

CURRICULUM VITAE

Mark E. Bouton
Fall, 2011

Address: Department of Psychology
University of Vermont
Burlington, Vermont 05405
Telephone: (802) 656-4164 FAX: (802) 656-8783
E-mail: mark.bouton@uvm.edu

Education: University of Washington, Seattle, Washington
Ph.D., 1980, in Learning and Motivation (Psychology)
Minor: Physiological Psychology (Behavioral Neuroscience)
Dissertation Advisor: Robert C. Bolles

Williams College, Williamstown, Massachusetts
B.A. Magna cum laude with Honors in Psychology, 1975.
Thesis Advisors: Hugh Criswell and Roger M. Tarpay

Positions Held:

2011-present Robert B. Lawson Green and Gold Professor of Psychology,
University of Vermont

1980-2010 Assistant Professor, Associate Professor, Professor, University of Vermont

Other Appointments:

2011- Visiting Professor, Brain and Cognition Research Priority Program, University of Amsterdam

2005- Assistant Director, Neuroscience Graduate Program, University of Vermont

2004-2011 Director, General/Experimental Psychology Graduate Program, University of Vermont

2004 Visiting Fellow, Department of Experimental Psychology, Cardiff University, Cardiff, Wales (Cardiff Visiting Fellows Scheme)

1998-2003 Editor, *Journal of Experimental Psychology: Animal Behavior Processes* (Published by the American Psychological Association)

1997-1998 Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford, California

1989-1990 Visiting Fellow, Department of Experimental Psychology, University of Cambridge, Cambridge, England

Honors and Awards:

W. Horsley Gantt Medal, Pavlovian Society, 2010

Fellow, Society of Experimental Psychologists, 2007-
Fellow, Center for Advanced Study in the Behavioral Sciences (Stanford, California), 1997-98
University Scholar, University of Vermont, 1995-96
Fulbright Scholar, United Kingdom, 1989-90
James McKeen Cattell Sabbatical Award, 1989-90
Fellow, American Psychological Association, 1991-
Fellow, Association for Psychological Science (formerly American Psychological Society), 1992-
Phi Beta Kappa, 1975
Sigma Xi, 1975

Consulting Editor:

Journal of Experimental Psychology: Animal Behavior Processes, 1991-1996; 2009-
Behavioral Neuroscience, 1995-
Behavior Therapy and Experimental Psychiatry, 2006-
Journal of the Experimental Analysis of Behavior, 2010-
Animal Learning & Behavior, 1987-88, 1998-99

Reviewer:

Acta Psychologica; American Journal of Psychology; Animal Cognition; Animal Learning & Behavior; Appetite; Archives of General Psychiatry; Behavior Therapy; Behavioral Neuroscience; Behavioural and Cognitive Psychotherapy; Behavioural Brain Research; Behavioural Pharmacology; Behaviour Research and Therapy; Behavioural Processes; Biological Psychiatry; Brain and Mind: A Transdisciplinary Journal of Neuroscience and Neurophilosophy; Brain Research; Clinical Psychology: Science and Practice; Comparative Cognition & Behavior Reviews; Developmental Psychobiology; European Journal of Neuroscience; Experimental & Clinical Psychopharmacology; Hippocampus; Journal of Abnormal Psychology; Journal of Comparative Psychology; Journal of the Experimental Analysis of Behavior; Journal of Experimental Psychology: Animal Behavior Processes; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Learning, Memory, & Cognition; Journal of Neuroscience; Journal of Neuroscience Methods; Learning & Behavior; Learning & Memory; Learning and Motivation; Life Sciences; Memory & Cognition; Molecular Psychiatry; Neurobiology of Learning and Memory; Neuropsychopharmacology; Neuroscience; Perspectives on Psychological Science; Pharmacology, Biochemistry, and Behavior; Physiology & Behavior; PLoS [Public Library of Science] One; Psychobiology; Progress in Neuro-Psychopharmacology & Biological Psychiatry; Psychophysiology; Psychological Bulletin; Psychological Review; Psychological Science; Psychology of Addictive Behaviors; Psychonomic Bulletin & Review; Quarterly Journal of Experimental Psychology; Science; Stress; Trends in Neurosciences; Advances in Infancy Research; National Science Foundation; National Institute of Health; Natural Sciences and Engineering Research Council of Canada; Biotechnology and Biological Sciences Research Council (U.K.); Australian Research Council; North Atlantic Treaty Organization; Eastern Psychological Association; Oxford University Press; United States – Israel Binational Science Foundation.

National or International Service:

Panel Member and Biological Psychology Chair, International Benchmarking Review of United Kingdom Psychology, London, October 2010. Coordinated by the UK Economic and Social Research Council.
President, Division of Behavioral Neuroscience and Comparative Psychology (Division 6) of the American Psychological Association (2009-2010)
President, Pavlovian Society (2008-2009)

President, Eastern Psychological Association (2004-2005)
 Member, Biobehavioral Regulation, Learning and Ethology Study Section (National Institutes of Health), 2008-2012
 Board of Directors, Eastern Psychological Association, 1996-1999, 2001-2006
 Member at Large of the Executive Committee, Division 3 of the American Psychological Association (Experimental Psychology), 2007-2010.
 Member at Large of the Executive Committee, Division 6 of the American Psychological Association (Behavioral Neuroscience and Comparative Psychology), 2003-2006
 National Institutes of Health Biobehavioral Regulation, Learning, and Ethology Study Section, 2005- (ad hoc).
 Council of Editors, American Psychological Association, 1997-2003
 Chair 2001-2002
 Steering Committee, International Conference on Comparative Cognition, 1993-2000
 Meeting Committee, Comparative Cognition Society, 2000-
 Fellows Committee, Division 6 of the American Psychological Association (Behavioral Neuroscience and Comparative Psychology) 2001-2004 (Chair 2002-2003)
 Awards Committee, Div 6 of the American Psychological Association 1998-2000 (Chair, 1999), 2005- 2007. (Chair, 2006)
 Selection Committee, American Psychological Association Early Career Contribution to Psychology Award (Behavioral Neuroscience/Animal Learning and Behavior), 1996
 Ad Hoc Member, National Institute of Mental Health Psychobiology, Behavior, and Neuroscience Review Committee, 1995
 Special Review Committees, National Institute of Mental Health, 1984, 1996, 2002, 2004, 2005, 2006, 2007.

Significant University Service (since 2005):

Search Committee, Chair of Neurological Sciences Department (College of Medicine), 2011-
 Steering Committee, Neuroscience, Behavior, and Health Spire of Excellence, 2010-
 Chair, Neuroscience Working Group, Transdisciplinary Research Initiative, 2009-2010
 Graduate College Executive Committee, 2008-
 Chair, Fifth-year review of Chemistry Department Chair Committee, 2008-2009
 Steering Committee, Neuroscience Graduate Program, 2005-

Society Memberships:

American Psychological Association
 Division of Experimental Psychology (Div. 3) [Fellow]
 Division of Behavioral Neuroscience and Comparative Psychology (Div. 6) [Fellow]
 Division of General Psychology (Div. 1) [Fellow]
 Association for Psychological Science [Fellow]
 Comparative Cognition Society
 Eastern Psychological Association [Fellow]
 Pavlovian Society
 Psychonomic Society
 Society for Neuroscience
 Society of Experimental Psychologists [Fellow]

Courses Taught:

Undergraduate: Learning, Animal Behavior, Memory, Psychological Methodology and Research

Graduate: Biobehavioral Proseminar, Learning Theory, Animal Minds, Opponent-process Theory, Basic Research Relevant to Applied Topics, Learning and Behavior Therapy.

Research Interests:

Context, Memory, and Emotional Processes in Associative Learning
 Extinction
 Models of Associative Learning
 Neurobiology of Learning, Memory, and Extinction
 Applications of Learning Theory to Issues in Cognitive Behavior Therapy

Research Grants:

Intramural:

Bouton, M. E. The Extinction of Conditioned Fear, University of Vermont Institutional Grant, January through December, 1981. \$2,850.

Bouton, M. E., & King, D. A. Role of Pavlovian Conditioning in the Development of Tolerance to the Benzodiazepine Midazolam. University of Vermont Institutional Grant, January through December, 1984. \$2,704.

Extramural:

· Continuous National Science Foundation and National Institute of Mental Health funding, 1981 - 2012. (NSF: 1981 – 2001)

Bouton, M. E. The Context as a Determinant of Conditioned Fear, National Science Foundation Grant No. BNS 81-05401, June 1981 through June 1983. \$40,993.

Bouton, M. E. Contextual Fear and the US-Memory in Fear Conditioning, Alcohol, Drug Abuse, and Mental Health Administration Small Grants Program, 1981. \$39,000. (Declined by PI because of overlap with NSF grant.)

Bouton, M. E. The Contextual Control of Conditioned Fear, National Science Foundation Grant No. BNS 83-00803, June 1983 through August 1986. \$111,135.

Bouton, M. E. Contextual Control in Simple Associative Learning, National Science Foundation Grant No. BNS 86-07208, August 1986 through July 1989. \$145,140.

Bouton, M. E. Context and Memory Retrieval in Associative Learning, National Science Foundation Grant No. BNS 89-08535, August 1989 through August 1992. \$166,853.

