

# VITA of RALPH R. MILLER – June 2023

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**E-mail:** rmiller@binghamton.edu

**Education:** Massachusetts Institute of Technology, Cambridge, MA, B.S. in Physics, 1962  
Rutgers University, New Brunswick, NJ, M.S. in Physics (high energy), 1964  
Rutgers University, New Brunswick, NJ, M.S. in Psychology (social), 1966  
Rutgers University, New Brunswick, NJ, Ph.D. in Psychology (physiological), 1969

**Experience:** Undergraduate Laboratory Assistant in Physics, MIT, 1959-62,  
Research Fellow and Teaching Assistant in Physics, Rutgers University, 1962-64  
Research Fellow and Teaching Assistant in Psychology, Rutgers University, 1964-69  
Assistant Professor of Psychology, Brooklyn College of CUNY, 1969-73  
Associate Professor of Psychology, Brooklyn College of CUNY, 1973-78  
Visiting Fellow in Experimental Psychology, University of Cambridge (UK), 1975-76  
Professor of Psychology, Brooklyn College of CUNY, 1978-79  
Associate Professor of Psychology, SUNY-Binghamton, 1979-81  
Professor of Psychology, SUNY-Binghamton, 1981-2003  
Chairperson, Department of Psychology, SUNY-Binghamton, 1993-96  
Distinguished Professor of Psychology, SUNY-Binghamton, 2003-present

**Statistics:** Citations > 19,000. h-index = 69. i10 index = 2752.

## **Current Research Interest: Information Processing in Animals.**

My specific area of specialization is elementary information processing in animals (humans and rats), including learning, memory, and decision-making. Although our research team in recent years has worked within the framework of Pavlovian associative conditioning, integration with both the physiological and human cognitive literature is sought at the theoretical level. Recent work has been concerned with distinguishing and characterizing perception, acquisition, storage, retention, retrieval, and response generation in humans and rodents, using impediments to performance such as associative interference, stimulus competition, and contingency degradation to understand the processing of acquired information. We are interested in identifying the conditions that will improve learning and retention when desired, and will enhance forgetting when that is desired (e.g., memories underlying anxiety disorders, and information of no long-term value such as last week's shopping list). We have found that training and testing contexts (i.e., background stimuli) play a central role in modulating acquired behavior. Present research continues to examine these issues, particularly to determine how retrieval processes can often explain phenomena that are traditionally attributed to differences in acquisition.

Experiments are being conducted to determine whether the retrieval rule that we have formulated based on a modified form of contingency theory (the Comparator Hypothesis) can explain sufficient behavioral variation to allow simplification of contemporary theories of memory acquisition.

For example, with this retrieval rule, behavior indicative of conditioned inhibition can be explained in terms of differences in US likelihood between cues that were trained together, rather than associations to a representation of the absence of a US or associations with negative value. Additionally, we are examining associative interference between independently acquired associations that share some but not all elements. We are examining a number of instances of every day forgetting, considering their conventional explanations, and asking whether they can better be viewed as instances of associative interference. Much of our current work on associative interference has implications for applied situations. Specifically, we use fear conditioning to model anxiety disorders in humans, experimental extinction to model exposure therapy, and recovery from extinction (e.g., spontaneous recovery and renewal) to model relapse from exposure therapy, all with the goal of informing clinicians on how they might minimize relapse from exposure therapy.

A second avenue of research is concerned with the role of temporal relationships between events in elementary learning. Our data indicate that temporal proximity not only fosters the formation of associations, but is invariably part of what gets encoded within the association. Moreover, this temporal information is a critical determinant of how the association will later be expressed in behavior. Our work in this area is summarized in what we call the Temporal Coding Hypothesis. Current research is examining the benefit of spacing target training trials to determine whether the content of the intertrial intervals is important.

Further studies are examining similarities and differences between expectancy learning concerning a cue and evaluative conditioning in which the cue takes on some of the affective value of the outcome. Additional research focuses on similarities and differences in Pavlovian expectancy conditioning, contingency judgment, and causal attribution by humans and nonhumans.

**Courses taught:**      Introductory Psychology  
                                 Experimental Methods in Psychology  
                                 Theories of Learning  
                                 Physiological Psychology  
                                 Comparative Psychology  
                                 Evolution and Behavior  
                                 Environmental Psychology  
                                 Seminar on Evolution and Human Decision Theory  
                                 Seminar on Evolution and Group Norms  
                                 Seminar on Evolutionary Psychology  
                                 Seminar on Memory Processes  
                                 Seminar on Ecological Psychobiology  
                                 Seminar on the Psychobiology of Feeding Behavior  
                                 Seminar on Science, Self, and Society  
                                 Seminar on Agency and Unconscious Control of Behavior  
                                 Statistics  
                                 Graduate Introduction to Research  
                                 Graduate Experimental Psychology  
                                 Graduate Comparative Psychology  
                                 Graduate Conditioning and Learning  
                                 Graduate Advanced Conditioning and Learning  
                                 Graduate Physiological Psychology  
                                 Doctoral Seminar on the Physiological Basis of Memory  
                                 Doctoral Seminar on Biofeedback and Autonomic Conditioning  
                                 Doctoral Seminar on Current Issues in the Psychology of Learning  
                                 Doctoral Seminar on Evolution and Learning  
                                 Doctoral Seminar on Theories of Discrimination Learning  
                                 Doctoral Seminar on Comparative Cognition

Doctoral Seminar on Causal Inference  
Doctoral Seminar on Behavior Theory and Therapy  
Doctoral Seminar on Cognitive Psychology

**Administrative and service experience:**

CUNY-Brooklyn.

Chairman, Metropolitan New York Seminars on the Physiology of Memory, 1970-73  
Deputy Departmental Chairman for Graduate Studies, 1970-72  
Representative to University Doctoral Executive Committee, 1971-72  
Doctoral Admissions Committee, 1971-72  
Doctoral Curriculum Committee, 1971-72  
Director of Animal Research Laboratories in Psychology (State certificate), 1971-79  
CUNY Faculty Research Award Committee, 1973-74  
CUNY Animal Research and Maintenance Committee, 1973-79  
School-wide Promotions Committee, 1973-74  
School-wide Graduate Review Committee, 1973-75  
Head, CUNY Doctoral Program in Experimental Psychology, 1974-76  
Departmental Colloquium Committee Chairman, 1976-79  
Brooklyn College Master Planning and Educational Policy Committee, 1977-79

SUNY-Binghamton.

Departmental Human Cognitive Search Committee, 1979-present  
(Chair, 1981-82, 1985-87)  
Departmental Senior Clinical Search Committee, 1981-82  
Departmental Colloquium Committee, 1979-present (Chairman, 1979-83, 1989-present)  
Co-organizer of Binghamton Symposium on Information Processing in Animals: Memory Mechanisms (1980)  
Co-organizer of Binghamton Symposium on Information Processing in Animals: Conditioned Inhibition (1983)  
Departmental Personnel Committees, 1979-present  
Departmental Undergraduate Committee,  
Off Campus College Academic Council, 1981-82, 1983-85  
Area Coordinator, Experimental Psychology, 1981-83  
Departmental Graduate Committee, 1981-86, 2005-present  
Director of Graduate Studies in Psychology, 1983-86  
Departmental Senior Cognitive Search Committee, Chairman, 1985-87  
Committee for the University Environment, 1984-91 (Chairman, 1986-91)  
University Advisor for NSF Graduate Fellowship Applicants, 1987-90  
Departmental Committee on Safety and Ventilation, 1987-91  
University Search Committee for Director of Physical Education, 1988-89  
Departmental Clinical Search Committee, 1989-90  
Anderson Center for the Performing Arts - Friends Steering Committee, 1988-90  
Faculty Senate, 1989-91, 2020-present  
Facilities Committee for Middle States Association Review, Co-Chairman, 1989-91  
Sigma Xi Membership Committee (1990-91)  
Board of Directors for Cider Mill Playhouse (autonomous from SUNY), 1991-2008,  
Chair of Development Committee, 1991-98, and Vice-President 1992-98, 2001-04  
Dean's Committee on Photographic Services, 1991-92  
Provost's Committee of Infrastructure for Research, 1991-92  
All-University Personnel Committee, 1991-93

Provost's Committee on General Education Requirement, 1992-93  
Chairperson, Department of Psychology, 1993-96  
Departmental Merit and Teaching Load Committee (chair), 1998-99  
Dean's Research Semester Selection Committee (chair) 1998-99  
Departmental Undergraduate Committee, 1998-2005, 2020-present  
Institutional Animal Care and Use Committee, 1998-2004; chair, 2002-04  
Committee for the University Environment, 1999-2003, 2004-14  
Evolutionary Studies Program Steering Committee, 2002-07  
Dean's Research Semester Selection Committee, 2004-05  
University Committee for Emergency Power, 2004-05  
Director of Graduate Studies in Psychology, 2005-15  
Departmental Executive Committee, 2005-15  
University Premedical Scholarship Committee, 2009-10  
Personal Review Committee for Distinguish Professorships, 2010-12  
Coordinator of Doctoral Cognitive & Behavioral Sciences Program, 2014-15  
Departmental Colloquium Committee, 2017  
Departmental Human Subjects Pool, supervisor, spring 2017, 2017-18  
Departmental Undergraduate Committee, 1980-81, 2020-present  
Faculty Senator, 2020-2022  
Departmental Instructor Search Committee (chair), 2021-present  
All-University Personnel Committee, 2021-23  
Faculty Senator, 2022-2024

**Editor:**

Animal Learning & Behavior (incoming 1996; 1997-2002)  
Journal Experimental Psychology: Animal Behavior Processes (incoming 2013; 2014-19)

**Consulting editor:**

American Journal of Psychology (1979-88)  
Journal of Experimental Psychology: Animal Behavior Processes (1986-99; 2009-13)  
Journal of the Experimental Analysis of Behavior (1994-97), (2009-13)  
International Journal of Psychology and Psychological Therapy (2001-09)  
Mexican Journal of Behavioral Analysis (2004-09)  
Learning & Behavior (2015-present)  
Psychological Review (2015-2020)

**Referee:**

American Psychologist  
American Journal of Psychology  
Animal Cognition  
Animal Learning & Behavior  
Appetite  
Attention, Perception, & Psychophysics  
Behavior Modification  
Behavioral and Brain Sciences  
Behavioral and Neural Biology  
Behavioral Biology  
Behavioral Neuroscience  
Behavioural Processes  
Biology Letters  
Biological Research

Brain Research  
British Journal of Psychology  
Canadian Journal of Experimental Psychology  
Cognition and Emotion  
Current Biology  
Current Directions in Psychological Science  
Developmental Psychobiology  
Experimental Psychology  
Frontiers in Behavioral Neuroscience  
Frontiers in Psychology  
Infant Behavior and Development  
International Journal of Psychology and Psychological Therapy  
Journal of Behavioral Decision Making  
Journal of Behavior Therapy and Experimental Psychiatry  
Journal of Comparative and Physiological 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, and Cognition  
Journal of Neuroscience  
Journal of the Experimental Analysis of Behavior  
Journal of Psychophysiology  
Learning & Behavior  
Learning and Memory  
Learning and Motivation  
Memory & Cognition  
Mexican Journal of Behavioral Analysis  
Nature  
Nature Neuroscience  
Nature Reviews Neuroscience  
Naturwissenschaften  
Perspectives on Psychological Science  
Pharmacology, Biochemistry and Behavior  
Physiological Psychology  
Physiology and Behavior  
PLOS One  
Proceedings of the National Academy of Sciences  
Progress in Neurobiology  
Psychobiology  
Psychological Bulletin  
Psychological Reports  
Psychological Review  
Psychological Science  
Psychonomic Bulletin & Review  
Quarterly Journal of Experimental Psychology, Sec. A  
Quarterly Journal of Experimental Psychology, Sec. B  
Royal Society Open Science  
Science  
Trends in Neurosciences

**Other off-campus professional service:**

Reviewer of grant proposals for NSF, NIH, Center for Advanced Studies in the Social Sciences, US-Israel Bi-national Science Foundation, Canadian National Science and Engineering Research Council, Australian Research Council, Belgian Research Council, CUNY Intermural Research Grant Program, SUNY-Cortland Intermural Research Grant Program, University of Montana Grant Program, Louisiana State University Grant Program, New Zealand Royal Society, United Kingdom Biological and Medical Research Council, Flanders Research Foundation, Pennsylvania Department of Health, Polish-American Fulbright Foundation,  
Member and sometimes chair of various NIH Review Panels.  
Reviewer of manuscripts for Harcourt Brace Jovanovich, Harpur & Row, John Wiley & Sons, Little-Brown, Macmillan, McGraw-Hill, Methuen, Prentice-Hall, Random House, Wm. Brown, Cambridge University Press, Brown-Benchmark, Macmillan, and Oxford University Press.  
Eastern Psychological Association Reviewer for Paper Selection, 1976-2011  
Eastern Psychological Association Program Committee, 1984-1987; chairman, 1985-1986  
American Psychological Association, Division 3 Membership and Fellowship Committee, 1983-86; chairman, 1984-1985  
Governing Board, Winter Conference on Animal Learning, 1987-1993  
American Psychological Association, Division 3 Program Committee, 1987-1990; chairman for 1989 convention.  
Fulbright/Spanish-North American Committee for Educational Cooperation  
Lecturer, 1988  
Fulbright/Spanish-North American Committee for Educational Cooperation  
Lecturer, 1991  
Eastern Psychological Association, Board of Directors, 1992-1995  
Eastern Psychological Association, Program Committee, 1996-2000  
Eastern Psychological Association, President-Elect 1998-99, President 1999-2000, Past-President 2000-2001  
NIH BBBP-1 Review panel, 1999-2005 (sometimes chair)  
NIH advisory committee of data achieving in animal behavior, 2001  
American Psychological Association, Division 6, Representative to Executive Committee, 2001-2004  
Eastern Psychological Association, Board of Directors, 2001-2003  
Eastern Psychological Association, Committee to Reorganize Management, chair, 2002-2004  
Spanish Society for Comparative Psychology, Scientific Committee, 2003  
American Psychological Association, Division 3, Executive Committee, 2004-2007  
Pavlovian Society, Executive Committee, 2004-2011  
Pavlovian Society, President, 2005-2006  
Eastern Psychological Association, Board of Directors, 2005-2008  
American Psychological Association, Division 3, Executive Committee, 2008-2011  
American Psychological Association, Division 3, President, 2009-2010  
Psychonomic Society, Publications Board, 2010-2015  
Eastern Psychological Association, Board of Directors, 2014-2017  
Eastern Psychological Association Election Committee, 2017  
Science Education Review Committee, University of Canterbury, NZ, 2018

