for Behavior Analysis, **Toronto, Canada.**
- Shahan, T.A. (1998, December). Behavioral economics of cigarette smoking: Conditioned reinforcement effects? Department of Psychology, **Keio University, Tokyo, Japan.**

#### **OTHER PRESENTATIONS AT PROFESSIONAL MEETINGS (excludes posters)**

- Podlesnik, C. A., Thrailkill, E. A., Jimenez-Gomez, C., & Shahan, T. A. (2011). Relations Among Preference, Resistance to Change, and Response Rates With Changes in Temporal Context. Symposium conducted at the 37<sup>th</sup> annual meeting of the Association for Behavior Analysis International, Denver, CO.

- Quick, S., Pyszczynski, A., Colston, K. & Shahan, T.A. (2010). Resurgence of Cocaine Seeking by Removal of a Non-Drug Alternative Reinforcer. In A. Doughty (Chair), Extinction-Induced Resurgence: Some New Findings. Symposium conducted at the 36<sup>th</sup> annual meeting of the Association for Behavior Analysis International, San Antonio, TX.
- Pyszczynski, A. & Shahan, T.A. (2010). Discontinuation of Food Reinforcers in One Context Produces Recovery of Extinguished Alcohol-Maintained Responding in a Separate Context. In C. Cancado. Resurgence: Controlling Variables and Implications for the Analysis of Behavior. Symposium conducted at the 36<sup>th</sup> annual meeting of the Association for Behavior Analysis International, San Antonio, TX.
- Thraillkill, E.A., & Shahan, T.A. (2010). Resistance to Change and Relapse of Observing. In E. Thraillkill (Chair). Conditioned Reinforcement. Symposium conducted at the 36<sup>th</sup> annual meeting of the Association for Behavior Analysis International, San Antonio, TX.
- Shahan, T. A. (2010). Resurgence. In J. Luke (Chair), Professional Development Series: Translation of Behavioral Momentum and Resurgence Theories to Differential Reinforcement Programs. Symposium conducted at the 36<sup>th</sup> annual meeting of the Association for Behavior Analysis International, San Antonio, TX.
- Shahan, T. A., & Quick, S. (2009). Reinforcement Probability Affects Adjusting Sample Duration in a Divided-Attention Task. In M. Davison (Chair), Divided Attention, Divided Stimulus Control. . Symposium conducted at the 35<sup>th</sup> annual meeting of the Association for Behavior Analysis International, Phoenix, AZ.
- Jimenez-Gomez, C., & Shahan, T.A. (2008). Matching Law Analysis of Rats' Alcohol Self-Administration in a Free-Operant Choice Procedure. In C. Jimenez-Gomez (Chair), Choice Procedures in Behavioral Pharmacology. Symposium conducted at the 34<sup>th</sup> annual meeting of the Association for Behavior Analysis, Chicago, IL.
- Podlesnik, C. A., & Shahan, T.A. (2008). Resistance to Change and Response Recovery. In C. Podlesnik (Chair), Behavioral Momentum Theory: 25 Years. Symposium conducted at the 34<sup>th</sup> annual meeting of the Association for Behavior Analysis, Chicago, IL.
- Jimenez-Gomez, C., & Shahan, T.A. (2008). Examining the Relation between Preference and Resistance to Change in Multiple Concurrent Schedules. In C. Podlesnik (Chair), Topics on the Persistence of Behavior. Symposium conducted at the 34<sup>th</sup> annual meeting of the Association for Behavior Analysis, Chicago, IL.
- Odum, A.L., Ward, R.D., Jimenez-Gomez, C., Shahan, T.A., & Nevin, J.A. (2007). Persistence of Accuracy and Response Rate in Delayed Matching-to-Sample with Differential Outcomes. In J. Nevin (Chair), Conditional Discriminations: Conceptual Issues and New Findings. Symposium conducted at the 33<sup>rd</sup> annual meeting of the Association for Behavior Analysis, San Diego, CA.
- Quick, S., Jimenez-Gomez, C., & Shahan, T.A. (2007). Behavioral momentum of cocaine self-administration. In Tammy Wade-Galuska (Chair), Quantitative Analyses in Behavioral Pharmacology: Studies of Choice, Behavioral Momentum, and Self-Control, Symposium conducted at the 33<sup>rd</sup> annual meeting of the Association for Behavior Analysis, San Diego, CA.
- Shahan, T.A., & Podlesnik, C.A. (2006). Effects of Added Free-Food Presentations Uncorrelated with S+ on Observing Rates and Resistance to Change. In A. Odum (Chair), Discriminating and Attending, Symposium conducted at the 32<sup>nd</sup> annual meeting of the Association for Behavior Analysis, Atlanta, GA.
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## UNIVERSITY SERVICE

### Departmental Service

- Chair: Experimental and Applied Psychological Sciences Graduate Program (2008-present)
- Chair: Graduate Emphasis in Behavior Analysis, Department of Psychology, Utah State University (2003–present)
- Member: Department of Psychology Course Scheduling Committee (2005-present)
- Member: Department of Psychology Graduate Assistantship Committee (2007-present)
- Chair: Search Committee for Associate Professor of Behavioral Neuroscience (2011)
- Chair: Search Committee for Associate Professor of Behavior Analysis (2009)
- Chair: Search Committee for Assistant Professor of Behavior Analysis (2008)
- Chair: Search Committee for Assistant Professor of Cognitive Psychology (2006-2007)
- Member: Experimental and Applied Psychological Sciences Committee (2006–2008)

## Mentorship

### Doctoral Committees Chaired

- Stacey Quick, (2010)  
Current position: Postdoctoral Fellow, Yale University
- Christopher Podlesnik, Ph.D. (2008)  
Current position: Lecturer (Assisant Prof.). University of Auckland, New Zealand
- Corina Jimenez-Gomez, Ph.D. (2008)  
Current position: Postdoctoral Fellow, University of Michigan
- Adam Pyszczynski (in progress)
- Eric Thraillkill (in progress)

M.S. Thesis Committees Chaired

Christopher Podlesnik (2005)  
Corina Jimenez-Gomez (2005)  
Adam Pyszczynski (2010)  
Eric Thraillkill (2010)  
Margaret Sweeney (in progress)

M.S. Thesis Committee Member

Ryan Ward, Psychology  
Ericka Bailey, Psychology  
Rachael Waller, Special Education  
Robert Johnson, Psychology  
Wesley Thomas, Psychology  
Rochelle Smits, Psychology  
Meredith Berry, Psychology  
Daniel Hutchinson, Psychology

Doctoral Committee Member

Ana Bauman, Psychology  
Katie Endicott, Special Education  
Jennifer Fallon, Psychology  
Lynne Gilbert-Norton, Forest, Range, & Wildlife Sciences  
Mark Groskreutz  
Nicole Groskreutz  
Kara Reagon, Special Education  
Sarah Dawson, Forest, Range, & Wildlife Sciences  
Ryan Ward, Psychology

Undergraduate Research Supervision

More than 10 paid undergraduate research assistants  
More than 18 undergraduates earning credits in an independent topics research course.  
Supervised 1 undergraduate Honor's thesis  
Supervised 4 NIH summer undergraduate research fellowships

<b>REFERENCES</b>
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- 1) Kennon A. Lattal, Centennial Professor, Department of Psychology, West Virginia University Morgantown, WV 26506-6040. Phone (304) 291-2001 ext. 608
- 2) John A. Nevin, Professor Emeritus, Department of Psychology, University of New Hampshire, Durham NH, 03824. Phone (603) 862-2360; jnevin@cisunix.unh.edu
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