Bouton, M. E. Context and Memory in Associative Learning, National Science Foundation Grant No. IBN 92-09454, September 1992 through August 1998. \$350,000.

Bouton, M. E. Context Dependence in Learning and Memory Processes, National Science Foundation Grant No. IBN 9727992, September 1998 through August 2001. \$210,000.

Bouton, M. E. Temporal and Associative Aspects of Pavlovian Learning, National Institute of Mental Health Grant No. RO1 MH64847, December 2001 – November 2006. \$1,045,420.

Bouton, M. E. Extinction and Recovery in Associative Learning, National Institute of Mental Health Grant No. 2 R01 MH064847, July 2007- June 2012. \$1,310,994.

Epstein, L. Translating habituation research to interventions for pediatric obesity, National Institute of Diabetes and Digestive and Kidney Diseases Grant DK088380. December 2009 – December 2014. (M. Bouton, Site Principal Investigator). Site: \$108,193.

Bouton, M. E. Extinction and Recovery in Associative Learning. National Institute on Drug Abuse (pending). May 2012 – April 2017. Impact/Priority Score = 13; Percentile = 2.0. \$1,899,950.

Publications:

Bolles, R. C., Collier, A. C., Bouton, M. E., & Marlin, N. A. (1978). Some tricks for ameliorating the trace-conditioning deficit. *Bulletin of the Psychonomic Society*, *11*, 403-406.

Bouton, M. E., & Bolles, R. C. (1979). Role of conditioned contextual stimuli in reinstatement of extinguished fear. *Journal of Experimental Psychology: Animal Behavior Processes*, *5*, 368-378.

Bouton, M. E., & Bolles, R. C. (1979). Contextual control of the extinction of conditioned fear. *Learning and Motivation*, *10*, 445-466.

Sigmundi, R. A., Bouton, M. E., & Bolles, R. C. (1980). Conditioned freezing in the rat as a function of shock intensity and CS modality. *Bulletin of the Psychonomic Society*, *15*, 254-256.

Bouton, M. E., & Bolles, R. C. (1980). Conditioned fear assessed by freezing and by the suppression of three different baselines. *Animal Learning & Behavior*, *8*, 429-434.

Bouton, M. E. (1982). Lack of reinstatement of an extinguished taste aversion. *Animal Learning & Behavior*, *10*, 233-241.

Bouton, M. E., & Whiting, M. R. (1982). Simultaneous odor-taste and taste-taste compounds in poison-avoidance learning. *Learning and Motivation*, *13*, 472-494.

Bernstein, I. L., Goehler, L. E., & Bouton, M. E. (1983). Relative potency of foods and drinks as targets in aversion conditioning. *Behavioral and Neural Biology*, *37*, 134-148.

Bouton, M. E., & King, D. A. (1983). Contextual control of the extinction of conditioned fear: Tests for the associative value of the context. *Journal of Experimental Psychology: Animal Behavior Processes*, *9*, 248-265.

Bouton, M. E. (1984). Differential control by context in the inflation and reinstatement paradigms. *Journal of Experimental Psychology: Animal Behavior Processes*, *10*, 56-74.

Bouton, M. E., & Bolles, R. C. (1985). Contexts, event-memories, and extinction. In P. D. Balsam & A. Tomie (Eds.), *Context and learning* (pp. 133-166). Hillsdale, NJ: Lawrence Erlbaum.

- Bouton, M. E., & King, D. A. (1986). Effect of context on performance to conditioned stimuli with mixed histories of reinforcement and nonreinforcement. *Journal of Experimental Psychology: Animal Behavior Processes*, *12*, 4-15.
- Bouton, M. E. (1986). Slow reacquisition following the extinction of conditioned suppression. *Learning and Motivation*, *17*, 1-15.
- Bouton, M. E., Jones, D. L., McPhillips, S. A., & Swartzentruber, D. (1986). Potentiation and overshadowing in odor-aversion learning: Role of method of odor presentation, the distal-proximal cue distinction, and the conditionability of odor. *Learning and Motivation*, *17*, 115-138.
- Bouton, M. E., & Swartzentruber, D. (1986). Analysis of the associative and occasion-setting properties of contexts participating in a Pavlovian discrimination. *Journal of Experimental Psychology: Animal Behavior Processes*, *12*, 333-350.
- Swartzentruber, D., & Bouton, M. E. (1986). Contextual control of negative transfer produced by prior CS-US pairings. *Learning and Motivation*, *17*, 366-385.
- King, D. A., Bouton, M. E., & Musty, R. E. (1987). Associative control of tolerance to the sedative effects of a short-acting benzodiazepine. *Behavioral Neuroscience*, *101*, 104-114.
- Bouton, M. E., Dunlap, C. M., & Swartzentruber, D. (1987). Potentiation of taste by another taste during compound aversion learning. *Animal Learning & Behavior*, *15*, 433-438.
- Bouton, M. E. (1988). Context and ambiguity in the extinction of emotional learning: Implications for exposure therapy. *Behaviour Research and Therapy*, *26*, 137-149.
- Swartzentruber, D., & Bouton, M. E. (1988). Transfer of positive contextual control across different conditioned stimuli. *Bulletin of the Psychonomic Society*, *26*, 569-572.
- Bouton, M. E., & Swartzentruber, D. (1989). Slow reacquisition following extinction: Context, encoding, and retrieval mechanisms. *Journal of Experimental Psychology: Animal Behavior Processes*, *15*, 43-53.
- Bouton, M. E., & Peck, C. A. (1989). Context effects on conditioning, extinction, and reinstatement in an appetitive conditioning preparation. *Animal Learning & Behavior*, *17*, 188-198.
- Sobrero, A. P., & Bouton, M. E. (1989). Effects of stimuli present during oral morphine administration on withdrawal and subsequent consumption. *Psychobiology*, *17*, 179-190.
- Peck, C. A., & Bouton, M. E. (1990). Context and performance in aversive-to-appetitive and appetitive-to-aversive transfer. *Learning and Motivation*, *21*, 1-31.
- Bouton, M. E., Kenney, F. A., & Rosengard, C. (1990). State-dependent fear extinction with two benzodiazepine tranquilizers. *Behavioral Neuroscience*, *104*, 44-55.
- Bouton, M. E. (1990). A mix of perspectives on a mix of problems. [Review of *Aversion, avoidance, and anxiety: Perspectives on aversively motivated behavior*]. *Contemporary Psychology*, *35*, 715.

- Bouton, M. E. (1991). Context and retrieval in extinction and in other examples of interference in simple associative learning. In L. Dachowski & C. F. Flaherty (Eds.), *Current topics in animal learning: Brain, emotion, and cognition* (pp. 25-53). Hillsdale, NJ: Lawrence Erlbaum.
- Bouton, M. E. (1991). A contextual analysis of fear extinction. In P. R. Martin (Ed.), *Handbook of behavior therapy and psychological science: An integrative approach* (pp. 435-453). Elmsford, NY: Pergamon Press, Inc.
- Bouton, M. E., & Swartzentruber, D. (1991). Sources of relapse after extinction in Pavlovian and instrumental learning. *Clinical Psychology Review, 11*, 123-140.
- Baker, A. G., Steinwald, H., & Bouton, M. E. (1991). Contextual conditioning and reinstatement of extinguished instrumental responding. *The Quarterly Journal of Experimental Psychology, 43B*, 199-218.
- Swartzentruber, D., & Bouton, M. E. (1992). Context sensitivity of conditioned suppression following preexposure to the conditioned stimulus. *Animal Learning & Behavior, 20*, 97-103.
- Bouton, M. E., & Peck, C. A. (1992). Spontaneous recovery in cross-motivational transfer (counter-conditioning). *Animal Learning & Behavior, 20*, 313-321.
- Brooks, D. C., & Bouton, M. E. (1993). A retrieval cue for extinction attenuates spontaneous recovery. *Journal of Experimental Psychology: Animal Behavior Processes, 19*, 77-89.
- Bouton, M. E., Rosengard, C., Achenbach, G. G., Peck, C. A., & Brooks, D. C. (1993). Effects of contextual conditioning and unconditional stimulus presentation on performance in appetitive conditioning. *The Quarterly Journal of Experimental Psychology, 46B*, 63-95.
- Bouton, M. E., & Brooks, D. C. (1993). Time and context effects on performance in a Pavlovian discrimination reversal. *Journal of Experimental Psychology: Animal Behavior Processes, 19*, 165-179.
- Bouton, M. E. (1993). Context, time, and memory retrieval in the interference paradigms of Pavlovian learning. *Psychological Bulletin, 114*, 80-99.
- Bouton, M. E., & Nelson, J. B. (1994). Context-specificity of target versus feature inhibition in a feature-negative discrimination. *Journal of Experimental Psychology: Animal Behavior Processes, 20*, 51-65.
- Bouton, M. E. (1994). Context, ambiguity, and classical conditioning. *Current Directions in Psychological Science, 3*, 49-53.
- Bouton, M. E. (1994). Conditioning, remembering, and forgetting. *Journal of Experimental Psychology: Animal Behavior Processes, 20*, 219-231.
- Bouton, M. E., & Ricker, S. T. (1994). Renewal of extinguished responding in a second context. *Animal Learning & Behavior, 22*, 317-324.