**Memberships in professional societies:**

American Association for the Advancement of Science  
American Psychological Association (Fellow)  
Association for Psychological Science (Fellow)  
Association for Behavior Analysis  
Comparative Cognition Society  
Eastern Psychological Association (Fellow)  
International Society for Comparative Psychology  
Midwestern Psychological Association  
Pavlovian Society  
Psychonomic Society (Fellow)  
Sigma Xi  
Society of Experimental Psychologists (Fellow)  
Society for Behavioral Neuroscience and Comparative Psychology (Fellow)  
Society for Experimental Psychology and Cognitive Sciences (Fellow)  
Society for the Quantitative Analysis of Behavior  
Society for Computational Modeling of Associative Learning

**Honors:**

Career Development Award, National Institutes of Health, 1976-79  
Fellow of Divisions 3 & 6, American Psychological Association  
Fellow, American Psychological Society  
University Award for Excellence in Research, 1996-97  
President-elect, President, Past-president, Eastern Psychological Association, 1998-2001  
Erskine Fellow (lecture series in New Zealand), 2000  
Gantt Medal from Pavlovian Society for Outstanding Contributions, 2001  
Fellow, Eastern Psychological Association, 2004-present  
SUNY Distinguished Professor, 2003-present  
President-elect, President, Past-president, Pavlovian Society, 2004-2007  
Binghamton University Award for Excellence in Graduate Student Mentoring, 2004-05  
Geoffrey Marshall Mentoring Award, Northeast Association of Graduate Schools, 2005  
Fellow, Society of Experimental Psychologists, 2008-present  
President-elect, President, Past-president, American Psychological Association, Division 3, 2008-2011  
QUAD-L Award for outstanding contributions to understanding of learning, University of New Mexico, 2014-15.  
Eastern Psychological Association symposium honoring 50 years of my contributions to the understanding of learning and to EPA, 2015.  
Fulbright Fellow: France, 2015-16.  
Fulbright Lecturer: Spain, 2016.  
Comparative Cognition Society Research Award, 2017.  
Erskine Fellow (lecture series in New Zealand), 2018.  
D. O. Hebb Distinguished Scientific Contributions Award in Neuroscience and Comparative Psychology, APA Div 6, 2021.  
B. F. Skinner Award, Association for Behavioral Analysis International, 2022.  
Awarded Honorary Professorship, University of Lille, FR, 2022.

**Grants Awarded:**

Sigma Xi Predoctoral Research Award, 1965-66 (No play: A means of conflict resolution, \$500)

NIMH Research Grant MH17906, 1969-70 (Stages of memory and ECS-induced amnesia, \$5,562)

CUNY FRAP-1155, 1970-71 (Studies of the phenomenon of memory, \$2,000)

NIMH Research Grant MH-19497, 1971-75 (Memory processes and retention, \$62,686)

CUNY FRAP-1385, 1971-72 (Memory and retention in rats, \$9,177)

NIMH Research Grant MH-21976, 1972-73 (Psychobiology of long-term memory, \$2,998)

CUNY FRAP-10246, 1973-74 (Interanimal chemical transfer of acquired information, \$3,160)

CUNY FRAP-10694, 1974-75 (The functional basis of classical conditioning, \$7,950)

CUNY FRAP-11183, 1975-76 (Memory deficits unique to young animals, \$10,783)

NIMH National Research Service Award MH-05152, 1975-76 (Memory processes in man and animal, \$16,967)

NSF Research Grant BMS 75-03383, 1975-78 (The function and nature of memory, \$62,000, accepted in preference to funds offered by NIMH)

NIMH Research Scientist Development Award MH-00061, 1976-81 (Function and nature of memory, \$158,065)

CUNY FRAP-11810, 1977-78 (Sources of infantile amnesia, \$13,868)

CUNY FRAP-12229, 1978-79 (Information processing in rats following initial acquisition and trace reactivation, \$10,993)

NIMH Research Grant MH-33881, 1979-81 (Memory and retroactive stimulus interference in rats, \$22,017)

NIH BRSG SO7RR07149-06, 1980-81 (Contextual control of acquired behavior, \$2,655)

SUNY-UAP-7479A, 1981-82 (Effects of postacquisition "surprising" events, \$3,450)

NIMH Research Grant MH-33881, 1981-83 (Extra-acquisition associative determinants of performance, \$53,136)

NIMH Research Grant MH-33881, 1983-86 (Extra-acquisition associative determinants of performance, \$137,411)

NIH BRSG SO7RR07149-10, 1984-85 (Computer interfaces for environmental control and data collection in rodent learning and memory laboratory, \$3,400)

NSF Research Grant BNS 86-00755, 1986-88 (Extra-acquisition associative determinants of performance, \$100,000 plus \$12,000 in supplements; accepted in preference to funds from NIMH)

NIMH Research Grant MH-33881, 1988-91 (Extra-acquisition associative determinants of performance; accepted in preference to funds from NSF, \$250,555)

NIMH Research Grant MH-33881, 1991-96 (Extra-acquisition associative determinants of performance, \$670,000)

Fulbright/Spanish-North American Committee for Educational Cooperation, 1991-92 (\$14,500)

NIMH Research Grant MH-50826, 1992-93 (Small instrumentation grant program; with L. Spear & N.E. Spear, \$23,309)

NIH BRSG SO7RR07149-18, 1992-93 (Temporal coding in Pavlovian associations, \$3,219)

Binghamton University grant in support of research, 1992-93 (Occasion setting of elementary associations, \$1,000)

NYS/UUP Continuing Faculty Development Award, 1992-93 (Conference travel expenses, \$750)

Binghamton University grant in support of research, 1993-94 (Animal analogs of causal judgment, \$1000)

NYS/UUP Continuing Faculty Development Award, 1993-94 (Conference travel expenses, \$750)

NYS/UUP Continuing Faculty Development Award, 1994-95 (Conference travel expenses, \$581)

Binghamton University grant in support of research, 1995-96 (Cognition as a group level



process, \$1,000)

NIMH Research Grant MH-33881, 1996-00 (Extra-acquisition associative determinants of performance, \$654,058 including supplement)

NIMH National Research Service Award (for Hernan Savastano) MH-11704, 1997-00 (The role of context and timing on associative learning, \$87,168)

NYS/UUP Continuing Faculty Development Award, 1998-99 (Conference travel expenses, \$400)

Erskine Fellowship (New Zealand), 2000 (Visiting lectureship, ~\$10,000 )

NIMH Research Grant MH-33881, 2000-05 (Extra-acquisition associative determinants of performance, \$1,303,891)

NIMH National Research Service Award (for Steven Stout) MH-64420, 2002-05 (Boundary conditions of time-scale invariance, \$128,724)

NIMH Research Grant MH-33881, 2005-12 (Extra-acquisition associative determinants of performance, \$1,439,290)

NYS/UUP Continuing Faculty Development Award, 2006-07 (Conference travel expenses, \$1000)

NYS/UUP Continuing Faculty Development Award, 2008-09 (Conference travel expenses, \$500)

NYS/UUP Continuing Faculty Development Award, 2010-11 (Conference travel expenses, \$670)

NYS/UUP Continuing Faculty Development Award, 2015-16 (Conference travel expenses, \$750)

Fulbright/France Research Fellowship, 2015-2016 (Stipend complementing sabbatical salary, \$47,676)

Fulbright/Spanish-American Commission/UNED, 2016 (Lectureship, \$1,300).

Erskine Fellowship (New Zealand), 2018 (Visiting lectureship, \$9,230)

NYS/UUP Continuing Faculty Development Award, 2018-19 (Conference travel expenses, \$700)

NYS/UUP Continuing Faculty Development Award, 2021-2022 (Conference travel expenses, \$1000)

### **PhDs supervised in chronological order:**

Alan Springer, Professor, New York Medical College

Nancy Marlin, Provost and Professor, San Diego State University

Alvin Berk, Vice-President for Facilities, SUNY Downstate Medical Center

Wesley Kaspro, Senior Researcher & Associate Professor, New Haven VA & Yale Medical School

Todd Schachtman, Professor, University of Missouri at Columbia

Louis Matzel, Professor and ex-Chair, Rutgers University at New Brunswick

Steve Hallam, Professor and Chair, Keuka College

Nicholas Grahame, Associate Professor, Indiana University-Purdue University in Indianapolis

Robert Barnett, Associate Professor, College of William and Mary

Robert Cole, Director of Research, Allied Services

Lisa Gunther, Professor and Chair, Greensboro College

James Denniston, Dean, College of Health, Education, and Human Services, Wright State University

Aaron Blaisdell, Professor, UCLA

Martha Escobar, Professor, Oakland University

Daniel Wheeler, Research Associate, Marquette University School of Medicine

Jeffrey Amundson, Assistant Professor, Medical College of Wisconsin

Gonzalo Pablo Urcelay, Associate Professor, University of Nottingham, UK

James Witnauer, Associate Professor, SUNY-Brockport  
Bridget McConnell, Lecturer, National University of Singapore  
Mario Laborda, Associate Professor, University of Chile  
Gonzalo Miguez, Assistant Professor, University of Chile  
Cody Polack, Sponsored Programs Administrator, Kent State University

**Postdoctoral Fellows sponsored in chronological order:**

Ronald Sigmundi, Professor, St. Lawrence University  
Jose Navarro-Guzman, Professor, University of Cadiz, Spain  
Philippe Oberling, Associate Professor, INSERM, Strasbourg, France  
Hernan Savastano, Project Manager, MicroSoft Corporation  
Francisco Arcediano, Assistant Professor, Oakland University  
Steven Stout, Professor, Jacksonville State University  
Tom Beckers, Professor, KULeuven, Belgium  
Oskar Pineno, Associate Professor, Hofstra University  
Kouji Urushihara, Professor, Kindai University, Osaka, Japan  
Miguel Vidallo, Senior Research Fellow, Autonomous University of Madrid, Spain  
David Guez, Lecturer, James Cook University, Australia  
Mikael Molet, Assistant Professor, University of Lille, France  
Jeremie Jozefowicz, Professor, University of Lille, France  
Cody Polack, Assistant Professor, State University of New York at Binghamton

**Publications:** (\* = student)

Brugger, H.R., Miller, R.R., & Plano, R.J. (1966). On-line checking of bubble chamber measurements. *International high energy physics* (pp. 393-394). Moscow, USSR: Atomizdat.

Lewis, D.J., Miller, R.R., Misanin, J.R., & Richter, N.G. (1967). ECS-induced retrograde amnesia for one-trial active avoidance. *Psychonomic Science*, 8, 485-486.

Miller, R.R. (1967). No play: A means of conflict resolution. *Journal of Personality and Social Psychology*, 6, 150-156.

Lewis, D.J., Miller, R.R., & Misanin, J.R. (1968). Control of retrograde amnesia. *Journal of Comparative and Physiological Psychology*, 66, 48-52.

Lewis, D.J., Misanin, J.R., & Miller, R.R. (1968). The recovery of memory following amnesic treatment. *Nature*, 220, 704-705. Reprinted in J.L. McGaugh & M.J. Herz (Eds.), (1972). *Memory consolidation: Critical issues* (pp. 107-110). San Francisco: Albion.

Misanin, J.R., Miller, R.R., & Lewis, D.J. (1968). Retrograde amnesia produced by electroconvulsive shock after reactivation of a consolidated memory trace. *Science*, 160, 554-555.

Lewis, D.J., Miller, R.R., & Misanin, J.R. (1969). Selective amnesia produced by ECS. *Journal of Comparative and Physiological Psychology*, 69, 136-140.

Miller, R.R., & Misanin, J.R. (1969). Critique of electroconvulsive shock-induced retrograde amnesia: Analysis of the familiarization effect. *Communications in Behavioral Biology*, 4, 255-256.

Miller, R.R., Misanin, J.R., & Lewis, D.J. (1969). Amnesia as a function of events during the learning-ECS interval. *Journal of Comparative and Physiological Psychology*, 67, 145-148.

Miller, R.R., & Spear, N.E. (1969). Obtaining the extensor phase of ECS-induced convulsions. *Psychonomic Science*, 15, 164-166.