- Brooks, D. C., & Bouton, M. E. (1994). A retrieval cue for extinction attenuates response recovery (renewal) caused by a return to the conditioning context. *Journal of Experimental Psychology: Animal Behavior Processes*, *20*, 366-379.
- Wilson, A., Brooks, D. C., & Bouton, M. E. (1995). The role of the rat hippocampal system in several effects of context in extinction. *Behavioral Neuroscience*, *109*, 828-836.
- Brooks, D. C., Hale, B., Nelson, J. B., & Bouton, M. E. (1995). Reinstatement after counterconditioning. *Animal Learning & Behavior*, *23*, 383-390.
- O'Boyle, E. A., & Bouton, M. E. (1996). Conditioned inhibition in a multiple-category learning task. *The Quarterly Journal of Experimental Psychology*, *49B*, 1-23.
- Bouton, M. E., & Fanselow, M. S. (1996). Robert C. Bolles [Obituary]. *American Psychologist*, *51*, 733.
- Rosas, J. M., & Bouton, M. E. (1996). Spontaneous recovery after extinction of a conditioned taste aversion. *Animal Learning & Behavior*, *24*, 341-348.
- Ricker, S. T., & Bouton, M. E. (1996). Reacquisition following extinction in appetitive conditioning. *Animal Learning & Behavior*, *24*, 423-436.
- Nelson, J. B., & Bouton, M. E. (1997). The effects of a context switch following serial and simultaneous feature-negative discriminations. *Learning and Motivation*, *28*, 56-84.
- Rosas, J. M., & Bouton, M. E. (1997). Renewal of a conditioned taste aversion upon return to the conditioning context after extinction in another one. *Learning and Motivation*, *28*, 216-229.
- Rosas, J. M., & Bouton, M. E. (1997). Additivity of the effects of retention interval and context change on latent inhibition: Toward resolution of the context forgetting paradox. *Journal of Experimental Psychology: Animal Behavior Processes*, *23*, 283-294.
- Bouton, M. E., & Fanselow, M. S. (Eds.) (1997). *Learning, motivation, and cognition: The functional behaviorism of Robert C. Bolles*. Washington, DC: American Psychological Association.
- Bouton, M. E. (1997). Signals for whether versus when an event will occur. In M. E. Bouton & M. S. Fanselow (Eds.), *Learning, motivation, and cognition: The functional behaviorism of Robert C. Bolles* (pp. 385-409). Washington, DC: American Psychological Association.
- Fanselow, M. S., & Bouton, M. E. (1997). The life and influence of Robert C. Bolles. In M. E. Bouton & M. S. Fanselow (Eds.), *Learning, motivation, and cognition: The functional behaviorism of Robert C. Bolles* (pp. 1-9). Washington, DC: American Psychological Association.
- Bouton, M. E., & Nelson, J. B. (1998). The role of context in classical conditioning: Some implications for cognitive behavior therapy. In W. O'Donohue (Ed.), *Learning and behavior therapy* (pp. 59-84). Needham Heights, MA: Allyn & Bacon.
- Bouton, M. E., & Nelson, J. B. (1998). Mechanisms of feature-positive and feature-negative discrimination

- learning in an appetitive conditioning paradigm. In N. Schmajuk & P. C. Holland (Eds.), *Occasion setting: Associative learning and cognition in animals* (pp. 69-112). Washington, DC: American Psychological Association.
- Rosas, J. M., & Bouton, M. E. (1998). Context change and retention interval can have additive, rather than interactive, effects after taste aversion extinction. *Psychonomic Bulletin & Review*, *5*, 79-83.
- Bouton, M. E., Nelson, J. B., & Rosas, J. M. (1999). Stimulus generalization, context change, and forgetting. *Psychological Bulletin*, *125*, 171-186.
- Bouton, M. E., Nelson, J. B., & Rosas, J. M. (1999). Resolution now! Reply to Riccio, Richardson, and Ebner (1999). *Psychological Bulletin*, *125*, 190-192.
- Holland, P. C., & Bouton, M. E. (1999). Hippocampus and context in classical conditioning. *Current Opinion in Neurobiology*, *9*, 195-202.
- Bouton, M. E. (2000). A learning theory perspective on lapse, relapse, and the maintenance of behavior change. *Health Psychology*, *19*(Suppl.), 57-63.
- Frohardt, R. J., Guarraci, F. A., & Bouton, M. E. (2000). The effects of neurotoxic hippocampal lesions on two effects of context after fear extinction. *Behavioral Neuroscience*, *114*, 227-240.
- Bouton, M. E., Mineka, S., & Barlow, D. H. (2001). A modern learning theory perspective on the etiology of panic disorder. *Psychological Review*, *108*, 4-32.
- Pearce, J. M., & Bouton, M. E. (2001). Theories of associative learning in animals. *Annual Review of Psychology*, *52*, 111-139.
- Bouton, M. E., & Sunsay, C. (2001). Contextual control of appetitive conditioning: Influence of a contextual stimulus generated by a partial reinforcement procedure. *The Quarterly Journal of Experimental Psychology*, *54B*, 109-125.
- Bouton, M. E. (2001). Classical conditioning and clinical psychology. In N. J. Smelser & P. B. Baltes (Eds.), *International Encyclopedia of the Social and Behavioral Sciences* (Vol. 3, pp. 1942-1945). Oxford: Elsevier Science.
- Nelson, J. B., & Bouton, M. E. (2002). Extinction, inhibition, and emotional intelligence. In L. Feldman Barrett & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence* (pp. 60-85). New York: Guilford Publications.
- Bouton, M. E. (2002). The other learning process in substance abuse: Comment on Alessi, Roll, Reilly, and Johanson (2002). *Experimental and Clinical Psychopharmacology*, *10*, 84-86.
- Bouton, M. E. (2002). Context, ambiguity, and unlearning: Sources of relapse after behavioral extinction. *Biological Psychiatry*, *52*, 976-986.
- Bouton, M. E., & Sunsay, C. (2003). Importance of trials versus accumulating time across trials in partially-

- reinforced appetitive conditioning. *Journal of Experimental Psychology: Animal Behavior Processes*, *29*, 62-77.
- Lovibond, P. F., Been, S.-L., Mitchell, C. J., Bouton, M. E., & Frohardt, R. (2003). Forward and backward blocking of causal judgment is enhanced by additivity of effect magnitude. *Memory and Cognition*, *31*, 133-142.
- Bouton, M. E. (2004). A general role for early onset cues and intra-event learning: Comment on McDonald and Siegel (2004). *Experimental and Clinical Psychopharmacology*, *12*, 18-19.
- Sunsay, C., Stetson, L., & Bouton, M. E. (2004). Memory priming and trial spacing effects in Pavlovian learning. *Learning & Behavior*, *32*, 220-229.
- Bouton, M. E., Woods, A. M., & Pineño, O. (2004). Occasional reinforced trials during extinction can slow the rate of rapid reacquisition. *Learning and Motivation*, *35*, 371-390.
- Bouton, M. E. (2004). Context and behavioral processes in extinction. *Learning & Memory*, *11*, 485-494.
- Bouton, M. E., & Moody, E. W. (2004). Memory processes in classical conditioning. *Neuroscience and Biobehavioral Reviews*, *28*, 663-674.
- Bouton, M. E. (2005). Behavior systems and the contextual control of anxiety, fear, and panic. In L. Feldman Barrett, P. Niedenthal, & P. Winkielman (Eds.), *Emotion: Conscious and unconscious* (pp. 205-227). New York: The Guilford Press.
- Bouton, M. E., & García-Gutiérrez, A. (2006). Intertrial interval as a contextual stimulus. *Behavioural Processes*, *71*, 307-317.
- Moody, E. W., Sunsay, C., & Bouton, M. E. (2006). Priming and trial spacing in extinction: Effects on extinction performance, spontaneous recovery, and reinstatement in appetitive conditioning. *The Quarterly Journal of Experimental Psychology*, *59*, 809-829.
- Waddell, J., Morris, R. W., & Bouton, M. E. (2006). Effect of bed nucleus of the stria terminalis lesions on conditioned anxiety: Aversive conditioning with long-duration conditional stimuli and reinstatement of extinguished fear. *Behavioral Neuroscience*, *120*, 324-336.
- Bouton, M. E., García-Gutiérrez, A., Zilski, J., & Moody, E. W. (2006). Extinction in multiple contexts does not necessarily make extinction less vulnerable to relapse. *Behaviour Research and Therapy*, *44*, 983-994.
- Bouton, M. E., Woods, A. M., Moody, E. W., Sunsay, C., & García-Gutiérrez, A. (2006). Counteracting the context-dependence of extinction: Relapse and tests of some relapse prevention methods. In M. G. Craske, D. Hermans, & D. Vansteenwegen (Eds.), *Fear and learning: Basic science to clinical application* (pp. 175-196). Washington, DC: American Psychological Association.
- Bouton, M. E., Westbrook, R. F., Corcoran, K. A., & Maren, S. (2006). Contextual and temporal modulation of extinction: Behavioral and brain mechanisms. *Biological Psychiatry*, *60*, 352-360.

- Morris, R. W., & Bouton, M. E. (2006). Effect of unconditioned stimulus magnitude on the emergence of conditioned responding. *Journal of Experimental Psychology: Animal Behavior Processes*, *32*, 371-385.
- Woods, A. M., & Bouton, M. E. (2006). D-cycloserine facilitates extinction but does not eliminate renewal of the conditioned emotional response. *Behavioral Neuroscience*, *120*, 1159-1162.
- Bouton, M. E. (2007). *Learning and behavior: A contemporary synthesis*. Sunderland, MA: Sinauer Associates, Inc.
- Bouton, M. E., & Waddell, J. (2007). Some biobehavioral insights into persistent effects of emotional trauma. In L. J. Kirmayer, R. Lemelson, & M. Barad (Eds.), *Understanding trauma: Integrating biological, clinical, and cultural perspectives* (pp. 41-59). Cambridge: Cambridge University Press.
- Woods, A. M., & Bouton, M. E. (2007). Occasional reinforced responses during extinction can slow the rate of reacquisition of an operant response. *Learning and Motivation*, *38*, 56-74.
- Bouton, M. E. (2007). Context: The concept in the human and animal memory domains. In H. L. Roediger, Y. Dudai, & S. M. Fitzpatrick (Eds.), *Science of Memory: Concepts* (pp. 115-119). Oxford: Oxford University Press.
- Morris, R. W., & Bouton, M. E. (2007). The effect of yohimbine on the extinction of conditioned fear: A role for context. *Behavioral Neuroscience*, *121*, 501-514.
- Acheson, D. T., Forsyth, J. P., Prenoveau, J. M., & Bouton, M. E. (2007). Interoceptive fear conditioning as a learning model of panic disorder: An experimental evaluation using 20% CO₂-enriched air in a non-clinical sample. *Behaviour Research & Therapy*, *45*, 2280-2294.
- Bouton, M. E., Frohardt, R. J., Sunsay, C., Waddell, J., & Morris, R. W. (2008). Contextual control of inhibition with reinforcement: Adaptation and timing mechanisms. *Journal of Experimental Psychology: Animal Behavior Processes*, *34*, 223-236.
- Bouton, M. E., & Woods, A. M. (2008). Extinction: Behavioral mechanisms and their implications. In J. H. Byrne, D. Sweatt, R. Menzel, H. Eichenbaum, & H. Roediger (Eds.), *Learning and memory: A comprehensive reference (Vol. 1, Learning Theory and Behaviour)*, pp. 151-171). Oxford: Elsevier.
- [Reprinted in J. H. Byrne (Ed.), *Concise learning and memory: The Editor's selection*, pp. 627-648. Oxford: Elsevier, 2008.]
- Sunsay, C., & Bouton, M. E. (2008). Analysis of a trial spacing effect with relatively long intertrial intervals. *Learning & Behavior*, *36*, 104-115.
- Bouton, M. E., Vurbic, D., & Woods, A. M. (2008). D-cycloserine facilitates context-specific fear extinction learning. *Neurobiology of Learning and Memory*, *90*, 504-510.
- Waddell, J., Bouton, M. E., & Falls, W. A. (2008). Central CRF receptor antagonist α -helical CRF9-41 blocks reinstatement of extinguished fear: The role of the bed nucleus of the stria terminalis. *Behavioral Neuroscience*, *122*, 1061-1069.

- Woods, A. M., & Bouton, M. E. (2008). Immediate extinction causes a less durable loss of performance than delayed extinction following either fear or appetitive conditioning. *Learning & Memory, 15*, 909-920.
- Newcombe, N. S., & Bouton, M. E. (2009). Masked reviews are not fairer reviews. *Perspectives on Psychological Science, 4*, 62-64.
- Bouton, M. E. (2009). Behaviourism, thoughts, and actions. *British Journal of Psychology, 100*, 181-183.
- Epstein, L. H., Temple, J. L., Roemmich, J. N., & Bouton, M. E. (2009). Habituation as a determinant of human food intake. *Psychological Review, 116*, 384-407.
- Bouton, M. E. (2009). Learning theory. In B. J. Sadock, V. A. Sadock, & P. Ruiz (Eds.), *Kaplan & Sadock's Comprehensive textbook of psychiatry* (9th ed., Vol. 1, pp. 647-658). New York: Lippincott Williams & Wilkins.
- Bouton, M. E. (2010). The multiple forms of "context" in associative learning theory. In B. Mesquita, L. Feldman Barrett, & E. Smith (Eds.), *The mind in context* (pp. 233-258). New York: The Guilford Press.
- Archbold, G. E. B., Bouton, M. E., & Nader, K. (2010). Evidence for the persistence of contextual fear memories following immediate extinction. *European Journal of Neuroscience, 31*, 1303-1311.
- Todd, T. P., Winterbauer, N. E., & Bouton, M. E. (2010). Interstimulus interval as a discriminative cue: Evidence of the generality of a novel asymmetry in temporal discrimination learning. *Behavioural Processes, 84*, 412-420.
- Westbrook, R. F., & Bouton, M. E. (2010). Latent inhibition and extinction: Their signature phenomena and the role of prediction error. In R. E. Lubow & I. Weiner (Eds.), *Latent inhibition: Cognition, neuroscience, and applications to schizophrenia* (pp. 23-39). Cambridge: Cambridge University Press.
- Winterbauer, N. E., & Bouton, M. E. (2010). Mechanisms of resurgence of an extinguished instrumental behavior. *Journal of Experimental Psychology: Animal Behavior Processes, 36*, 343-353.
- Bouton, M. E., & Hendrix, M. C. (2011). Intertrial interval as a contextual stimulus: Further analysis of a novel asymmetry in temporal discrimination learning. *Journal of Experimental Psychology: Animal Behavior Processes, 37*, 79-93.
- Bouton, M. E., Todd, T. P., Vurbic, D., & Winterbauer, N. E. (2011). Renewal after the extinction of free operant behavior. *Learning & Behavior, 39*, 57-67.
- Bouton, M. E. (2011). Learning and the persistence of appetite: Extinction and the motivation to eat and overeat. *Physiology & Behavior, 103*, 51-58.
- Winterbauer, N. E., & Bouton, M. E. (2011). Mechanisms of resurgence II: Response-contingent reinforcers can reinstate a second extinguished behavior. *Learning and Motivation, 42*, 154-164.

- Epstein, L. H., Carr, K. A., Cavanaugh, M. D., Paluch, R. A., & Bouton, M. E. (2011). Long-term habituation to food in obese and nonobese women. *The American Journal of Clinical Nutrition*, *94*, 371-376.
- Vurbic, D., Gold, B., & Bouton, M. E. (2011). Effects of D-cycloserine on the extinction of appetitive operant learning. *Behavioral Neuroscience*, *125*, 551-559.
- Vurbic, D., & Bouton, M. E. (2011). Secondary extinction in Pavlovian fear conditioning. *Learning & Behavior*, *39*, 202-211.
- Todd, T. P., & Bouton, M. E. (2011). Trial spacing effect in associative learning. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning*. Springer, in press.
- Bouton, M. E., Winterbauer, N. E., & Vurbic, D. (2012). Context and extinction: Mechanisms of relapse in drug self-administration. In M. Haselgrove & L. Hogarth (Eds.), *Clinical applications of learning theory* (pp. 103-133). East Sussex, UK: Psychology Press, in press.
- Todd, T. P., Winterbauer, N. E., & Bouton, M. E. (2012). Effects of the amount of acquisition and contextual generalization on the renewal of instrumental behavior after extinction. *Learning & Behavior*, in press.
- Bouton, M. E., & Doyle-Burr, C. (in revision). Asymmetrical generalization of conditioning and extinction from compound to element and element to compound. Submitted for publication.
- Todd, T. P., Winterbauer, N. E., & Bouton, M. E. Contextual control of appetite: Renewal of inhibited food-seeking behavior in sated rats after extinction. Submitted for publication.
- Bouton, M. E., Winterbauer, N. E., & Todd, T. P. Relapse processes after the extinction of instrumental learning: Renewal, resurgence, and reacquisition. Invited paper under review, *Behavioural Processes*.
- Papers in preparation:
- Winterbauer, N. E., & Bouton, M. E. (in preparation). Effects of thinning the rate at which the alternative behavior is reinforced on resurgence of an extinguished instrumental response.
- Winterbauer, N. E., Lucke, S., & Bouton, M. E. (in preparation). Factors that modulate resurgence after instrumental extinction.
- Doctoral Dissertation:
Role of conditioned contextual stimuli in two effects of retaining the unconditioned stimulus during extinction.
- Papers and Invited Presentations:
- Bouton, M. E., & Bolles, R. C. *Contextual determinants of conditioned suppression*. Psychonomic Society,