Miller, R.R. (1970). Effects of environmental complexity on amnesia induced by electroconvulsive shock in the rat. *Journal of Comparative and Physiological Psychology*, 71, 267-275.

Miller, R.R., & \*Springer, A.D. (1971). Temporal course of amnesia in rats after electroconvulsive shock. *Physiology and Behavior*, 6, 229-233.

Misanin, J.R., Smith, N.F., & Miller, R.R. (1971). Memory of electroconvulsive shock as a function of shock intensity and duration. *Psychonomic Science*, 22, 5-7.

Lewis, D.J., Jackson, F., Miller, R.R., & Misanin, J.R. (1972). The relation between rectal and brain temperatures following hypothermia. *Psychonomic Science*, 27, 29-30.

Miller, R.R., \*Malinowski, B., \*Puk, G., & \*Springer, A.D. (1972). State-dependent models of ECS-induced amnesia. *Journal of Comparative and Physiological Psychology*, 81, 533-540.

Miller, R.R., & \*Springer, A.D. (1972a). Effects of strychnine on ECS-induced amnesia in the rat. *Psychonomic Science*, 26, 289-290.

Miller, R.R., & \*Springer, A.D. (1972b). Induced recovery of memory in rats following ECS. *Physiology and Behavior*, 8, 645-651.

Miller, R.R., & \*Springer, A.D. (1972c). Recovery from amnesia following transcorneal electroconvulsive shock. *Psychonomic Science*, 28, 7-9.

\*Springer, A.D., & Miller, R.R. (1972). Retrieval failure induced by electroconvulsive shock: Reversal with dissimilar training and recovery agents. *Science*, 177, 628-630.

Miller, R.R., & \*Springer, A.D. (1973). Amnesia, consolidation, and retrieval. *Psychological Review*, 80, 69-79.

\*Springer, A.D., & Miller, R.R. (1973). An inexpensive circuit for recording mean heart rate. *Physiology and Behavior*, 11, 415-417.

Miller, R.R., \*Berk, A.M., & \*Springer, A.D. (1974). Acquisition and retention of active avoidance in *Xenopus laevis*. *Bulletin of the Psychonomic Society*, 3, 139-141.

Miller, R.R., \*Daniel, D., & Berk, A.M. (1974). Successive reversals of a discriminated preference for signaled tailshock. *Animal Learning & Behavior*, 2, 271-274.

Miller, R.R., \*Ott, C.A., \*Berk, A.M., & \*Springer, A.D. (1974). Appetitive memory restoration after electroconvulsive shock in the rat. *Journal of Comparative and Physiological Psychology*, 87, 717-723.

Miller, R.R., & \*Springer, A.D. (1974). Implications of recovery from experimental amnesia. *Psychological Review*, 81, 470-473.

Miller, R.R., \*Small, D., & \*Berk, A.M. (1975). Information content of rat scotophobin. *Behavioral Biology*, 15, 463-472.

Miller, R.R., \*Ott, C.A., \*Daniel, D., & \*Berk, A.M. (1976). ECS-induced amnesia and recovery of memory for classically conditioned fear in the rat. *Physiological Psychology*, 4, 57-60.

\*Berk, A.M., \*Marlin, N.A., & Miller, R.R. (1977). System for delivering tailshock to freely ambulatory rats. *Physiology and Behavior*, 19, 815-818.

Miller, R.R., & \*Berk, A.M. (1977). Retention over metamorphosis in the African claw-toed frog. *Journal of Experimental Psychology: Animal Behavior Processes*, 3, 343-356.

Miller, R.R., & \*Kraus, J.N. (1977). Somatic and autonomic indexes of recovery from ECS-induced amnesia in rats. *Journal of Comparative and Physiological Psychology*, 91, 434-442.

Miller, R.R., \*Marlin, N.A., & \*Berk, A.M. (1977). Reliability and sources of control of preference for signaled shock. *Animal Learning & Behavior*, 5, 303-308.

\*Berk, A.M., & Miller, R.R. (1978). LiCl-induced aversions to audiovisual cues as a function of response measure and CS-US interval. *Behavioral Biology*, 24, 184-208.

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\*Hallam, S.C., \*Dufore, D.S., & Miller, R.R. Mechanisms underlying the enhancement of negative summation after operational extinction of a conditioned inhibitor. Eastern Psychological Association, Boston, MA, 1989.

Miller, R.R. A nature-nurture analysis of some dysfunctional behaviors. Winter Conference on Animal Learning, Winter Park, CO, 1989.

Miller, R.R. Organizational Issues: Views from Division 3. American Psychological Association, New Orleans, LA, 1989.

Miller, R.R., \*Grahame, N.J., & \*Hallam, S.C. Trade-offs between training contexts and punctate excitors as comparator stimuli for Pavlovian conditioned inhibitors. Psychonomic Society, Atlanta, GA, 1989.

Miller, R.R., \*Hallam, S.C., & \*Grahame, N.J. Nonlinearity in contingency space. Midwestern Psychological Association, Chicago, IL, 1989.

\*Priore, S.L., \*Castillo, J.M., & Miller, R.R. Higher-order occasion setting. Eastern Psychological Association, Boston, MA, 1989.

\*Arnold, H.M., \*Hong, J.Y., & Miller, R.R. Higher-order discriminations in the rat: Implications for occasion setting. Eastern Psychological Association, Philadelphia, PA, 1990.

\*Barnet, R.C., Grahame, \*N.J., & Miller, R.R. Simultaneous associations revealed by second-order conditioning. Eastern Psychological Association, Philadelphia, PA, 1990.

\*Grahame, N.J., \*Dufore, D.S., & Miller, R.R. Inflation of comparator stimuli following CS training. Eastern Psychological Association, Philadelphia, PA, 1990.

\*Hallam, S.C., \*Arnold, H.M., & Miller, R.R. Blocking of a Pavlovian conditioned inhibitor. Eastern Psychological Association, Philadelphia, PA, 1990.

Miller, R.R. Associative structure in instrumental learning. Midwestern Psychological Association Association, Chicago, IL, 1990. (Invited symposium presentation.)

Miller, R.R. Associative structure in animal learning. Winter Conference on Animal Learning,

Winter Park, CO, 1990.

Miller, R.R., \*Esposito, J.J., & \*Barnet, R.C. Response rules as alternatives to models of conditioning. Midwestern Psychological Association, Chicago, IL, 1990. (Invited address.)

Miller, R.R., \*Grahame, N.J., & \*Hallam, S.C. Necessary conditions for the development of inhibition. Psychonomic Society, New Orleans, LA, 1990.

\*Barnet, R.C., \*Grahame, N.J., & Miller, R.R. Local context during training as a modulator of Pavlovian responding. Psychonomic Society, San Francisco, CA, 1991.

\*Barnet, R.C., \*Newcomer, G.J., & Miller, R.R. Blocking of forward associations by simultaneous and forward associations. Eastern Psychological Association, New York, NY, 1991.

\*Grahame, N.J., \*Seo, H.S., & Miller, R.R. Contribution of sequence learning to contextual occasion setting. Eastern Psychological Association, New York, NY, 1991.

\*Hallam, S.C., Esposito, J.J., & Miller, R.R. Comparator effects after Pavlovian training in one or two contexts. Eastern Psychological Association, New York, NY, 1991.

Miller, R.R. Encoding temporal relationships in Pavlovian conditioning. Spanish Comparative Psychology Society, Seville, Spain, 1991. (Keynote address.)

Miller, R.R. Latent memory and the learning-performance distinction. Winter Conference on Animal Learning, Winter Park, CO, 1991.

Miller, R.R., \*Hallam, S.C., & \*Gerstman, J. Specificity of comparator stimuli that modulate responding to conditioned stimuli. Midwestern Psychological Association, Chicago, IL, 1991.

\*Barnet, R.C., \*Newcomer, G.J., \*Hiralall, A., & Miller, R.R. Local time horizons in Pavlovian learning. Eastern Psychological Association, Boston, MA, 1992.

\*Barnet, R.C., \*Rivera, J.F., & Miller, R.R. Local training context as a modulator of Pavlovian responding: Control by events before and after a target CS. Midwestern Psychological Association, Chicago, IL, 1992.

\*Grahame, N.J., \*Seo, H.S., & Miller, R.R. Latent inhibition: A performance deficit arising from CS-context associations. Eastern Psychological Association, Boston, MA, 1992.

\*Hallam, S.C., \*Grahame, N.J., \*Barnet, R.C., & Miller, R.R. Differences in the associate structures of serial and simultaneous negative features. Psychonomic Society, St. Louis, MO, 1992.

Miller, R.R. Ecological determinants of acquired behavior. Winter Conference on Animal Learning, Winter Park, CO, 1992.

Miller, R.R. Time as an attribute as well as a catalyst. Winter Conference on Animal Learning, Winter Park, CO, 1992.

\*Barnet, R.C., \*Unrod, M., & Miller, R.R. Symmetrical influence on pre-trial and post-trial ITIs on the trial spacing effect. Eastern Psychological Association, Washington, DC, 1993.

\*Cole, R.P., \*Barnet, R.C., & Miller, R.R. Temporal encoding in Pavlovian learning: Trace conditioning. Psychonomic Society, Washington, DC, 1993.

\*Fiori, L.M., \*Grahame, N.J., & Miller, R.R. Renewal of Pavlovian conditioned inhibition. Eastern Psychological Association, Washington, DC, 1993.

Miller, R.R. Time horizons and homeostasis. Midwestern Psychological Association, Chicago, IL, 1993. (Invited address.)

Miller, R.R. Time horizons in Pavlovian conditioning. Winter Conference on Animal Learning, Winter Park, CO, 1993.

\*Near, D.A., Wilson, D.S., & Miller, R.R. Machiavellianism: A synthesis of the evolutionary and psychological literatures. Human Evolution and Behavior Society, Binghamton, NY, 1993.

\*Yin, H., \*Barnet, R.C., & Miller, R.R. Trial spacing and trial distribution effects in Pavlovian conditioning: Contributions of the comparator hypothesis. Eastern Psychological Association, Washington, DC, 1993.

\*Barnet, R.C., \*Mattes, L., & Miller, R.R. The role of pre-trial ITIs on the trial spacing effect. Eastern Psychological Association. Providence, RI, 1994.

\*Barnet, R.C., & Miller, R.R. Mediation of second-order excitation by a backward conditioned inhibitor. Psychonomic Society. St. Louis, MO, 1994.

\*Cole, R.P., \*Lampenstein, E.H., & Miller, R.R. Backward and forward Pavlovian conditioning: A temporal analysis. Eastern Psychological Association. Providence, RI, 1994.

Matute, H., Esmoris, F., & Miller, R.R. Blocking between antecedent stimuli and between subsequent stimuli. Spanish Society for Comparative Psychology. Segovia, Spain, 1994.

Matute, H., Miller, R.R., & Arcediano, F. Backward blocking in rats. Spanish Society for Comparative Psychology. Segovia, Spain, 1994.

Miller, R.R., \*Cole, R.P., & \*Barnet, R.C. Conditioned inhibition revisited. International Comparative Cognition Society. Melbourne, FL, 1994.

Miller, R.R., & Matute, H. Causal perception: The meeting ground of cognitivism and associationism. Midwestern Psychological Association, Chicago, IL, 1994. (Invited symposium presentation.)

Miller, R.R., & Matute, H. Causal judgments in rats and humans. International Society for Comparative Psychology, Sao Paulo, Brazil, 1994.

\*Yin, H., \*Packer, W.J., & Miller, R.R. Second-order conditioning and Pavlovian conditioned inhibition: Operational similarities and differences. Eastern Psychological Association. Providence, RI, 1994.

\*Arcediano, F., Matute, H., & Miller, R.R. Competition between causes and between effects predictive and diagnostic training and testing. Spanish Society for Comparative Psychology, Bilbao, Spain, 1995.

\*Arcediano, F., Matute, H., & Miller, R.R. Conditioned blocking in humans. Spanish Society for Comparative Psychology, Bilbao, Spain, 1995.

\*Barnet, R.C., \*Cole, R.P., & Miller, R.R. Memory for temporal location in Pavlovian conditioning. Experimental Psychology Society, London, UK, 1995.

\*Barnet, R.C., & Miller, R.R. Timing in conditioned inhibition. Canadian Society for Brain, Behavior, and Cognitive Science, Halifax, NS, Canada, 1995.

\*Cole, R.P., \*Mattes, L., & Miller, R.R. Attenuation of the relative validity effect by posttraining extinction of the more valid cue. Eastern Psychological Association, Boston, MA, 1995.

\*Denniston, J.C., \*Grimaldi, S., & Miller, R.R. Temporal coding in Pavlovian conditioning: Hall-Pearce latent inhibition. Eastern Psychological Association, Boston, MA, 1995.

\*Gunther, L.M., \*Scarinci, D.R., & Miller, R.R. Renewal of comparator stimuli. Eastern Psychological Association, Boston, MA, 1995.

Matute, H., & \*Arcediano, F., & Miller, R.R. Causal judgment and Pavlovian conditioning. International Australian Learning Group Conference. Magnetic Island, Australia, 1995.

Miller, R.R., \*Cole, R.P., \*Denniston, J.C. The temporal encoding hypothesis. International Comparative Cognition Society. Melbourne, FL, 1995.

Miller, R.R., & \*Gunther, L.M. Renewal of comparator stimuli in overshadowing: Conservation of associative strength violated. International Australian Learning Group Conference. Magnetic Island, Australia, 1995.