- Washington, DC, 1977.
- Bolles, R. C., & Bouton, M. E. *Freezing as an index of fear conditioning*. Psychonomic Society, San Antonio, 1978.
- Bouton, M. E., & Bolles, R. C. *Reinstatement of conditioned fear following extinction depends upon conditioning of contextual stimuli*. Eastern Psychological Association, Philadelphia, 1979.
- Bouton, M. E. *Role of contextual stimuli in the effect of US inflation following fear conditioning*. Eastern Psychological Association, Hartford, 1980.
- Bouton, M. E. *US memories and contexts in fear conditioning*. Conference on Animal Learning, McGill University, 1981.
- Bouton, M. E. *Extinction of fear in a dangerous context*. Eastern Psychological Association, New York City, 1981.
- Bouton, M. E., & Whiting, M. R. *A comparison of odor-taste and taste-taste compounds in toxiphobia conditioning*. Eastern Psychological Association, Baltimore, 1982.
- Bouton, M. E. *Conditioned fear and the associative value of the context*. Psychonomic Society, Minneapolis, 1982.
- Bouton, M. E. *Differential influence of context following fear conditioning and extinction*. Conference on Animal Learning, McGill University, 1983.
- Bouton, M. E. *Contexts, event-memories, and extinction*. Psychology Department Colloquium Series, Dartmouth College, 1983.
- Bouton, M. E. *Opponent-process theory, drug tolerance, and drug addiction*. Vermont State Substance Abuse Conference, Fairlee, VT, 1984.
- Bouton, M. E., & King, D. A. *Conditioning history of the CS affects CS-context interactions*. Psychonomic Society, San Antonio, 1984.
- Bouton, M. E., Jones, D. A., & McPhillips, S. *Potentiation and overshadowing of odor-aversion learning by taste: Role of method of odor administration*. Eastern Psychological Association, Boston, 1985.
- King, D. A., Bouton, M. E., & Musty, R. E. *Benzodiazepine tolerance acquisition: Evidence for a compensatory response*. Eastern Psychological Association, Boston, 1985.
- Bouton, M. E. *The contextual control of Pavlovian behavior*. Psychology Department Colloquium Series, Dalhousie University, Halifax, Nova Scotia, 1985.
- Bouton, M. E., & Swartzentruber, D. *Properties of contexts participating in a simple Pavlovian discrimination*. Psychonomic Society, Boston, 1985.
- Bouton, M. E. *Contexts, occasion setting, and the role of the discriminative stimulus concept in modern*

- behavior theory*. Winter Conference on Animal Learning, Winter Park, Colorado, 1986.
- Bouton, M. E. *Drug tolerance, drug dependence, and learning: New implications for substance abuse*. Vermont Psychological Association, Warren, VT, 1986.
- Bouton, M. E. *Function vs. fiction in learning theory: The non-peculiar roles of odor and taste in toxin avoidance learning*. Northeast Regional Meeting of the Animal Behavior Society, Burlington, VT, 1986.
- Bouton, M. E. *Context and the resolution of ambiguity in simple associative learning*. Psychology Department Colloquium Series:
 -University of Massachusetts, Amherst, 1986.
 -State University of New York at Binghamton, 1987.
 -McGill University, Montreal, 1987.
- Swartzentruber, D., & Bouton, M. E. *Contextual control of Hall-Pearce negative transfer*. Eastern Psychological Association, Arlington, VA, 1987.
- Bouton, M. E. *Context and interference in simple associative learning*. New England Psychological Association, Amherst, MA, 1987.
- Bouton, M. E., & Swartzentruber, D. *Mechanisms of slow reacquisition following the extinction of conditioned suppression*. Psychonomic Society, Seattle, 1987.
- Bouton, M. E. *Contextual control in simple associative learning: Context and retrieval processes in extinction*. Flowerree Symposium on Animal Learning and Conditioning, Tulane University, New Orleans, 1988.
- Sobrero, A. P., & Bouton, M. E. *Oral administration of morphine and the effects of environment-drug associations on consumption and withdrawal*. Eastern Psychological Association, Buffalo, 1988.
- Bouton, M. E. *Memory retrieval in animal learning*. Pennsylvania Lecture Series in Psychology, Susquehanna University / Bucknell University, Selinsgrove, PA, 1988.
- Swartzentruber, D., & Bouton, M. E. *Blocking between occasion setters and contextual stimuli*. Eastern Psychological Association, Boston, 1989.
- Bouton, M. E. *Context and memory retrieval in associative learning*. Psychobiology colloquium, Yale University, 1989.
- Bouton, M. E. *Context, memory retrieval, and interference in associative learning*. Psychology colloquium, University of York, England, 1989.
- Bouton, M. E. *Context and memory retrieval in associative learning*. Experimental Psychology colloquium, University of Cambridge, 1990.
- Bouton, M. E. *Toward a retrieval model of interference in Pavlovian learning*. Conference of The Experimental Analysis of Behaviour Group, York, England, 1990.

- Baker, A. G., Geczy, I., & Bouton, M. E. *Reinstatement of operant conditioning following the presence and the absence of the reinforcer*. Eastern Psychological Association, Philadelphia, 1990.
- Bouton, M. E. *A contextual analysis of fear extinction*. Psychology colloquium, Institute of Psychiatry, London, 1990.
- Bouton, M. E. *Context and retrieval processes in simple associative learning*. Experimental Psychology Society, Oxford, England, 1990.
- Bouton, M. E. *Availability and accessibility in associative learning: Another look at the learning-performance distinction*. Winter Conference on Animal Learning, Winter Park, Colorado, 1991.
- Bouton, M. E. *Context and memory retrieval in animal learning*. Psychobiology of animal cognition colloquium, Columbia University, 1991.
- Bouton, M. E. *Context, retrieval, and relapse after the extinction and counterconditioning of fear*. American Psychological Association, San Francisco, 1991.
- Bouton, M. E. *Context, retrieval, and relapse in extinction and other learning paradigms*. Psychology colloquium, Concordia University, Montreal, 1991.
- Bouton, M. E., Peck, C. A., & Brooks, D. C. *Contextual conditioning and performance in appetitive conditioning*. Psychonomic Society, San Francisco, 1991.
- Bouton, M. E., & Brooks, D. C. *Time and physical context effects in a Pavlovian discrimination reversal*. Eastern Psychological Association, Boston, 1992.
- Brooks, D. C., & Bouton, M. E. *Retrieval cues for extinction may attenuate spontaneous recovery*. Eastern Psychological Association, Boston, 1992.
- Bouton, M. E., & Nelson, J. B. *Context-specificity of target vs. feature inhibition in a feature-negative discrimination*. Psychonomic Society, St. Louis, 1992.
- Bouton, M. E. *Behavioral evidence that extinction is not unlearning*. Winter Conference on the Neurobiology of Learning and Memory, Park City, Utah, 1993.
- O'Boyle, E. A., Lamoureux, J., & Bouton, M. E. *Conditioned inhibition in a multiple-category learning task*. Eastern Psychological Association, Arlington, VA, 1993.
- Bouton, M. E., Nelson, J. B., & Ricker, S. T. *Context and memory retrieval: Some new relationships between extinction and conditioned inhibition*. Canadian Brain, Behavior, and Cognition Society, Toronto, 1993.
- Bouton, M. E. *Extinction is not forever: Sources of relapse after behavior change*. Science Weekend Symposium ("Does behavior change permanently?"), American Psychological Association, Toronto, 1993.

- Bouton, M. E. *Context, ambiguity, and classical conditioning*. Invited Address, American Psychological Association, Toronto, 1993.
- Brooks, D. C., & Bouton, M. E. *Retrieval of extinction attenuates spontaneous recovery and the renewal effect*. Psychonomic Society, Washington, D.C., 1993.
- Nelson, J. B., & Bouton, M. E. *Effect of context on inhibition arising from serial and simultaneous feature-negative discriminations*. Conference on Comparative Cognition, Melbourne, FL, 1994.
- Brooks, D. C., Hale, B., Nelson, J. B., & Bouton, M. E. *Reinstatement after counterconditioning*. Eastern Psychological Association, Providence, RI, 1994.
- Bouton, M. E. *Context, ambiguity, and classical conditioning*. Rutgers University Psychology Department Colloquium, 1994.
- Bouton, M. E. *Signals for whether versus when an event will occur*. Memorial Tribute to Robert C. Bolles, University of Washington, Seattle, 1994.
- Bouton, M. E. *Sources of relapse after behavior change: Remembering and forgetting in conditioning*. Hebb Lecture, McGill University, 1994.
- Bouton, M. E. *Signaling whether versus when an event will occur*. Robert C. Bolles Memorial, Psychonomic Society, St. Louis, 1994.
- Wilson, A., Brooks, D. C., & Bouton, M. E. *The role of the hippocampal system on two context effects after extinction*. Society for Neuroscience, Miami Beach, 1994.
- Bouton, M. E. *Context, ambiguity, and memory retrieval in simple associative learning*. Binghamton University Psychology Department Colloquium, 1995.
- Bouton, M. E. *The animal cognition in animal conditioning*. Conference on Comparative Cognition, Melbourne, FL, 1995.
- Brooks, D. C., & Bouton, M. E. *Mechanisms by which retrieval cues for extinction attenuate spontaneous recovery*. Eastern Psychological Association, Boston, 1995.
- Nelson, J. B., & Bouton, M. E. *The effects of context on inhibition following serial and simultaneous feature-negative discrimination training*. Eastern Psychological Association, Boston, 1995.
- Ricker, S. T., & Bouton, M. E. *Reacquisition following extinction in appetitive conditioning*. Eastern Psychological Association, Boston, 1995.
- Bouton, M. E., & Nelson, J. B. *Context, extinction, and inhibition*. First Annual Meeting of the Australian Learning Group, Townsville, Queensland, Australia, 1995.
- Bouton, M. E. *Memory and relapse effects in classical conditioning*. Science Weekend Symposium ("Basic conditioning processes and their place in contemporary psychology"), American Psychological Association, New York, 1995.

- Rosas, J. M., & Bouton, M. E. *Recuperacion espontanea de la conducta extinguida en aversion condicionada al sabor*. VII Congreso de la Sociedad Espanola de Psicologia comparada (SEPC), Bilbao, Spain, 1995.
- Bouton, M. E. *Context, memory retrieval, and behavior change*. Psychology Department Colloquium, Purdue University, 1995.
- Rosas, J. M., & Bouton, M. E. *Spontaneous recovery following extinction of a conditioned taste aversion*. Psychonomic Society, Los Angeles, 1995.
- Bouton, M. E. *Context, interference, and inhibition in simple associative learning*. Department of Experimental Psychology Colloquium, Duke University, 1995.
- Bouton, M. E. *Why the name Pavlov still rings a bell*. University Scholar Lecture, University of Vermont, 1996.
- Bouton, M. E., & Rosas, J. M. *Interactions between context switch and retention interval effects*. Conference on Comparative Cognition, Melbourne, FL, 1996.
- Bouton, M. E. *Context, memory retrieval, and behavioral inhibition*. Clarence H. Graham Memorial Lecture (Invited Address), Eastern Psychological Association, Philadelphia, 1996.
- Bouton, M. E. *Context and the modulation of learned performances*. Yale University Psychobiology / Learning Colloquium, 1996.
- Rosas, J. M., & Bouton, M. E. *Context switch and retention interval effects after conditioning and extinction of a taste aversion*. XXVI International Congress of Psychology, Montreal, 1996.
- Bouton, M. E. *Context, memory, and simple associative learning*. Neurobiology of Learning and Memory Colloquium, Universite Paris Sud, Paris, France, 1996.
- Bouton, M. E. *The several roles of context in learning and memory processes*. (2 lectures). University of Strasbourg, Strasbourg, France, 1996.
- Bouton, M. E. *Context and memory processes in associative learning*. European Neuroscience Association / European Brain and Behaviour Society, Strasbourg, France, 1996.
- Bouton, M. E. *Context, conditioning, and memory*. Psychology Department Colloquium, University of Toronto, February 1997.
- Bouton, M. E., & Nelson, J. B. *Are feature-negative and feature-positive discriminations psychological opposites?* Duke University Conference on Occasion-Setting, March 1997.
- Bouton, M. E., Nelson, J. B., & Rosas, J. M. *Paradox lost: Generalization gradients that flatten over time and their implications for a context-change account of forgetting*. International Conference on Comparative Cognition, Melbourne, FL, March 1997.

- Bouton, M. E. *The content of unlearning: Extinction, inhibition, and occasion setting*. Eastern Psychological Association, Washington, DC, April 1997.
- Nelson, J. B., & Bouton, M. E. *Context specificity and the sequential order of memories*. Eastern Psychological Association, Washington, DC, April 1997.
- Bouton, M. E. *Context, conditioning, and memory*. Psychology Department Colloquium ("Distinguished Psychologists Series"), University of California Los Angeles, February 1998.
- Bouton, M. E. *Theoretical and practical implications of a memory model of extinction*. Eastern Psychological Association, Boston, February 1998.
- Nelson, J. B., & Bouton, M. E. *A role for a context-dependent second association in feature-positive discriminations*. Eastern Psychological Association, Boston, February 1998.
- Bouton, M. E. *Why the name Pavlov still rings a bell: Learning, unlearning, and relapse*. Psychology Department Colloquium, California State University at Fresno, March 1998.
- Bouton, M. E. *Context, conditioning, and memory*. Psychology Department Colloquium, University of California, Berkeley, April 1998.
- Bouton, M. E. *Behavior maintenance after behavior change: Relapse in the learning laboratory*. Symposium on Maintenance of Behavior Change in Cardiovascular Risk Reduction, National Heart Lung and Blood Institute, Bethesda, July 1998.
- Bouton, M. E. *Context and inhibitory processes in behavior and memory*. Psychology Department Colloquium, Rutgers University, September 1998.
- Bouton, M. E. *Context and inhibitory processes in behavior and memory*. Psychology Department Colloquium, Brown University, October 1998.
- Bouton, M. E. *The complexities of contemporary research on conditioning as relevant to understanding panic disorder*. Society for Research in Psychopathology, Boston, November 1998.
- Bouton, M. E. *Practical and theoretical implications of a memory model of extinction*. Invited Address, Western Psychological Association, Irvine, CA April, 1999.
- Bouton, M. E. *Context and inhibitory mechanisms in animal memory*. President's Symposium, Western Psychological Association, Irvine, CA April, 1999.
- Bouton, M. E. *What makes learning context-specific?* American Psychological Association, Boston, August, 1999.
- Bouton, M. E. *Multiple roles of context in classical conditioning: An analysis of two effects of context after extinction*. Behavioral Pharmacology Society / European Behavioural Pharmacology Society, Boston, September, 1999.
- Bouton, M. E. *Context and memory processes in conditioning and associative learning*. Invited Address,

- XI Congress of the Spanish Society of Comparative Psychology, Baeza, Spain, September, 1999.
- Bouton, M. E., & Frohardt, R. J. *Behavioral and brain dissociations of two effects of context following extinction*. European Brain and Behaviour Society, Rome, October 1999.
- Frohardt, R. J., Guarraci, F. A., & Bouton, M. E. *The role of the hippocampus in reinstatement and renewal*. Society for Neuroscience, November 1999.
- Bouton, M. E., & Sunsay, C. *Surprise, frustration, and the contextual control of appetitive conditioning*. International Conference on Comparative Cognition, Melbourne, FL, March 2000.
- Bouton, M. E. *Context and memory processes in conditioning and associative learning*. Psychology Department Colloquium, Dartmouth College, May 2000.
- Frohardt, R. J., & Bouton, M. E. *Context freezing after lesions of the hippocampus or two of its efferent targets*. Society for Neuroscience, New Orleans, November 2000.
- Bouton, M. E., & Sunsay, C. *Trials versus accumulating time in trials in a partial reinforcement procedure*. International Conference on Comparative Cognition, Melbourne, FL March 2001.
- Bouton, M. E. *Are trials the basis of Pavlovian learning?* Guest Lecture, Gregynog conference on associative learning, Gregynog, Wales, April 2001.
- Bouton, M. E., & Sunsay, C. *Effects of trial time, cycle time, and US probability on acquisition under partial reinforcement conditions*. Eastern Psychological Association, Washington, DC, April 2001.
- Sunsay, C., Waddell, J., Gingras, A., Minton, A., & Bouton, M. E. *The relationship between inhibition of delay and nonmonotonic learning curves: Evidence from aversive and appetitive conditioning*. Eastern Psychological Association, Washington, DC, April 2001.
- Bouton, M. E. *Context and memory processes in conditioning and associative learning*. Psychology Department Colloquium, University of New South Wales, Sydney, Australia, July 2001.
- Bouton, M. E., & Sunsay, C. *Time versus trials as the basis of Pavlovian learning*. Meeting of the Australian Learning Group, Townsville, Queensland, Australia, July 2001.
- Bouton, M. E. *Associative learning, behavior systems, and panic disorder*. American Psychological Association, San Francisco, August 2001.
- Pineño, O., & Bouton, M. E. *Reacquisition when either extinction or partial reinforcement has followed an initial conditioning phase*. XIII Congress of the Spanish Society of Comparative Psychology, San Sebastian, Spain, September 2001.
- Falls, W. A., & Bouton, M. E. *Behavioral and physiological studies of extinction: Extinction is not unlearning*. Pavlovian Society, New Brunswick, NJ, October 2001.
- Bouton, M. E. *Why the name Pavlov still rings a bell: Modern implications of the world's most famous*