Miller, R.R., & Matute, H. Pavlovian conditioning as a model of causal judgment. American Psychological Association, New York City, 1995. (Invited symposium presentation.)

Miller, R.R., Matute, H., & \*Gunther, L.M. What distinguishes a CS from a US? Psychonomic Society, Los Angeles, 1995.

Oberling, P., \*Denniston, J.C., & Miller, R.R. Biologically relevant stimuli do not follow the law of contingency. Society for Physiology, Strasbourg, France, 1995.

\*Blaisdell, A.P., \*Bristol, A.S., & Miller, R.R. Testing the Comparator Hypothesis: Latent inhibition and overshadowing counteract each other. Psychonomic Society, Chicago, IL, 1996.

\*Blaisdell, A.P., \*Cole, R.P., & Miller, R.R. Recovery from the relative stimulus validity effect. Eastern Psychological Association, Philadelphia, PA, 1996.

\*Blaisdell, A.P., & Miller, R.R. Unblocking with qualitative changes in an aversive US. International Comparative Cognition Society, Melbourne, FL, 1996.

\*Cole, R.P., \*Denniston, J.C., & Miller, R.R. Behavioral recovery from the effect of one-trial overshadowing. Eastern Psychological Association, Philadelphia, PA, 1996.

\*Denniston, J.C., \*Gunther, L.M., & Miller, R.R. Generalized extinction as a result of extinction

in multiple contexts. International Comparative Cognition Society, Melbourne, FL, 1996.

\*Denniston, J.C., Miller, R.R., & Matute, H. Biological significance as a determinant of cue competition. Eastern Psychological Association, Philadelphia, PA, 1996.

\*Gunther, L.M., \*Friedman, B., & Miller, R.R. Generalized excitation as a result of training and extinction in multiple contexts. International Comparative Cognition Society, Melbourne, FL, 1996.

\*Gunther, L.M., Oberling, P., & Miller, R.R. Biological significance attenuates overshadowing, the effect of low relative stimulus validity, and the effect of degraded contingency. Eastern Psychological Association, Philadelphia, PA, 1996.

Matute, H., & Miller, R.R. Cue competition in causal judgment. International Congress of Psychology, Montreal, 1996. (Invited symposium presentation.)

Miller, R.R. Acquisition and expression of Pavlovian associations. Spanish Comparative Psychology Society, Malaga, Spain, 1996. (Keynote address.)

Miller, R.R., Oberling, P., & \*Gunther, L.M. Latent inhibition and overshadowing of occasion setting. International Comparative Cognition Society, Melbourne, FL, 1996.

Miller, R.R. The temporal coding hypothesis. Midwestern Psychological Association, Chicago, IL, 1996. (Invited address.)

Oberling, P., \*Gunther, L.M., & Miller, R.R. Latent inhibition of occasion setting. European Neuroscience Association, Strasbourg, France, 1996.

Angst, M.J., Oberling, P., Miller, R.R., & Sandner, G. Effect of amphetamine in a new model of delusion disorders in rats. Regio Neurex Meeting, Basel, Switzerland, 1997.

\*Blaisdell, A.P., \*Denniston, J.C., & Miller, R.R. Temporal coding as a determinant of overshadowing. Eastern Psychological Association, Washington, DC, 1997.

\*Blaisdell, A.P., \*Gunther, L.M., & Miller, R.R. Recovery from blocking through deflation of the blocking stimulus. International Comparative Cognition Society, Melbourne, FL, 1997.

\*Bristol, A.S., \*Blaisdell, A.P., & Miller, R.R. Overshadowing and latent inhibition counteract each other due to their dependence on different comparator mechanisms. Eastern Psychological Association, Washington, DC, 1997.

\*Denniston, J.C., \*Kovacs, G.A., Miller, R.R. Temporal coding as a determinant of transfer of inhibition. Eastern Psychological Association, Washington, DC, 1997.

\*Denniston, J.C., Matute, H., & Miller, R.R. Blocking in humans using conditioned suppression. International Comparative Cognition Society, Melbourne, FL, 1997.

\*Friedman, B., \*Vadhan, N.P., & Miller, R.R. Comparator mechanisms and conditioned inhibition. Eastern Psychological Association, Washington, DC, 1997.

\*Gunther, L.M., \*Cole, R.P., & Miller, R.R. Conditioned excitation and conditioned inhibition acquired through backward conditioning. Eastern Psychological Association, Washington, DC, 1997.

\*Gunther, L.M., \*Fletcher-Haynes, Z., \*Consorte, D., & Miller, R.R. The contingency effect revisited: Signaling the CS alleviates the deficit. International Comparative Cognition Society, Melbourne, FL, 1997.

Miller, R.R. What differences between acquisition and expression tell us about the contents of learning. Eastern Psychological Association, Washington, DC, 1997. (Invited symposium presentation.)

Miller, R.R., Denniston, J.C., & Blaisdell, A.P. Comparator processes influence retrieval, not response generation. Psychonomic Society, Philadelphia, PA, 1997.

Miller, R.R., \*Gunther, L.M., \*Denniston, J.C., & \*Blaisdell, A.P. The comparator hypothesis: Current status. International Comparative Cognition Society, Melbourne, FL, 1997.

Miller, R.R., & Oberling, P. Analogues between occasion setting and Pavlovian conditioning. APA sponsored Conference on Occasion Setting, Durham, NC, 1997. (Invited address.)

Miller, R.R., & Oberling, P. Occasion setting: Basic phenomena. Eastern Psychological Association, Washington, DC, 1997. (Invited address.)

Oberling, P., Angst, M.J., Miller, R.R., & Sander, G. Pavlovian conditioning in rats as a tool to study schizophrenia: On the role of contingency judgment in the formation of abnormal beliefs. Japanese-French Conference on Neurosciences, Cognition, and Related Fields, Strasbourg, France, 1997.

\*Blaisdell, A.P., \*Wishtart, R., & Miller, R.R. Posttraining shifting of the overshadowing stimulus-US interval alleviates the overshadowing deficit. Eastern Psychological Association, Boston, MA, 1998.

\*Burger, D.C., \*George, G., & Miller, R.R. Overshadowing of subsequent events. Eastern Psychological Association, Boston, MA, 1998.

\*Denniston, J.C., \*Mallema, H., & Miller, R.R. Retrospective reevaluation of temporal information in conditioned inhibition. Eastern Psychological Association, Boston, MA, 1998.

\*Gunther, L.M., \*Bristol, A., Matute, H., & Miller, R.R. Stimuli with acquired biological significance are protected from cue competition. Eastern Psychological Association, Boston, MA, 1998.

Matute, H., \*Pineno, O., \*Ortega, N., & Miller, R.R. Interference effects from a learning-theoretic view. Spanish Society for Experimental Psychology, Granada, Spain, 1998.

Miller, R.R. The role of models, semantics, and levels of analysis. Rutgers University Symposium on Associationism and Computational Models of Learning and Memory, New Brunswick, NJ, 1998. (Invited symposium presentation.)

Miller, R.R. The role of timing in Pavlovian conditioning: The temporal coding hypothesis. Eastern Psychological Association, Boston, MA, 1998. (Invited address.)

Miller, R.R., \*Denniston, J.C., & \*Blaisdell, A.P. New tests of the comparator hypothesis as

applied to retrieval in Pavlovian situations. Midwestern Psychological Association, Chicago, IL, 1998. (Invited address.)

Miller, R.R., \*Denniston, J., & \*Burger, D. Temporal encoding in Pavlovian inhibition. International Comparative Cognition Society, Melbourne, FL, 1998.

Miller, R.R., \*Escobar, M., Savastano, H.I., & Matute, H. Stimulus competition: Antecedent or subsequent events presented on the same or different trials. Psychonomic Society, Dallas, TX, 1998.

Miller, R.R., & Savastano, H.I. The use of temporal information in Pavlovian behavior. Society of the Quantitative Analysis of Behavior, Orlando, FL, 1998. (Invited address.)

Savastano, H.I., \*Blaisdell, A., & Miller, R.R. Competition between potential comparator stimuli in the CS-preexposure effect. International Comparative Cognition Society, Melbourne, FL, 1998.

Savastano, H.I., Matute, H., & Miller, R.R. Blocking between outcomes. Eastern Psychological Association, Boston, MA, 1998.

\*Blaisdell, A.P., \*George, G., & Miller, R.R. Counterconditioning of an overshadowed cue attenuates overshadowing of aversive associations. Eastern Psychological Association, Providence, RI, 1999.

\*Blaisdell, A.P., Miller, R.R., & \*Escobar, M. Contrasting the comparator hypothesis with acquisition-focused models of retrospective revaluation: Relative validity. Psychonomic Society, Los Angeles, CA, 1999.

\*Denniston, J.C., \*Salpegi, N., Savastano, H.I., & Miller, R.R. Temporal specificity of inhibition produced through extinction. Eastern Psychological Association, Providence, RI, 1999.

\*Escobar, M., \*Blaisdell, A.P., & Miller, R.R. Retrospective revaluation and the extended comparator hypothesis. Gregynog Associative Learning Symposium, Gregynog, United Kingdom, 1999.

\*Escobar, M., \*Hauer, L., Matute, H., & Miller, R.R. Competition between cues trained apart. Eastern Psychological Association, Providence, RI, 1999.

Miller, R.R. Competition between antecedent/subsequent events. European Conference on Cue Competition. Le Lignely, Belgium, 1999. (Invited address.)

Miller, R.R., \*Denniston, J.C., & \*Blaisdell, A.P. Acquisition- vs. expression-deficit models of cue competition. European Conference on Cue Competition. Le Lignely, Belgium, 1999. (Invited address.)

Miller, R.R., Savastano, H.I., \*Escobar, M., & Matute, H. Interactions between antecedent events presented together and apart and between subsequent events presented together and apart. European Conference on Classic and Connectionist Approaches to Causal Inference and Social Judgment. Aix-en-Provence, France, 1999. (Invited address.)

Miller, R.R. Retrospective revaluation and the comparator hypothesis. Southwestern

Psychological Association, Albuquerque, NM, 1999. (Invited symposium presentation.)

Miller, R.R., \*Denniston, J.C., & Arcediano, F. Ratings of causation versus prediction: A test of Power PC Theory. Eastern Psychological Association, Providence, RI, 1999.

Savastano, H.I., \*Blaisdell, A.P., & Miller, R.R. A comparator account of preexposure effects. Eastern Psychological Association, Providence, RI, 1999.

Arcediano, F., \*Burger, D.C., \*Escobar, M., & Miller, R.R. Backward associations in humans. International Comparative Cognition Society, Melbourne, FL, 2000.

Arcediano, F., \*Escobar, M., & Miller, R.R. Temporal coding and backward associations in humans. Eastern Psychological Association, Baltimore, MD, 2000.

Arcediano, F., \*Escobar, M., & Miller, R.R. Temporal coding, backward associations and bidirectionality of associations in humans. Spanish Comparative Psychology Society, Granada, Spain, 2000.

\*Blaisdell, A.P., \*Denniston, J.C., & Miller, R.R. Recovery from the overexpectation effect: Support for performance models of retrospective revaluation. Eastern Psychological Association, Baltimore, MD, 2000.

\*Burger, D.C., \*Denniston, J.C., & Miller, R.R. Temporal coding in conditioned inhibition: Retardation tests. Eastern Psychological Association, Baltimore, MD, 2000.

\*Chang, R.C., \*Blaisdell, A.P., Miller, R.R. Temporal relationship as a determinant of blocking in backward conditioning. Eastern Psychological Association, Baltimore, MD, 2000.

\*Denniston, J.C., \*Burger, D.C., \*Escobar, M., & Miller, R.R. Timing of US omission in Pavlovian conditioned inhibition. Psychonomic Society, New Orleans, LA, 2000.

\*Denniston, J.C., \*Chang, R., & Miller, R.R. Massive extinction prevents the renewal effect. Eastern Psychological Association, Baltimore, MD, 2000.

\*Escobar, M., Arcediano, F., & Miller, R.R. Latent inhibition and contextual associations. Eastern Psychological Association, Baltimore, MD, 2000.

\*Escobar, M., Arcediano, F., & Miller, R.R. Context exposure modulates the CS-preexposure effect. International Comparative Cognition Society, Melbourne, FL, 2000.

\*Escobar, M., & Miller, R.R. Contrasting retroactive interference between antecedent events and subsequent events in rats. Spanish Comparative Psychology Society, Granada, Spain, 2000.

Miller, R.R. One hundred years of learning theory: What have we learned? Eastern Psychological Association, Baltimore, MD, 2000. (Presidential address).

Miller, R.R. The roles of temporal relationships in Pavlovian conditioning. Pavlovian Society, Annapolis, MD, 2000. (Invited address.)

Savastano, H.I., \*Escobar, M., & Miller, R.R. The interaction of preexposure and overshadowing. Eastern Psychological Association, Baltimore, MD, 2000.



Arcediano, F., \*Escobar, M., & Miller, R.R. Backward associations and bidirectionality of associations in man and beast. International Comparative Cognition Society. Melbourne, FL, 2001.

Arcediano, F., \*Genua, J.S., Miller, R.R. Backward associations and bidirectionality in rats. Eastern Psychological Association, Washington, DC, 2001.

Arcediano, F., & Miller, R.R. Backward associations and bidirectionality of associations in rats. Spanish Comparative Psychology Society, San Sebastian, Spain, 2001.