- learning process*. J. R. Kantor Memorial Lecture, Denison University, Ohio, February 2002.
- Bouton, M. E. *Context and memory processes in conditioning and associative learning*. Psychology Department Colloquium, Denison University, Ohio, February 2002.
- Sunsay, C., Stetson, L, Melamed, T, & Bouton, M. E. *Priming effects in appetitive conditioning*. Eastern Psychological Association, Boston, March 2002.
- Bouton, M. E. *Sources of relapse after extinction and counterconditioning: Context, ambiguity, and "unlearning."* Satellite Research Symposium, Anxiety Disorders Association of America, Austin, Texas, March 2002.
- Bouton, M. E. *Context, memory, and learning: Synergistic relationships between conditioning theory, memory theory, and brain*. Kalamazoo College Symposium on Interdisciplinary Approaches to Neuroscience: The Hippocampus, Kalamazoo, MI, April 2002.
- Bouton, M. E. *Trials, rate, and conditioning: Separating trial-based and time-accumulation models of Pavlovian learning*. Yale University Psychobiology / Learning Colloquium, September 2002.
- Bouton, M. E. *Extinction is not forever: What modern learning research can tell us about lapse and relapse after behavior change*. Invited Address, Association for the Advancement of Behavior Therapy, Reno, November 2002.
- Bouton, M. E. *Context, ambiguity, and unlearning: Sources of relapse after behavioral extinction*. Conference on Posttraumatic Stress Disorder: Biological, Clinical, and Cultural Approaches to Trauma's Effects, Los Angeles, December 2002.
- Bouton, M. E. *Extinction is not forever*. Colloquium at the National Center for PTSD / Boston VAMC / Department of Psychiatry, Boston University, January 2003.
- Bouton, M. E. *Context, ambiguity, and relapse after behavioral extinction*. Keynote Address, Winter Conference on Animal Learning and Behavior, Winter Park, CO, February 2003.
- Bouton, M. E. *Behavior systems and the associative control of anxiety, fear, and panic*. Special Interest Meeting on Learning and Fear, Le Lignely, Belgium (University of Leuven), May 2003.
- Bouton, M. E. *Behavioral lapse and relapse mechanisms after extinction and counterconditioning*. National Institute of Mental Health Workshop, "Mechanisms of Extinction Learning: Basic, Clinical, and Translational Research," Rockville, MD, June 2003.
- Bouton, M. E. *Importance of context, new learning, and memory retrieval in understanding extinction*. Symposium on extinction, American Psychological Association, Toronto, August 2003.
- Bouton, M. E. *Behavior systems and the contextual control of anxiety, fear, and panic*. Conference on Emotion: Conscious and Unconscious, Clermont-Ferrand, France, September 2003.

- Bouton, M. E., Sunsay, C., Woods, A., & Zilski, J. *Effects of partial reinforcement on classical conditioning and extinction: Trial-based and time-based accounts*. XV Congress of the Spanish Society of Comparative Psychology, Barcelona, Spain, September, 2003.
- Bouton, M. E. *Context and memory processes in conditioning, extinction, and associative learning*. Psychology Department Colloquium, University of Maryland, October 2003.
- Bouton, M. E. *Behavior systems and the contextual control of anxiety, fear and panic*. Clinical colloquium, Indiana University, November 2003.
- Bouton, M. E. *Context and memory processes in conditioning, extinction, and associative learning*. Psychology Department Colloquium, Indiana University, November 2003.
- Bouton, M. E. *Context and memory processes in conditioning, extinction, and associative learning*. Psychology Department Colloquium, Cardiff University (Wales), February 2004.
- Bouton, M. E., Sunsay, C., Moody, E. W., & Woods, A. M. *Effects of time and time expectancy in extinction*. Gregynog conference on associative learning, Gregynog, Wales, April 2004.
- Bouton, M. E., & Woods, A. M. *Separating time-based and trial-based accounts of the partial reinforcement extinction effect*. Eastern Psychological Association, Washington, DC, April 2004.
- Moody, E. W., & Bouton, M. E. *Effects of trial distribution on extinction and spontaneous recovery*. Eastern Psychological Association, Washington, DC, April 2004.
- Woods, A. M., & Bouton, M. E. *Reacquisition following extinction and following partial reinforcement in appetitive conditioning*. Eastern Psychological Association, Washington, DC, April 2004.
- Sunsay, C., & Bouton, M. E. *Theoretical explanations of the trial spacing effect in appetitive Pavlovian conditioning*. Eastern Psychological Association, Washington, DC, April 2004.
- Bouton, M. E. *Context and memory processes in extinction, relapse, and conditioning*. Psychology Department Colloquium, University of Minnesota, April 2004.
- Bouton, M. E. *Learning, extinction, and emotion in the context of time*. Master Lecture, American Psychological Association, Honolulu, HI, July 2004.
- Bouton, M. E. *Extinction generates new learning, not unlearning: Implications for relapse*. Workshop on Cognitive & Affective Neuroscience and Behavioral Treatment Development: New Directions for Translational Research, National Institute on Drug Abuse, September 2004.
- Waddell, J., & Bouton, M. E. *Effect of bed nucleus of the stria terminalis lesions on aversive conditioning with long-duration conditional stimuli*. Pavlovian Society, Baltimore, MD.
- Bouton, M. E. *Context and memory processes in extinction, relapse, and conditioning*. Symposium on Learning, Memory, and Brain Plasticity: Implications for Psychopathology, Freudenstadt, Germany, September 2004.

- Bouton, M. E. *Context and behavioral processes in conditioning, extinction, and relapse*. 10th Annual Duke Nicotine Research Conference, Duke University, October 2004.
- Bouton, M. E. *Context, memory, and relapse processes in extinction and associative learning*. Psychology Department Colloquium, Kent State University, November 2004.
- Bouton, M. E. *Multiple effects of time on conditioning and learning*. Psychology Department Colloquium, McGill University, January 2005.
- Bouton, M. E., & Woods, A. M. *What the effects of partial reinforcement procedures can tell us about extinction*. Conference on Extinction: The Neural Mechanisms of Behavior Change, Ponce, Puerto Rico, February 2005.
- Bouton, M. E. *Are lapse and relapse inevitable? Context and behavioral processes in extinction*. Presidential Address, Eastern Psychological Association, Boston, March 2005.
- Garcia-Gutierrez, A., Zilski, J., Moody, E. W., & Bouton, M. E. *Extinction in multiple contexts does not necessarily prevent the renewal effect*. Eastern Psychological Association, Boston, March 2005.
- Woods, A. M., & Bouton, M. E. *Occasional reinforced responses during extinction slow down rapid reacquisition in operant conditioning*. Eastern Psychological Association, Boston, March 2005.
- Bouton, M. E. *Learning and extinction: The place of basic behavioral science in a translational research agenda*. National Institutes of Health Behavioral and Social Science Research Lecture, Rockville, MD, May 2005.
- Bouton, M. E. *Context*. Science of Memory: Concepts (Conference organized by the James S McDonnell Foundation). IBM Palisades, Palisades, NY, September 2005.
- Bouton, M. E. *Time between trials as a contextual stimulus*. Associative Learning Today: Conference in Honour of Shepard Siegel, McMaster University, Ontario, November 2005.
- Morris, R., Waddell, J., & Bouton, M. E. *Effect of bed nucleus of the stria terminalis lesions on aversive conditioning with long duration conditional stimuli and reinstatement of extinguished fear*. Society for Neuroscience, Washington, DC, November 2005.
- Bouton, M. E. *Multiple effects of time on learning, conditioning, and extinction*. Psychology Department Colloquium, Johns Hopkins University, Baltimore, MD March 2006.
- Bouton, M. E., & Garcia-Gutierrez, A. *Intertrial interval as a contextual stimulus: An unexpected asymmetry in interval timing*. Eastern Psychological Association, Baltimore, March 2006.
- Morris, R., & Bouton, M. E. *Effect of US magnitude on the decision to respond in appetitive and aversive conditioning*. Eastern Psychological Association, Baltimore, March 2006.
- Woods, A. M., & Bouton, M. E. *The effects of d-cycloserine on fear extinction and renewal*. Eastern Psychological Association, Baltimore, March 2006.

- Bouton, M. E., Sunsay, C., Garcia-Gutierrez, A., & Hendrix, M. C. *Understanding intertrial interval effects*. International Conference on Comparative Cognition, Melbourne, FL, March 2006.
- Bouton, M. E. *Are lapse and relapse inevitable? Context and behavioral processes in extinction*. Psychology Department Colloquium, College of Charleston, Charleston, SC, April 2006.
- Bouton, M. E., Garcia-Gutierrez, A., & Hendrix, M. C. *Time between trials as a contextual stimulus*. Gregynog conference on associative learning, Gregynog, Wales, April 2006.
- Bouton, M. E. *Contrasting trial-based and time-accumulation accounts of Pavlovian learning*. Meeting of the Pavlovian Society, Philadelphia September 2006.
- Bouton, M. E. *Behavior systems, extinction, and the contextual control of anxiety, fear, and panic*. Symposium on Learning, Memory, and Brain Plasticity: Implications for psychopathology. Schwetzingen, Germany, October 2006.
- Bouton, M. E. *Context, fear learning, and fear extinction*. Symposium on Pain and Learning, Gatsby Computational Neuroscience Unit, University College London, London, November 2006.
- Woods, A. M., & Bouton, M. E. *Effects of immediate versus delayed fear extinction*. Eastern Psychological Association, Philadelphia, March 2007.
- Bouton, M. E., & Hendrix, M. *Intertrial interval as a contextual stimulus: Further analysis of a new asymmetry in temporal discrimination learning*. Eastern Psychological Association, Philadelphia, March 2007.
- Bouton, M. E. *Behavior systems and the contextual control of anxiety, fear, and panic*. Gregory A. Kimble Lecture, Duke University Department of Psychology and Neuroscience, April 2007.
- Bouton, M. E., & Woods, A. M. *Optimizing extinction learning*. Special Interest Meeting on Learning and Fear, Le Lignely, Belgium (University of Leuven), May 2007.
- Woods, A. M., & Bouton, M. E. *A comparison of immediate versus delayed extinction after aversive and appetitive conditioning*. Special Interest Meeting on Learning and Fear, Le Lignely, Belgium (University of Leuven), May 2007.
- Bouton, M. E. *Context and memory processes in extinction: Some implications for understanding relapse*. Psychology Department Colloquium, University of Pittsburgh, September 2007.
- Bouton, M. E. *Context, extinction, and relapse: Insights from animal associative learning*. Department of Psychology, Universität Würzburg, Germany, October 2007.
- Woods, A. M., & Bouton, M. E. *Immediate extinction is less durable than delayed extinction in a fear-conditioning and an appetitive-conditioning paradigm*. Society for Neuroscience, San Diego, November 2007.
- Archbold, G., Bouton, M. E., & Nader, K. *Evidence for the persistence of contextual fear memories that have undergone immediate extinction*. Society for Neuroscience, San Diego, November 2007.