\*Chang, R.C., \*Kelschenbach, J., & Miller, R.R. Posttraining context extinction attenuates a backward excitor and a backward inhibitor. Eastern Psychological Association, Washington, DC, 2001.

\*Chang, R.C., & Miller, R.R. The role of context in excitatory backward conditioning. International Comparative Cognition Society. Melbourne, FL, 2001.

\*Escobar, M., \*Choi, D., & Miller, R.R. Retroactive interference and event temporal location. Eastern Psychological Association, Washington, DC, 2001.

\*Escobar, M., & Miller, R.R. Latent inhibition in human adults without masking. Spanish Comparative Psychology Society, San Sebastian, Spain, 2001.

Miller, R.R. Destructive readout or multiple representations in memory? Pavlovian Society. New Brunswick, NJ, 2001. (Invited symposium presentation.)

Miller, R.R., & \*Escobar, M. Interference between cues and between outcomes in rats. Midwestern Psychological Association, Chicago, IL, 2001. (Invited address.)

Miller, R.R., & \*Escobar, M. Interference between cues and between outcomes presented together and presented apart. Society for the Quantitative Analysis of Behavior, New Orleans, 2001. (Invited address.)

Miller, R.R., & \*Escobar, M. Latent inhibition in man and beast. International Comparative Cognition Society. Melbourne, FL, 2001.

Stout, S., & Miller, R.R. Massed trials counter overshadowing. International Comparative Cognition Society. Melbourne, FL, 2001.

Stout, S., & Miller, R.R. Positive and negative mediated behavior: Trade-off with number of compound-CS trials. Pavlovian Society. New Brunswick, NJ, 2001.

Stout, S., & Miller, R.R. The effect of trial spacing on cue competition. Psychonomic Society, Orlando, FL, 2001.

\*Amundson, J., \*Escobar, M., & Miller, R.R. Backward blocking with humans in a nonverbal task. International Comparative Cognition Society. Melbourne, FL, 2002.

\*Amundson, J., \*Escobar, M., & Miller, R.R. Proactive interference of Pavlovian associations. Eastern Psychological Association. Boston, MA, 2002.

Arcediano, F., \*Escobar, M., & Miller, R.R. Disruption of latent inhibition by context segmentation. Eastern Psychological Association. Boston, MA, 2002.

Arcediano, \*Escobar, M., & Miller, R.R. Is stimulus competition an acquisition deficit or a performance deficit? International Congress on Behaviorism and the Sciences of Behavior. Auburn, AL, 2002.

\*Chang, R.C., \*Yirenchi, D.A., & Miller, R.R. Context mediation of backward and forward conditioning. Eastern Psychological Association. Boston, MA, 2002.

\*Chang, R.C., Stout, S.C., & Miller, R.R. Context mediation of excitatory backward and forward conditioning: Posttraining context extinction. International Comparative Cognition Society. Melbourne, FL, 2002.

\*Escobar, M., \*Amundson, J., Arcediano, F., & Miller, R.R. Associative interference: An integrative approach. International Congress on Behaviorism and the Sciences of Behavior. Auburn, AL, 2002.

\*Escobar, M., Arcediano, F., & Miller, R.R. Latent inhibition in human adults: Is masking necessary? Eastern Psychological Association. Boston, MA, 2002.

Miller, R.R. How temporal relationships modulate acquired behavior. International Congress on Behaviorism and the Sciences of Behavior. Auburn, AL, 2002. (Invited address.)

Miller, R.R. Retrospective revaluation: Learning without input? American Psychological Association. Chicago, IL, 2002. (Invited symposium presentation.)

Miller, R.R. Contrasting acquisition-focused and performance-focused models of retrospective revaluation. American Psychological Association. Chicago, IL, 2002. (Invited symposium presentation.)

Miller, R.R., & \*Escobar, M. Memory, retrieval, and interference: How some new and not so new findings in the animal laboratory inform stimulus control in clinical situations. Association for Behavioral Analysis. Toronto, Ontario, Canada, 2002. (Invited address.)

Stout, S.C., \*Escobar, M., & Miller, R.R. Trial number and temporal relationship as joint determinants of second-order conditioning and conditioned inhibition. Psychonomic Society. Kansas City, MO, 2002.

Stout, S.C., & Miller, R.R. Mediation as a function of trial spacing and number of training trials. International Comparative Cognition Society. Melbourne, FL, 2002.

Stout, S.C., & Miller, R.R. Trial number and temporal contiguity as determinants of cue competition. International Comparative Cognition Society. Melbourne, FL, 2002.

Stout, S.C., & Miller, R.R. Overshadowing is transient: Role of comparator processes. Eastern Psychological Association. Boston, MA, 2002.

\*Wheeler, D., \*Chang, R., \*Yirenchi, D.A., & Miller, R.R. Context mediation of excitatory backward and forward conditioning: US preexposure. International Comparative Cognition Society. Melbourne, FL, 2002.

\*Wheeler, D., Savastano, H.I., & Miller, R.R. Biological significance and posttraining changes in conditioned responding. Eastern Psychological Association. Boston, MA, 2002.

\*Amundson, J.C., Stout, S.C., & Miller, R.R. Interaction of trial order and retention interval in a human contingency judgment task. Eastern Psychological Association. Baltimore, MD, 2003.

\*Amundson, J.C., Urushihara, K., & Miller, R.R. Generality of posttraining deflation and inflation of comparator stimuli on conditioned inhibition. Pavlovian Society. Bloomington, IN, 2003.

Arcediano, F., \*Escobar, M., & Miller, R.R. Responding to a blocking stimulus is reduced by compound reinforced training. International Comparative Cognition Society. Melbourne, FL, 2003.

Arcediano, F., Matute, H., & Miller, R.R. Competition between antecedent and between subsequent stimuli. Eastern Psychological Association. Baltimore, MD, 2003.

\*Casteel, B., \*Escobar, M., & Miller, R.R. The latent inhibition effect: Much more than the effects of preexposure. American Psychological Society. Atlanta, GA, 2003.

\*Escobar, M., Arcediano, F., & Miller, R.R. Irrelevant stimulation interpolated between preexposure and conditioning disrupts latent inhibition in a conditioned fear preparation with rat subjects. International Comparative Cognition Society. Melbourne, FL, 2003.

\*Escobar, M., & Miller, R.R. Temporal parameters in retroactive interference. Eastern Psychological Association. Baltimore, MD, 2003.

Miller, R.R. Biologically significant cues are relatively immune to cue competition. International Comparative Cognition Society. Melbourne, FL, 2003.

Miller, R.R. Lessons that I learned at Rutgers. Rutgers University Conference on the History of Psychology, New Brunswick, NJ, 2003.

Miller, R.R., & \*Escobar, M. Modeling associative interference beyond conventional cue competition. Midwestern Psychological Association. Chicago, IL, 2003. (Invited address.)

Miller, R.R., & Pineño, O. Predictors and causes: What's the difference? Psychonomic Society. Vancouver, BC, Canada, 2003. (Invited symposium presentation.)

Miller, R.R., & Stout, S.C. Sometimes competing retrieval (SOCR) of Pavlovian responding: A mathematical implementation of the extended comparator hypothesis. Gregynog Associative Learning Symposium. Gregynog, United Kingdom, 2003. (Keynote address.)

Miller, R.R., & Stout, S.C. Sometimes competing retrieval (SOCR) of Pavlovian responding: A mathematical implementation of the extended comparator hypothesis. Pavlovian Society. Bloomington, IN, 2003. (Invited address.)

Pineño, O., Denniston, J.C., & Miller, R.R. Predictive and causal learning in humans are differentially sensitive to stimulus competition. Spanish Comparative Psychology Society, Barcelona, Spain, 2003.

Pineño, O., & Miller, R. R. Signaling a change in cue-outcome relations in human associative

learning. Spanish Comparative Psychology Society, Barcelona, Spain, 2003.

Pineño, O., & Miller, R. R. Spontaneous recovery of responding following forward and backward blocking: The role of within-compound associations. Spanish Comparative Psychology Society, Barcelona, Spain, 2003.

\*Platt, T., \*Escobar, M., & Miller, R.R. Dissociation of the effects of interpolating a retention interval versus instructions between preexposure and conditioning in a human unmasked latent inhibition paradigm. International Comparative Cognition Society. Melbourne, FL, 2003.

Stout, S., & Miller, R.R. Sometimes competing retrieval (SOCR): A model of Pavlovian conditioning. Eastern Psychological Association. Baltimore, MD, 2003.

Urushihara, K., \*Wheeler, D. \*Francis, J., & Miller, R.R. Influence of intervening retention interval on outcome pre- and post-exposure effects: Primacy and recency effects in outcome exposure paradigm. Eastern Psychological Association. Baltimore, MD, 2003.

\*Wheeler, D.S., Stout, S.C., \*Scalli, L., & Miller, R.R. A super-latent inhibition effect observed in a conditioned fear preparation. Eastern Psychological Association. Baltimore, MD, 2003.

\*Amundson, J.C., \*Gutter, D., & Miller, R.R. Inflation of training excitors in Pavlovian conditioned inhibition. Eastern Psychological Association. Washington, DC, 2004.

\*Amundson, J.C., & Miller, R.R. Inflation of the comparator stimulus in Pavlovian conditioned inhibition enhances inhibition. Society of the Quantitative Analysis of Behavior, Boston, MA, 2004.

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Matute, H., Miller, R.R., & \*Vadillo, M.A. Animal conditioning and human causal learning: similarities and differences. European Neuroscience Society. Lisbon, Portugal, 2004.

Miller, R.R., & Pineno, O. Applying the comparator hypothesis to predictive and causal learning by humans. Conference on Human Contingency Learning. Ardennes, Belgium, 2004. (Invited address.)

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Miller, R.R., Stout, S.C., \*Amundson, J.C. Trial order and contingency judgement. Psychonomic Society. Minneapolis, MN, 2004.

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Urushihara, K., & Miller, R.R. Overshadowing and the outcome-alone exposure effect counteract each other. Society for the Quantitative Analysis of Behavior. Boston, MA, 2004.

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Miller, R.R. Stimulus interaction: Competition between stimuli trained together and interference between stimuli trained apart. Conference on Basic and Applied Learning. Santiago, Chile, 2005. (Invited address.)

Miller, R.R., & \*Escobar, M. The wide wide world of stimulus interaction. Eastern Psychological Association. Boston, MA, 2005. (Invited address.)

Miller, R.R., & Stout S.C. Sometimes competing retrieval: A mathematical implementation of the extended comparator hypothesis. Conference on Associative Learning Today. Hamilton, Ontario, Canada, 2005. (Invited address.)

Miller, R.R., \*Urcelay, G.P., Urushihara, K. Laws of learning appear to differ for elemental cues and compound cues. Psychonomic Society. Toronto, Canada, 2005.

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Urushihara, K., \*Lipatova, O., & Miller, R.R. Partial reinforcement and CS duration effects counteract overshadowing in select situations. Spanish Comparative Psychology Society. Madrid,

Spain, 2005.

Urushihara, K., & Miller, R.R. Investigation of the interaction between overshadowing and US-alone exposure treatment in rats. Japanese Society for Animal Psychology, 2005.

\*Vadillo, M.A., \*Lipatova, O., \*Wheeler, D.S., & Miller, R.R. Subsequently trained blocking stimuli are subject to recency-to-primacy shifts. Spanish Comparative Psychology Society. Madrid, Spain, 2005.

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Guez, D., & Miller, R.R. Blocking and pseudo-blocking: The reply of *Rattus norvegicus* to *Apis mellifera*. International Australian Learning Group Conference. Magnetic Island, Australia, 2006.

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\*McConnell, B.L., \*Amundson, J.C., & Miller, R.R. Associative interference in Pavlovian conditioning: A function of similarity. Eastern Psychological Association. Philadelphia, PA, 2007.

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Miller, R.R., & \*Wheeler, D.S. Interactions between competing stimuli: Confirmation of some surprising predictions of the SOCR model of Pavlovian responding (a mathematical implementation of the extended comparator hypothesis). Society for the Quantitative Analysis of Behavior. San Diego, CA, 2007. (Invited address.)

Miller, R. R., & \*Wheeler, D.S. When a single cue has multiple competing stimuli: Confirmation of some surprising predictions of the SOCR model of Pavlovian responding. Pavlovian Society. Austin, TX, 2007. (Invited address.)

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\*Urcelay, G.P., & Miller, R.R. A comparator view of the overtraining effect. International Comparative Cognition Society. Melbourne, FL, 2007.

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Society for Neuroscience. San Diego, CA, 2007.

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Urushihara, K., \*Wheeler, D.S., \*Amundson, J.C., & Miller, R.R. An experimental analysis of superconditioning in human contingency judgment. Japanese Psychological Association. Tokyo, Japan, 2007.

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Jozefowicz, J., & Miller, R.R. Economic factors influence human temporal judgements in a temporal bisection task. Society for the Quantitative Analysis of Behavior. Chicago, Ill, 2008.

Jozefowicz, J., & Miller, R.R. Inhibition of delay in fear conditioning. Pavlovian Society. New York, NY, 2008.

Jozefowicz, J., Staddon, J.E.R., & Miller, R.R. A behavioral account of metacognition in animals. International Comparative Cognition Society. Melbourne, FL, 2008.

\*Laborda, M.A., \*Witnauer, J.E., & Miller, R.R. Contrasting AAC and ABC renewal: The role of contextual associations. Pavlovian Society. New York, NY, 2008.

\*Laborda, M.A., \*Witnauer, J.E., & Miller, R.R. Some determinants of second-order conditioning. Eastern Psychological Association. Boston, MA, 2008.

\*Laborda, M.A., \*Witnauer, J.E., & Miller, R.R. The role of CS-context and context-US associations in extinction. International Society for Comparative Psychology. Buenos Aires, Argentina, 2008.

\*McConnell, B.L., Urushihara, K., & Miller, R.R. Contrasting predictions of the extended comparator hypothesis and modified SOP. Society for the Quantitative Analysis of Behavior. Chicago, IL, 2008.

\*McConnell, B.L., \*Wheeler, D.S., \*Urcelay, G.P., & Miller, R.R. Protection from latent inhibition provided by a conditioned inhibitor. Eastern Psychological Association. Boston, MA, 2008.

Miller, R.R. Expression of knowledge. Spanish Comparative Psychology Society. Bilbao, Spain, 2008. (Keynote address.)

Miller, R.R. Time and time again. Psychonomic Society. Chicago, IL, 2008.

Miller, R.R. The error of total error reduction. Society of Experimental Psychologists. Bloomington, IN, 2008. (Invited address.)

Miller, R. R. Why evolution selected for limited retrieval rather than acquisition. Congress on Ethology and Comparative Psychology. Santiago, Chile, 2008. (Invited address.)

Miller, R.R., & Molet, M. Navigating through life using spatiotemporal maps: Data from hairy rats and hairless apes. Invited symposium contribution. Psychonomic Society. Chicago, IL, 2008.

Miller, R.R., \*Urcelay, G.P., & \*Witnauer, J.E. There is more to acquired behavior than acquisition. Gregynog Associative Learning Symposium. Gregynog, United Kingdom, 2008. (Keynote address.)

Miller, R.R., & \*Witnauer, J.E. The error of total error reduction. Psychonomic Society. Chicago, IL, 2008.

Molet, M., & Miller, R.R. Integration of cognitive maps in humans. International Comparative Cognition Society. Melbourne, FL, 2008.

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\*Witnauer, J.E., \*Urcelay, G.P., & Miller, R.R. Reduced blocking as a result of increasing the number of blocking cues. Eastern Psychological Association. Boston, MA, 2008.

\*Witnauer, J.E., \*Urcelay, G.P., & Miller, R.R. Two blocking stimuli are less effective than one blocking stimulus. American Psychological Association. Boston, MA, 2008.

Escobar, M., Miller, R.R., & Suits, W.T. Interferencia retroactiva: Una perspectiva comparativa (Retroactive interference: A comparative perspective). 2nd National Psychology Conference COLPSIC and 1st International Psychology Conference COLPSIC-ASCOFAPSI. Bogota, Colombia, 2009. (Invited address).

Jozefowicz, J., \*Witnauer, J.E., \* Miller, R.R. Paradoxical timing in fear conditioning. Pavlovian Society. Burlington, VT, 2009.

\*Laborda, M.A., \*Witnauer, J.E., & Miller, R.R. Contrasting AAC and ABC renewal: The role of context associations. Eastern Psychological Association. Pittsburgh, PA, 2009.

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\*McConnell, B.L., & Miller, R.R. Protection from and reemergence of extinction. Pavlovian Society. Burlington, VT, 2009.

\*McConnell, B.L., Urushihara, K., \*Tanaka, Y., & Miller, R.R. A novel means of differentiating between accounts of retrospective revaluation. International Comparative Cognition Society. Boston, MA, 2009.

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\*Miguez, G., Molet, M., & Miller, R.R. Physical and temporal contexts can disambiguate temporal information. Pavlovian Society. Burlington, VT, 2009.

\*Miguez, G., \*Sissons, H., & Miller, R.R. Second-learned associations fade faster than first-

learned associations. Eastern Psychological Association. Pittsburgh, PA, 2009.

Miller, R.R. Evolution as the cornerstone of contemporary psychological science. American Psychological Association. Toronto, Ontario, Canada. (Invited address.)

Miller, R.R., & \*Laborda, M. Minimizing recovery from extinction. Pavlovian Society. Burlington, VT, 2009. (Invited address.)

Miller, R.R., & \*Witnauer, J.E. Cue interactions: The role of within-compound associations. Psychonomic Society, Boston, MA 2009.

Miller, R.R., & \*Witnauer, J.E. The role of within-compound associations in cue interactions: Models and data. Duke Symposium on Computational Models of Classical Conditioning. Durham, NC, 2009. (Invited address.)

\*Polack, C.W., Jozefowicz, J., & Miller, R.R. Economic factors determine temporal judgements in a bisection task. Eastern Psychological Association. Pittsburgh, PA, 2009.

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\*Witnauer, J.E., & Miller, R.R. Total error reduction: Data and simulations. International Comparative Cognition Society. Boston, MA, 2009.

\*Laborda, M.A., \*Miguez, G., \*Witnauer, J.E., & Miller, R.R. Partial reinforcement acquisition deficit: The role of contextual associations. International Comparative Cognition Society, St. Louis, MO, 2010.

\*Laborda, M.A., & Miller, R.R. Additive effect of extinction in multiple contexts and massive extinction in attenuating recovery. International Comparative Cognition Society. Melbourne, FL, 2010.

\*Laborda, M.A., & Miller, R.R. Massive extinction in multiple contexts reduces fear recovery after a delayed context shift. Eastern Psychological Association. New York, NY, 2010.

\*Laborda, M.A., \*Polack, C.W., \*Miguez, G., & Miller, R.R. Extinction, renewal, and the comparator model. Pavlovian Society. Baltimore, MD, 2010.

\*Laborda, M.A., \*Witnauer, J.E., & Miller, R.R. Conditioned suppression is an inverted-U function of footshock intensity. Eastern Psychological Association. New York, NY, 2010.

\*McConnell, B.L., & Miller, R.R. Attenuated deepened extinction with additional conditioned exciters during extinction. International Comparative Cognition Society, St. Louis, MO, 2010.

\*McConnell, B.L., & Miller, R.R. Compound Extinction with Multiple Exciters: A Nonlinear Relationship. Pavlovian Society. Baltimore, MD, 2010.

\*McConnell, B.L., \*Laborda, M., & Miller, R.R. Preventing relapse through massive extinction in multiple contexts. Association for Behavioral Analysis International. San Antonio, TX, 2010.

\*McConnell, B.L., & Miller, R.R. Contrasting conditioned inhibition and negative occasion setting. Eastern Psychological Association. New York, NY, 2010.

\*Miguez, G., \*Laborda, M.A., & Miller, R.R. Retrospective revaluation of Pavlovian retroactive cue interference. Pavlovian Society. Baltimore, MD, 2010.

\*Miguez, G., \*Witnauer, J.E., & Miller, R.R. Role of contextual associations in the Pavlovian partial reinforcement response deficit. Eastern Psychological Association. New York, NY, 2010.

Miller, R.R. Functional analysis of learning and its failures: The benefits of imperfect retrieval. American Psychological Association. San Diego, CA, 2010. (Invited address.)

Miller, R.R. Timing in conditioned inhibition: Exactly when does an event not happen? Pavlovian Society. Baltimore, MD, 2010. (Invited address.)

Miller, R.R., & \*Miguez, G. Commonalities among retroactive cue interference and other stimulus interactions in elementary learning situations" Retrospective revaluation, renewal, & spontaneous recovery. Psychonomic Society. St. Louis, MO, 2010.

Miller, R.R., \*Polack, C.W., & \*McConnell, B.L. Causal learning in rats. International Comparative Cognition Society. Melbourne, FL, 2010.

Miller, R.R., \*Polack, C.W., & \*McConnell, B.L. Causal learning in rats. International Australian Learning Group Conference. Darwin, Australia, 2010.

Miller, R.R., \*Polack, C.W., & \*McConnell, B.L. Causal learning in rats. Society of Experimental Psychologists. Philadelphia, PA, 2010.

Pineno, O., & Miller, R.R. Extinction in multiple contexts: Evidence for rule learning. Eastern Psychological Association. New York, NY, 2010.

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\*Polack, C.W., \*Miguez, G., \*Witnauer, J.E., & Miller, R.R. Associative history of an extinction context determines benefits/deficits of extinction trial spacing. Eastern Psychological Association. New York, NY, 2010.

\*Polack, C.W., \*Witnauer, J.E., & Miller, R.R. An inverted-U function relating stimulus control

to footshock intensity. International Comparative Cognition Society. Melbourne, FL, 2010.

\*Witnauer, J.E., \*Laborda, M.A., & Miller, R.R. Fear is an inverted-U function of US intensity. Pavlovian Society. Baltimore, MD, 2010.

\*Laborda, M.A., \*Miguez, G., & Miller, R.R. Additive effects of spacing extinction trials and spacing extinction session in preventing recovery from extinction. Eastern Psychological Association. Cambridge, MA, 2011.

\*Laborda, M.A., \*Miguez, G., & Miller, R.R. Spaced extinction training and recovery from extinction. International Comparative Cognition Society. Seattle, WA, 2011.

\*Laborda, M.A., & Miller, R.R. Minimizing recovery from extinction: Lessons from the experimental laboratory. Congress on the Investigation of Physiological and Experimental Psychology. Mexico City, Mexico, 2011.

\*Laborda, M.A., & Miller, R.R. Towards an enhanced-exposure therapy (EET): Behavioral techniques summate to prevent recovery in an animal model of anxiety. American Psychological Association. Washington, DC, 2011.

\*Laborda, M.A., \*Polack, C.W., & Miller, R.R. An extinction context can acquire inhibitory properties: Summation and retardation data. Eastern Psychological Association. Cambridge, MA, 2011.

\*McConnell, B.L., \*Miguez, G., \*Laborda, M.A., & Miller, R.R. Retroactive cue interference depends on the associative status of the interfering cue. Eastern Psychological Association. Cambridge, MA, 2011.

\*Miguez, G., \*Cham, H., & Miller, R.R. Parallels between renewal after blocking and after interference. Psychonomic Society. Seattle, WA, 2011.

\*Miguez, G., \*Cham, H., & Miller, R.R. Spontaneous recovery and renewal of conditioned fear after retroactive cue interference in rats. International Comparative Cognition Society. Seattle, WA, 2011.

\*Miguez, G., \*Laborda, M.A., \*McConnell, B.L., & Miller, R.R. Contextual specificity of latent inhibition and conditioned inhibition. Chilean Congress of Psychology. Santiago, Chile, 2011.

\*Miguez, G., & Miller, R.R. The effect of training in multiple contexts on the renewal of retroactive cue interference. Eastern Psychological Association. Cambridge, MA, 2011.

Miller, R.R. Presidential Perspectives on Psychology. Eastern Psychological Association. Cambridge, MA, 2011. (Invited address.)

Miller, R.R., & \*Laborda, M.A. Extinction and recovery: Theory, current research, and potential applications. Society for the Quantitative Analysis of Behavior. Denver, CO, 2011. (Invited address.)

Miller, R.R., \*Miguez, G., \*Laborda, M.A., \*McConnell, B.L., & \*Polack, C.W. Understanding the renewal effect: What is context specific? Psychonomic Society. Seattle, WA, 2011.

\*Polack, C.W., \*Laborda, M.A., & Miller, R. R. Extinction of Pavlovian conditioned inhibition results in stimulus-specific inhibition. Eastern Psychological Association. Cambridge, MA, 2011.

\*Polack, C.W., \*Laborda, M.A., & Miller, R.R. The role of the excitatory context in renewal. International Comparative Cognition Society. Seattle, WA, 2011.

\*Polack, C.W., \*Miguez, G., & Miller, R.R. Reduction in retroactive cue interference through delay and context shift. Eastern Psychological Association. Cambridge, MA, 2011.

Unrod, M., Drobles, D.J., Stasiewicz, R.R., Ditre, J.W., Bouton, M.E., Miller, R.R., Niaura, R.S., & Brandon, T.H. Extinction of cue-provoking craving during cue-exposure therapy for smoking cessation. Society for Research on Nicotine and Tobacco. Toronto, Ontario, Canada, 2011

\*Witnauer, J.E., \*Montagione, E., & Miller, R.R. A concurrent excitor during extinction deepens extinction in a neutral context and attenuates extinction in an excitatory context. Eastern Psychological Association. Cambridge, MA, 2011.

\*Witnauer, J.E., \*Wojcick, B.M., & Miller, R.R. Conditioned lick suppression is an inverted-U function of US intensity. Eastern Psychological Association. Cambridge, MA, 2011.

\*Laborda, M.A., & Miller, R.R. A symposium: Mechanism of extinction and recovery from extinction. Joint meeting of the International Society for Comparative Psychology and Spanish Society for Comparative Psychology. Jaen, Spain, 2012.

\*Laborda, M.A., \*Polack, C.W., & Miller, R.R. Attenuating the contextual specificity of latent inhibition. Pavlovian Society. New York, NY, 2012.

\*Laborda, M.A., \*Polack, C.W., & Miller, R.R. Preventing recovery from CS preexposure. International Comparative Cognition Society. Melbourne, FL, 2012.

\*Laborda, M.A., \*Polack, C.W., & Miller, R.R. Stimulus-like roles of contexts in extinction. Joint meeting of the International Society for Comparative Psychology and Spanish Society for Comparative Psychology. Jaen, Spain, 2012.

\*Laborda, M.A., \*Polack, C.W., & Miller, R.R. Stimulus-specific conditioned inhibition and experimental renewal. Eastern Psychological Association. Pittsburgh, PA, 2012.