- Bouton, M. E. *Context and memory processes in extinction: Some implications for understanding relapse*. Ernest Gallo Clinic and Research Center, University of California San Francisco, November 2007.
- Unrod, M., Drobles, D. J., Stasiewicz, P. R., Ditre, J. W., Armstrong, G., Bouton, M. E., Miller, R. R., Niaura, R. S., & Brandon, T. H. *Key decision-points in conducting cue-exposure therapy for smoking cessation*. Society for Research on Nicotine and Tobacco, Portland, OR, February 2008.
- Bouton, M. E. *Optimizing extinction learning*. Winter Conference on Neural Plasticity, St. Lucia, February 2008.
- Bouton, M. E. *Context and memory processes in extinction: Some implications for understanding relapse*. Psychology Department Colloquium, University of Guelph, Ontario, March 2008.
- Bouton, M. E., Vurbic, D., & Woods, A. M. *Clarifying the effects of D-cycloserine on fear extinction learning*. Eastern Psychological Association, Boston, March 2008.
- Bouton, M. E., Woods, A. M., & Vurbic, D. *Effects of D-cycloserine and immediate extinction on extinction learning*. Symposium on Associative Learning, Gregynog, Wales, March 2008.
- Bouton, M. E. *Context and memory processes in extinction: Some implications for understanding relapse*. Alcohol and Drug Abuse Research Program Colloquium, Washington State University, Pullman, WA, April 2008.
- Bouton, M. E. *Context and memory processes in extinction: Some implications for understanding relapse*. Roger Brown Loucks Lecture in the Neurophysiological Basis of Learning and Memory, University of Washington, Seattle, April 2008.
- Bouton, M. E. *Learning and conditioning in the context of time*. Psychology Department Colloquium, University of Washington, Seattle, April 2008.
- Bouton, M. E. *Context, extinction, and relapse*. Psychology Department Colloquium, Binghamton University, May 2008.
- Bouton, M. E. *Optimizing extinction learning*. Plenary Lecture, Dutch Endo-Neuro-Psycho Society Meeting, Doorwerth, Netherlands, June 2008.
- Bouton, M. E. *Contextual and temporal modulation of emotional learning*. Symposium on Context in Learning and Memory, Dutch Endo-Neuro-Psycho Society Meeting, Doorwerth, Netherlands, June 2008.
- Bouton, M. E. *Parallel asymmetries in discrimination learning with temporal and explicit predictors of food*. Experimental Psychology Society, Symposium on Associative Learning, Liverpool, July 2008.
- Bouton, M. E. *Optimizing extinction learning*. Master Lecture, American Psychological Association, Boston, August 2008.

- Bouton, M. E. *Context, extinction, and relapse*. Psychology Department Colloquium, Rutgers University, October 2008.
- Bouton, M. E. *Context, extinction, and relapse*. Psychology Department and Neuroscience Program Colloquium, Middlebury College, November 2008.
- Bouton, M. E. *Context, extinction, and relapse*. Cognitive Science Colloquium, State University of New York at Buffalo, December 2008.
- Winterbauer, N. E., & Bouton, M. E. *Mechanisms behind resurgence of an extinguished operant behavior*. Eastern Psychological Association, Pittsburgh, March 2009.
- Vurbic, D., & Bouton, M. E. *Pavlovian secondary extinction in fear conditioning*. Eastern Psychological Association, Pittsburgh, March 2009.
- Bouton, M. E. *Context, extinction, and relapse*. Psychology Department Colloquium, University of Delaware, April 2009.
- Bouton, M. E. *Toward an associative analysis of temporal learning*. Society for the Quantitative Analyses of Behavior, Phoenix, May 2009.
- Bouton, M. E. *Toward an associative analysis of temporal learning: Novel asymmetries in the generalization of extinction*. Psychology Department Colloquium, Philipps-Universitat Marburg, Marburg, Germany, June 2009.
- Bouton, M. E. *The role of context in relapse after extinction of Pavlovian and instrumental learning*. European Behavioural Pharmacology Society, Rome, Italy, September 2009.
- Vurbic, D., & Bouton, M. E. *Secondary extinction of Pavlovian conditioned fear requires intermixed conditioning trials*. Pavlovian Society, Burlington, VT, October 2009.
- Winterbauer, N. E., & Bouton, M. E. *Different mechanisms in two kinds of resurgence following the extinction of an operant response*. Pavlovian Society, Burlington, VT, October 2009.
- Winterbauer, N. E., Todd, T. P., & Bouton, M. E. *Predictability of the temporal relationship between CS and US affects the distribution of conditioned responding*. Pavlovian Society, Burlington, VT, October 2009.
- Todd, T. P., Winterbauer, N. E., & Bouton, M. E. *Contrasting asymmetries in within trial temporal discrimination learning*. Pavlovian Society, Burlington, VT, October 2009.
- Winterbauer, N. E., & Bouton, M. E. *Resurgence of instrumental behavior II: Role of reinstatement*. Eastern Psychological Association, Brooklyn, March 2010.
- Vurbic, D., Winterbauer, N. E., & Bouton, M. E. *Secondary extinction of appetitive and aversive Pavlovian conditioning requires intermixed conditioning trials*. Eastern Psychological

- Association, Brooklyn, March 2010.
- Bouton, M. E. *Context and the extinction of free-operant behavior*. Eastern Psychological Association, Brooklyn, March 2010.
- Todd, T. P., Vurbic, D., Winterbauer, N. E., & Bouton, M. E. *ABA, AAB, and ABC renewal of extinguished instrumental responding*. Eastern Psychological Association, Brooklyn, March 2010.
- Bouton, M. E., Winterbauer, N. E., Vurbic, D., & Todd, T. P. *Renewal and resurgence after the extinction of free-operant behavior*. Symposium on Associative Learning, Gregynog, Wales, March 2010.
- Bouton, M. E. *Learning and unlearning appetitive behavior*. Festschrift for Stephen C. Woods, University of Cincinnati, April 2010.
- Bouton, M. E. *Context, lapse, and relapse after extinction of instrumental (operant) behavior*. National Institute on Drug Abuse Intramural Research Program Seminar, Baltimore, June 2010.
- Bouton, M. E. *Timing and associative learning: Does one explain the other?* Presidential Address, Division 6 (Division of Behavioral Neuroscience and Comparative Psychology), American Psychological Association, San Diego, August 2010.
- Todd, T. P., Winterbauer, N. E., & Bouton, M. E. *Effects of self-generated priming of the conditioned stimulus on the acquisition of conditioned responding*. Pavlovian Society, Baltimore, October 2010.
- Vurbic, D., Gold, B., & Bouton, M. E. *Effects of d-cycloserine on operant extinction learning*. Pavlovian Society, Baltimore, October 2010.
- Bouton, M. E. *Timing and associative learning: Does one explain the other?* Pavlovian Society, Baltimore, October 2010.
- Bouton, M. E. *Context, extinction, and relapse*. Keynote Address, Indianapolis Chapter of the Society for Neuroscience and Psychiatry Department Grand Rounds, Indiana University - Purdue University Indianapolis, Indianapolis, IN, October 2010.
- Bouton, M. E. *Context, lapse, and relapse after extinction of instrumental (operant) behavior*. Psychology Department Colloquium, Concordia University, Montreal, November 2010.
- Bouton, M. E. *Context, extinction, and memory: Implications for understanding relapse*. CSCA Lecture Series, Cognitive Science Center of the University of Amsterdam, November 2010.
- Unrod, M., Drobles, D. J., Stasiewicz, P. R., Ditte, J. W., Bouton, M. E., Miller, R. R., Niaura, R. S., & Brandon, T. H. *Extinction of cue-provoked craving during cue-exposure therapy for smoking cessation*. Society for Research on Nicotine and Tobacco, Toronto, February 2011.
- Bouton, M. E. *Finding trends in psychology*. Eastern Psychological Association ("EPA Past Presidents

Panel”), Cambridge, MA, March 2011.

Bouton, M. E., Todd, T. P., Vurbic, D., & Winterbauer, N. E. *Contextual control of operant extinction learning*. Society for the Quantitative Analyses of Behavior, Denver, May 2011.

Bouton, M. E. *Relapse processes in instrumental (operant) learning: Implications for addiction*. Addiction Seminar, Medical University of South Carolina, Charleston, November 2011.

Bouton, M. E. *Context, extinction, and relapse*. Grand Rounds, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston, November 2011.

Bouton, M. E. *Context, extinction, and memory: Implications for a biobehavioral understanding of relapse*. Psychology and Neuroscience Colloquium, St. Mary’s College of Maryland, November 2011.