\*McConnell, B.L., & Miller, R.R. The effects of compound extinction on renewal. Gregynog Associative Learning Symposium. Gregynog, United Kingdom, 2012.

\*Miguez, G., \*Cham, H.X., & Miller, R.R. Analogies between forward blocking and proactive cue interference on context dependency. International Comparative Cognition Society. Melbourne, FL, 2012.

\*Miguez, G., \*Mash, L., \*Laborda, M.A., & Miller, R.R. Analogies and relations between associative cue interference and cue competition. Joint meeting of the International Society for Comparative Psychology and Spanish Society for Comparative Psychology. Jaen, Spain, 2012.

\*Miguez, G., \*Mash, L., & Miller, R.R. Reduction and enhancement of Pavlovian retroactive cue interference as a function of training in multiple contexts. Pavlovian Society. New York, NY, 2012.

\*Miguez, G., Molet, M., & Miller, R.R. Temporal integration of sensory preconditioning occurs at test. Eastern Psychological Association. Pittsburgh, PA, 2012.

Miller, R.R., \*Miguez, G., \*Cham, H.X., \*Burney, C., & Molet, M. When does integration of independent temporal maps take place?. International Comparative Cognition Society. Melbourne, FL, 2012.

Miller, R.R., Molet, M., & \*Miguez, G. The temporal coding hypothesis: Temporal relationships as part of associative structure. Conference on Encoding and Memory of Duration. Saint-Remy-les-Chevreuse, France, 2012. (Invited address.)

Miller, R.R., & \*Cody, C.W. Parallels between perceptual learning and Pavlovian conditioning: Contrasting conditioned inhibition and second-order conditioning. Psychonomic Society. Minneapolis, MN, 2012.

Miller, R.R., \*Polack, C.W., & \*McConnell, B.L. Associative bases of causal learning in rats. Pavlovian Society. New York, NY, 2012. (Invited address.)

Molet, M., \*Miguez, G., & Miller, R.R. When does integration of temporal maps take place? Joint meeting of the International Society for Comparative Psychology and Spanish Society for Comparative Psychology. Jaen, Spain, 2012.

Molet, M., \*Miguez, G., & Miller, R.R. When does integration of independent temporal maps take place? French Society for the Study of Animal Behavior. Saint-Etienne, France, 2012.

\*Polack, C.W., \*Laborda, M.A., & Miller, R.R. The basis of differences among ABA, ABC, and AAC renewal. Eastern Psychological Association. Pittsburgh, PA, 2012.

\*Polack, C.W., & Miller, R.R. Facilitation of within-compound associations. Pavlovian Society. New York, NY, 2012.

\*Polack, C.W., & Miller, R.R. Inhibition and facilitation using Espinet pretraining. International Comparative Cognition Society. Melbourne, FL, 2012.

\*Laborda, M.A., \*Schofield, C., \*Johnson, E.M., \*Schubert, J.R., \*George-Denn, D., Coles, M.E., & Miller, R.R. Public speaking fear: Its extinction and return. World Congress of Behavioural and Cognitive Therapies. Lima, Peru, 2013.

\*Mash, L.E., \*Miguez, G., \*Cham, H., & Miller, R.R. Assessment of physical and temporal context changes in retrieval-induced forgetting. Eastern Psychological Association. New York, NY, 2013.

\*Miguez, G., \*Laborda, M.A., & Miller, R.R. Context-shift effects in extinction and latent inhibition. Eastern Psychological Association. New York, NY, 2013.

Miller, R.R. The application of learning theory: From the laboratory to the real world. Japanese Psychological Association, Sapporo, Japan, 2013. (Keynote address.)

Miller, R.R. The pervasiveness of contrast effects: Acquired behavior depends on post-acquisition information processing. Japanese Society for Animal Psychology. Tokyo, Japan, 2013.



(Keynote address.)

Miller, R.R., \*Miguez, G., & \*Laborda, M.A. Context specificity of ambiguous information. International Comparative Cognition Society. Melbourne, FL, 2013.

Miller, R.R., Molet, M., \*Miguez, G., \*Mash, L.E., Craddock, R., & Kosinski, T. Attenuating evaluative conditioning: A theoretical issue with clinical implications. Psychonomic Society. Toronto, Ontario, Canada, 2013.

Miller, R.R., & Witnauer, J.E. Rescorla and his legacy, with a focus on total-error reduction. Eastern Psychological Association. New York, NY, 2013. (Invited paper)

\*Polack, C.W., \*Miguez, G., Molet, M., & Miller, R.R. The associative structure of temporally integrated representations. Eastern Psychological Association. New York, NY, 2013.

\*Mallea, J., \*Miguez, G., & Miller, R.R. Context shifts affect interference with conditioned inhibition by latent inhibition. Chilean Psychological Association. Chillan City, Chile, 2014.

\*Miguez, G., \*Polack, C.W., \*Mash, L., & Miller, R.R. Contextual independence of retrieval-induced forgetting. Chilean Psychological Association, Chillan City, Chile, 2014.

\*Miguez, G., \*Soares, J.S., & Miller, R.R. Context shifts affect interference with conditioned inhibition by latent inhibition. Eastern Psychological Association. Boston, MA, 2014.

\*Miguez, G., \*Soares, J.S., & Miller, R.R. Contextual specificity of cue pre-exposure's interference with subsequently trained conditioned inhibition. International Society for Comparative Psychology. Bogota, Columbia, 2014.

Molet, M., Miller, R.R., \*Miguez, G., \*Mash, L.E., Craddock, P., & Kosinski, T. Attenuating the learning of the affective values of others with memory-suppression techniques. European Association of Social Psychology. Amsterdam, NL, 2014.

\*Polack, C.W., & Miller, R.R. Inhibitory and facilitative perceptual learning. Eastern Psychological Association. Boston, MA, 2014.

\*Soares, J.S., \*Polack, C.W., & Miller, R.R. Assessing the inhibition and context accounts of retrieval-induced forgetting. Psychonomic Society. Long Beach, CA, 2014.

\*Soares, J.S., \*Polack, C.W., \*Miguez, G., & Miller, R.R. Is retrieval-induced forgetting dependent on competition between exemplars? Eastern Psychological Association. Boston, MA, 2014.

\*Miguez, G., & Miller, R.R. The role of associative interference in blocking as assessed by analogies between cue competition and cue interference in context dependency. Eastern Psychological Association. Philadelphia, PA, 2015.

\*Miguez, G., \*Soares, J. & Miller, R.R. Contextual specificity of cue pre-exposure's interference with subsequently trained conditioned inhibition. International Society for Comparative Psychology. Bogota, Colombia, 2015.

Miller, R.R. Implications of retrospective revaluation for models of learning and memory.

International Comparative Cognition Society. Melbourne, FL, 2015.

Miller, R.R. The construct of attention and beyond: Homage to N J Mackintosh. Pavlovian Society. Portland, OR, 2015. Invited address.

\*Polack, C.W., \*O'Hara, S.R., & Miller, R.R. A novel assessment of inhibition between conditioned stimuli: Retardation and suppression of cue competition. Eastern Psychological Association. Philadelphia, PA, 2015.

\*Polack, C.W., \*O'Hara, S.R., & Miller, R.R. Assessing inhibitory associations between cues produced by inhibitory perceptual learning treatment. Psychonomic Society. Chicago, IL, 2015.

\*Soares, J., \*Polack, C.W., & Miller, R.R. Assessment of the context-shift account of retrieval-induced forgetting. Eastern Psychological Association. Philadelphia, PA, 2015.

Miller, R.R. The role of associative interference in forgetting. East England Associative Learning Society. York, UK, 2016. Invited address.

Miller, R.R. Sources of forgetting and the fate of forgotten memories. Spanish Society for Comparative Psychology. Barcelona, Spain, 2016. Keynote address.

Miller, R.R. The comparator hypothesis: An associative model focused on retrieval and expression of acquired information. Dijon Conference on Human Associative Learning. Dijon, France, 2016. Keynote address.

Miller, R.R. The role of encoded interstimulus intervals in cue competition and associative interference. Experimental Psychology Society. Durham, UK, 2016. Invited address.

Miller, R.R., & \*Polack, C.W. Stepping back from 'persistence and relapse' to see the forest: Determinants of associative interference. Society for the Quantitative Analysis of Behavior. Chicago, IL, 2016. (Invited address.)

\*Perez, R.W., \*Polack, C.W., & Miller, R.R. A unified model accounting for stimulus interaction between stimuli trained together or trained apart. Eastern Psychological Association. New York, NY, 2016.

\*Polack, C.W., \*Kurian, T., \*Chen, F., \*Wasserman, J., \*O'Hara, S., \*Szabo, C., & Miller, R. R. Enhancing retrieval-induced forgetting by increasing competition. Eastern Psychological Association. New York, NY, 2016.

\*Polack, C.W., \*O'Hara, S., & Miller, R.R. Associative structure of inhibitory perceptual learning. Pavlovian Society. New York, NY, 2016.

Witnauer, J.E., & Miller, R.R. Leveling the playing field for comparing models of learning. Conference of Computational Modeling of Classical Conditioning. London, UK, 2016.

Miller, R.R. A taxonomy of forgetting and the fates of forgotten memories. International Comparative Cognition Society. Melbourne, FL, 2017. Master lecture.

Miller, R.R. Associative interference in Pavlovian condition. Pavlovian Society. Philadelphia, PA, 2017. A symposium.

Miller, R.R., & \*Polack, C.W. The role of associative interference in 'forgetting' and the fate of forgotten memories. Pavlovian Society. Philadelphia, PA, 2017. Invited lecture.

Miller, R.R., & \*Polack, C.W. Transfer of training. International Comparative Cognition Society. Vancouver, BC, 2017.

Miller, R.R., \*Wasserman, J.S., \*Polack, C.W., \*Casado, C.V., Brunel, M., El Haj, M. Using contextual information to assess the accuracy of eye witness testimony. Psychonomic Society. Vancouver, BC, 2017.

\*Polack, C.W., \*Seitz, B.M., & Miller, R.R. Adaptive Memory: Is there a reproductive processing effect? International Comparative Cognition Society. Melbourne, FL, 2017.

\*Polack, C.W., \*Wasserman, J.S., Craddock, P., & Miller, R.R. Mediated performance or mediated extinction in sequential second-order conditioning. Eastern Psychological Association. Boston, MA, 2017.

\*Polack, C.W., Craddock, P., \*Wasserman, J.S., & Miller, R.R. Mediated performance or mediated extinction in sequential second-order conditioning. Pavlovian Society. Philadelphia, PA, 2017.

\*Renaux, C., Rivière, V., Craddock, P., & Miller, R.R. Associative learning in dementia: Implications for the role of verbal strategies in associative learning. Society for the Quantitative Analysis of Behavior. Denver, CO, 2017.

\*Renaux, C., Rivière, V., Craddock, P., & Miller, R.R. Number of stimuli presentations in the observation of associative learning. Association for Behavior Analysis International. Paris, France, 2017.

\*Renaux, C., Rivière, V., Craddock, P., & Miller, R.R. Spatial contiguity's contribution to the formation of associations between neutral stimuli. Association for Behavioral Analysis International. Denver, CO, 2017.

\*Seitz, B.M., Craddock, P., \*Wasserman, J.S., \*Polack, C.W., & Miller, R.R. Support for mediated performance over mediated extinction in sequential second-order conditioning. International Comparative Cognition Society. Melbourne, FL, 2017.

Unrod, M., Drobles, D.J., Sutton, S.K., Brandon, K., Hawk, L., Simmons, V., Meltzer, V., Miller, R.R., & Brandon, T.H. Facilitated extinction training to improve pharmacotherapy for smoking cessation: A pilot feasibility trial. Society For Research On Nicotine and Tobacco. Florence, Italy, 2017.

\*Wasserman, J.S., \*Seitz, B.M., \*Polack, C.W., & Miller, R.R. Adaptive memory: Is there a reproductive processing effect? Eastern Psychological Association. Boston, MA, 2017.

\*Casado, C., \*Pena, T., \*Polack, C.W., \*Li, P., Craddock, P., Molet, M & Miller, R.R. Mere exposure effect, but no post-peak decrement with added exposures. Eastern Psychological Association. Philadelphia, PA, 2018.

Miller, R.R., & Polack, C.W. TOTAL PREDICTIVE Error-reduction drives ACQUISITION of associative memories: No!, No!, and No! Pavlovian Society, Iowa City, IA, 2018.

\*Morrissey, D.K., \*Tsvetkov, A., \*Polack, C.W., \*Factor, Z., \*Joseph, J., Murphy, R.A., & Miller, R.R. How does the absence of events influence peoples' learning?: The influence of temporal and spatial context on contingency learning during trials without cues or outcomes. Gregynog Associative Learning Symposium. Gregynog, United Kingdom, 2018.

\*Pena, T., \*Polack, C.W., \*Berruti, A., \*LI, A., \*Villemin, Y., Jozefowicz, J., & Miller, R.R. Counterconditioning as a crucible for studying associative interference. Eastern Psychological Association. Philadelphia, PA, 2018.

\*Polack, C.W., \*Wasserman, J., \*Casado, C., Brunel, M., El Haj, M., & Miller, R.R. Assessment and enhancement of eyewitness testimony. Eastern Psychological Association. Philadelphia, PA, 2018.

\*Prével, A., Rivière, V., Darcheville, J-C., Urcelay, G.P., & Miller, R.R. Excitatory backward second-order conditioning in humans. Gregynog Associative Learning Symposium. Gregynog, United Kingdom, 2018.

\*Prével, A., Rivière, V., Darcheville, J-C., Urcelay, G.P., & Miller, R.R. Excitatory second-order conditioning in humans using a first-order backward conditioned stimulus: A challenge to the necessity for learning of *prediction* error. Spanish Society for Comparative Psychology. Avila, Spain, 2018.

\*Renaux, C., Rivière, V., Craddock, P., & Miller, R.R. Associative learning in nonverbal autistic children: Verbal processing hypothesized as a mediator of associative learning. Association for Behavioral Analysis International. Miami, FL, 2018.

\*Renaux, C., Rivière, V., Craddock, P., & Miller, R.R. Associative learning in babies : Higher-order conditioning without verbal skills. Association for Behavioral Analysis International. San Diego, CA, 2018.

\*Seitz, B.M., Blaisdell, A.P., Polack, C.W., Miller, R.R. The role of biological significance in human learning & memory. International Society for Comparative Psychology. Los Angeles, CA, 2018.

\*Tsvetkov, A., \*Polack, C.W., \*Factor, Z.Z., \*Joseph, J., \*Just, D., Murphy, R.A., & Miller, R.R. How does the absence of both the cue and outcome influence cue-outcome learning? Eastern Psychological Association. Philadelphia, PA, 2018.

\*Tsvetkov, A., \*Polack, C.W., \*Morrissey, D., Murphy, R.A., & Miller, R.R. Counting vs. timing of intertrial intervals in conditioning. International Comparative Cognition Society. Melbourne, FL, 2018.

\*Berruti, A., Polack, C.W., \*Moshchenko, Y., Jozefowicz, J., & Miller, R.R. Contrasting counterconditioning and extinction with respect to renewal. Eastern Psychological Association. New York, NY, 2019.

Jozefowicz, J., Polack, C.W., \*Berruti, A., \*Pena, T., & Miller, R.R. Extinction and counterconditioning with and without biologically relevant outcomes. East England Associative Learning Society. York, UK, 2019.

\*Li, A., \*Alcaide, D.M., Polack, C.W., \*Morrissey, D., Murphy, R.A., & Miller, R.R. Do contingency judgements depend on counting or timing of stimuli presentations? Eastern Psychological Association. New York, NY, 2019.

\*Li, P., Molet, M., Craddock, P., \*Osroff, A., Polack, C., & Miller, R. R. Comparing faces and foreign letters in the mere exposure effect. Eastern Psychological Association. New York, NY, 2019.

\*Factor, Z.Z., Polack, C.W., & Miller, R.R. Do visual cues increase attending to gender-congruent stimulus during dichotic listening? Eastern Psychological Association. New York, NY, 2019.

Miller, R.R. Disengaging dysfunctional memories from behavior: Data, theory, and dogma. Conference on the Attenuation of Emotional Memories. Genk, Belgium, 2019.

Miller, R.R., & Polack, C.W. ACQUISITION of associative memory is driven by TOTAL PREDICTION error-reduction: No!, No!, and No! International Australian Learning Group Conference. Magnetic Island, Queensland, Australia, 2019.

Miller, R.R., & Polack, C.W. ACQUISITION of associative memory is driven by TOTAL PREDICTION error reduction. No! No! and No! International Comparative Cognition Society. Melbourne, FL, 2019.

Miller, R.R., \*Li, A., \*Tsvetkov, A., \*Alcaide, D.M., Witnauer, J.E., \*Castiello, S., \*Morrissey, D., Polack, C.W., & Murphy, R.A. Contingency learning with A, B, C, and D cell events: Contrasting number of trials with duration of trials. Psychonomic Society. Montreal, Canada, 2019.

Miller, R.R., \*Li, A., \*Alcaide, D.M., Witnauer, J.E., \*Castiello, S., Polack, C.W., & Murphy, R.A. Contrasting number of trials with duration of trials in contingency learning. Pavlovian Society. Vancouver, Canada, 2019.

\*Alcaide, D.M., \*Castiello, S., Witnauer, J.E., \*Li, A., \*Cook, A., Murphy, R.A., & Miller, R.R. Playing off number of trials against duration of trials in contingency learning: There is a free lunch. Eastern Psychological Association, Boston, MA, 2020.

\*Castiello, S., \*Jain, R., Miller, R.R., Witnauer, J.E., & Murphy, R.A. Increasing frequency of low salient absent events enhances learning. Gregynog Associative Learning Symposium, Gregynog, United Kingdom, 2020.

Miller, R.R., \*Castiello, S., Witnauer, J.E., \*Cook, A., & Murphy, R.A. Benefitting from increased trial spacing and more training trials without increasing training time: There is a free lunch. International Comparative Cognition Society. Melbourne, FL, 2020. Accepted, scheduled, and prepared, but not delivered due to covid-19.

\*Moshchenko, Y., \*Berruti, A.S., \*Blattstein, J., Jozefowicz, J., & Miller, R.R. Retroactive interference: Counterconditioning and extinction with and without biologically significant outcomes. Eastern Psychological Association, Boston, MA, 2020.

\*Osroff, A., \*Li, P., Molet, M., Craddock, P., \*Livingston, T., & Miller, R.R. The role of positive and negative affect induction on the mere exposure effect: Evidence against a reduced-neophobia account. Eastern Psychological Association, Boston, MA, 2020.

\*Satanovsky, M., \*Lux, M.L., Polack, C.W., & Miller, R.R. Retrieval-induced forgetting: Does giving feedback enhance the effect? Eastern Psychological Association, Boston, MA, 2020.

\*Seitz, B.M., & Miller, R.R. Adaptive memory: Parent processing enhances retention. Society for Personality and Social Psychology. San Francisco, CA, 2020.

\*Castiello, S., Browning, M., Miller, R.R., & Murphy, R.A. Lower sensitivity to mutually absent stimuli in schizotypy. Experimental Psychology Society. London, UK, 2021.

Miller, R.R. Repetition-induced truth effect: Consolidation, reconsolidation, and prediction error. American Psychological Association. Washington, DC (virtual), 2021. [2020 D. O. Hebb Award address.]

\*Chew, S.J., \*Castiello, S., Murphy, R.A., Witnauer, J.E., & Miller, R.R. Obtaining the benefit of trial spacing without lengthening the training session. Eastern Psychological Association, New York City, NY, 2022.

\*Elengickal, D.J., Witnauer, J.E., Murphy, R.A., \*Castiello, S., & Miller, R.R. Determinants of extinction. Eastern Psychological Association, New York City, NY, 2022.

\*Huang, J., \*Silverstein, J., \*Woltag, S., Witnauer, J.E., Jozefowicz, J., Miller, R.R. Contrasting interspersed associative interference with proactive and retroactive interference. Eastern Psychological Association, New York City, NY, 2022.

Miller, R.R. Repetition-induced truth effect in psychological theorizing: 'Learning driven by *prediction error*' as a case study. Society of Experimental Psychologists. Chicago, IL, 2022.

Miller, R.R. Researcher heuristics as obstacles to our understanding of learning. Society of the Quantitative Analysis of Behavior, Boston, MA, 2022. (Invited address.)

Miller, R.R. Laboratory to clinic: Dysfunctional behaviors cannot be erased from the behavioral repertoire, but a growing stable of modification techniques collectively can reduce such behavior and impede relapse. Association for Behavioral Analysis International. Boston, MA, 2022. [2022 Invited Skinner Lecture]

Miller, R.R., \*Mccrea, C., \*Moshchenko, Y., \*Stenstrom, K., Witnauer, J.E., & Jozefowicz, J. Comparing novelty-facilitated extinction with counterconditioning and extinction in cognitive and emotional domains. Eastern Psychological Association, New York City, NY, 2022.

\*Artus, K. P., \*Huang, J., \*Piliya, R. J., \*Castiello, S., Witnauer, J. E., Murphy, R. A., & Miller, R. R. Impact of 'irrelevant' information during intertrial intervals on contingency ratings. Eastern Psychological Association, Boston, MA, 2023.

\*Huang, J., \*Powell, J., \*Elengickal, D., \*Darko, N., Witnauer, J.E., Murphy, R.A., & Miller, R.R. Quantity of interspersed target cue-outcome dyads impacts the influence of intertrial intervals on contingency judgments. Eastern Psychological Association, Boston, MA, 2023.

Jozefowicz, J., Witnauer, J.E., \*Moshchenko, Y., \*McCrea, C.M., \*Stenstrom, K.A., & Miller, R.R. Renewal in the cognitive and emotional domain: Comparing novelty-facilitated extinction with counterconditioning and extinction. Gregynog Associative Learning Symposium, Gregynog, United Kingdom, 2023.

Miller, R.R. Generalizing findings in cognitive psychology to situations beyond those examined. Society of Experimental Psychologists. Philadelphia, PA, 2023.

Miller, R.R., Witnauer, J.E., \*Stentstrom, K., \*Woltag, S., & Jozefowicz, J. Thumb rules mask qualifiers and boundary conditions in cognitive science as well as everyday life. International Conference on Comparative Cognition. Melbourne, FL, 2023.

\*Jain, R., \*Huang, J., \*Artus, K., \*Castiello, S., Witnauer, J. E., Murphy, R. A., Miller, R. R. How are empty trials processed when learning the association between stimuli? Gregynog Associative Learning Symposium, Gregynog, United Kingdom, 2023.

\*Stenstrom, K., Jozefoweiz, J., \*Escaldi, A., \*McCrea, C.M., Witnauer, J.E., Miller, R.R. Renewal in the cognitive and emotional domains: Comparing extinction, counterconditioning, and novelty-facilitated extinction of affectively neutral and appetitive target associations. Eastern Psychological Association, Boston, MA, 2023.

\*Woltag, S., Jozefowicz, J., Witnaeur, J.E., \*Hope, A., & Miller, R. R. Contrasting latent inhibition, partial reinforcement, and extinction in contingency learning. Eastern Psychological Association, Boston, MA, 2023.

**Invited colloquia** (in approximate chronological order) given at:

University of Florida, University of Maine, Hollins College, SUNY-Plattsburgh, CUNY-Brooklyn, SUNY-Downstate Medical Center, CUNY-Queens, University of Michigan, SUNY-Binghamton, Memorial University of Newfoundland (Canada), University of Toronto (Canada), Iowa State University, Erindale College (Canada), Cambridge University (UK), University of Milan Medical School (Italy), University of Reading (UK), University of Sussex (UK), University of Birmingham (UK), CUNY-Hunter, University of Wales (UK), Medical School of the University of Lyons (France), Oxford University (UK), University College of London (UK), National Hospital (UK), MRC Applied Psychology Unit (UK), New York University, Binghamton Conference on Ontogeny of Learning and Memory, University of California-Irvine, CUNY-Graduate Center, Fairfield University, SUNY-Stony Brook, University of Pennsylvania Medical School, Cambridge University (UK), Susquehanna University, Kings College, Rutgers University, Utah Conference on State-Dependent Behavior, University of California at Los Angeles, Columbia University, UNED (Spain), University of Cadiz Medical School

(Spain), University of Seville (Spain), SUNY-Binghamton (Biology), Indiana University, Bucknell University, University of Delaware, Hangzhou University (China), Institute of Psychology (Chinese National Academy of Sciences), Beijing University (China), American University, SUNY-Binghamton (Biology Department), University of Cadiz (Spain), University of Seville (Spain), Spanish Comparative Psychology Society, Northwestern University, Kent State University, University of New South Wales (Australia), Purdue University, INSERM 405 Strasbourg (France), University Louis Pasteur School of Medicine (France), University of Deusto (Spain), University of Pennsylvania, Cleveland State University, Rutgers University, Brooklyn College of CUNY, Duke University, University of Santiago de Compostela (Spain), University of the Basque Country (San Sebastian, Spain), University of Barcelona (Spain), University of Granada (Spain), Comprehensive University of Madrid (Spain), Clarion University, University of Seville (Spain), University of New Hampshire, SUNY-Binghamton, McGill University (Canada), University of South Florida University, Canterbury University (New Zealand), University of Waikato (New Zealand), University of Otago (New Zealand), Brown University, Greensboro University, University of North Carolina at Greensboro, Appalachian State University, University of Akron, McMaster University (Canada), McGill University (Canada), Universidad de las Americas (Chile), Syracuse University, Baldwin-Wallace College, University of Seville (Spain), Australian National University, Duke University, Universidad de Chile (Chile), University of Buffalo-SUNY, University of Guadalajara (Mexico), University of Paris Sud (France), Kwansai Gakuin University (Japan), University of New Mexico, SUNY-Brockport, University of Lille (France), Ghent University (Belgium), Catholic University (KU) of Leuven (Belgium), Ruhr University at Bochum (Germany), University of Paris Sud (France), University of York (UK), Exeter University (UK), University of the Basque Country (San Sebastian, Spain), City University of London (UK), University of Oxford (UK), University of Leicester (UK), UNED (Spain), University of Bourgogne (France), State University of New York at Binghamton (EvoS), University of Guadalajara (Mexico), University of Canterbury (New Zealand), University of Otago (New Zealand), University of California at Los Angeles, University of New South Wales (Australia), University of Sydney (Australia), University of Guadalajara (Mexico), Trinity College of the University of Dublin (Ireland), FMI Institute of University of Basel, University of Nottingham.