

Kimberly Kirkpatrick
Department of Psychological Sciences
Kansas State University
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Manhattan, KS 66506

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EDUCATION

Ph.D. (December, 1995) *The University of Iowa*, Iowa City, Iowa
Department of Psychology, Neuroscience and Behavior Program
M.A. (May, 1992) *The University of Iowa*, Iowa City, Iowa
Department of Psychology, Neuroscience and Behavior Program
B.S. (May, 1989) *Iowa State University*, Ames, Iowa
Major in Psychology

POSITIONS HELD

University Distinguished Professor (July 2019 –)
Kansas State University, Manhattan, KS, USA
Professor (July 2012 – 2019)
Kansas State University, Manhattan, KS, USA
Associate Professor (August 2008 – 2012)
Kansas State University, Manhattan, KS, USA
Adjunct Associate Professor (January 2008 – August 2008)
Kansas State University, Manhattan, KS, USA
Senior Lecturer (October 2006 – July 2008)
University of York, York, UK
Lecturer, tenured, Grade B (October 2000 – September 2006)
University of York, York, UK
Assistant Research Professor (June 2000 – September 2000)
Brown University, Providence, Rhode Island, USA
Post-doctoral Fellow (January 1996 – May 2000)
Brown University, Providence, Rhode Island, USA
Research Assistant (August 1989 – December 1995)
The University of Iowa, Iowa City, Iowa, USA

GRANTS AND FELLOWSHIPS

National Institute of Mental Health and National Institute of General Medical Sciences, R01 Project Grant,
Timing, reward processing, and choice, \$1.86M, 2021-2026, Role: PI
National Institute on Drug Abuse, R43 SBIR grant, *BoostOne*, \$246K (\$30K sub-award), 2021-2023, Role:
Co-Investigator
National Institute of General Medical Sciences, Administrative Supplement for P20 COBRE award,
Cognitive and neurobiological approaches to plasticity (C-NAP) center, \$118K, 2021-2022, Role: PI/PD
Psi Chi, Graduate Research Grant, *Effects of time-based intervention training on neural activity*, \$1.5K, 2021-2022,
Role: Mentor

Sigma Xi Scientific Research Society, Undergraduate Research Grant, *Identifying brain structures active during a time-based intervention*, \$1K, 2021, Role: Mentor

National Institutes of Health, K-INBRE Core Facility Grant, *Advancing cellular neuroscience in the Kansas State University COBRE center*, \$10K, 2020-2021, Role: PI

Sigma Xi Scientific Research Society, Graduate Research Grant, *The impact of estradiol on impulsive decision-making and timing*, \$1K, 2020, Role: Mentor

National Institute of General Medical Sciences, P20 COBRE center grant, *Cognitive and neurobiological approaches to plasticity (C-NAP) center*, \$10.6M, 2017-2022, Role: PI/PD

National Institute of Mental Health, R01 Project Grant, *Timing, reward processing, and choice*, \$1.35M, 2016-2020, Role: PI

National Science Foundation, Graduate Research Fellowship, *Catherine Steele (formerly Hill)*, \$132K, 2016-2019, Role: Mentor

National Institutes of Health, T32 National Research Service Award, *BRITE veterinary student program*, \$40K, 2015-2016, Role: Mentor

National Institute of Mental Health, R01 Project Grant, *Timing, reward processing, and choice*, \$1.3M, 2010-2016, Role: PI

Consejo Nacional de Ciencia y Tecnología, Graduate Research Fellowship, *Ana Garcia*, \$125K, 2010-2013, Role: Mentor.

Kansas State University, University Research Small Grant, *Differential rearing effects on novelty-seeking, impulsive action, and impulsive choice*, \$4000, 2010, Role: Co-PI (with Mary Cain)

National Science Foundation, ADVANCE Distinguished Lecture Series, \$1200, 2009, Role: Sponsor

Biotechnology and Biological Sciences Research Council, International Scientific Interchange Scheme, *Neurobiology of timing and reward value*, £3000, 2007, Role: PI

The Leverhulme Trust, Study Abroad Fellowship, *The neurobiology of time perception*, £11,000, 2007, Role: PI

Biotechnology and Biological Sciences Research Council, PI on Project Grant, *Reward value effects on reward timing*, £311,000, 2007-2009, Role: PI

The Royal Society, Conference Grant to attend *The 13th International Conference on Comparative Cognition*, £800, 2006, Role: PI

Biotechnology and Biological Sciences Research Council, Graduate Research Fellowship, *Tiffany Galtress*, £57,000, 2001-2004, Role: Mentor

Biotechnology and Biological Sciences Research Council, *The role of the basolateral nucleus of the amygdala in the acquisition of timing: neural and psychological processes*, £186,000, 2005-2008, Role: PI

Biotechnology and Biological Sciences Research Council, Graduate Research Fellowship, *Rona Russell*, £55,000, 2001-2004, Role: Mentor

Biotechnology and Biological Sciences Research Council, *Temporal content and transfer effects in classical conditioning*, £155,000, 2001-2004, Role: PI

University of York, Innovation and Research Pump Priming Fund, *An examination of tracking and catching in pigeons*, £7600, 2003, Role: PI

University of York, Teaching Innovation and Development Grant, *Animal cognition video project*, £400, 2002, Role: PI

National Institutes of Health, National Research Service Award (MH1169), *Schedule induced behavior in rats*, \$74,000, 1997-1999, Role: PI

Sigma Xi, Grant-in-Aid of Research, *A comparison of features and spatial organization in visual recognition of complex line drawings by pigeons*, \$400, 1994, Role: PI

HONORS AND AWARDS

American Psychological Association, Division 25, *Fellow*, 2021

Commerce Bank and William T. Kemper Foundation, *Distinguished Graduate Faculty Award*, 2018

Professorial Performance Award, Kansas State University, 2017

Kansas State University College of Arts and Sciences, *Karen Griffith Research Award*, 2017

Association for Psychological Science, *Fellow*, 2017
Elsevier, *Excellence in Reviewing Award*, 2014
Eastern Psychological Association, *Fellow*, 2013
American Psychological Association, Division 6, *Fellow*, 2012
American Psychological Association, Division 3, *Fellow*, 2007
American Psychological Association, Division 3, *New Investigator Award*, 1999
American Psychological Association, Division 25, *Outstanding Dissertation Award*, 1997
University of Iowa, Department of Psychology, *Donald Lewis Dissertation Award*, 1995
University of Iowa, Department of Psychology, *Kenneth W. Spence Award*, 1994

PROFESSIONAL ASSOCIATION MEMBERSHIPS

American Psychological Association
Association for Psychological Science
Association for Behavioral Analysis
Eastern Psychological Association
Comparative Cognition Society, Founding Member
Pavlovian Society
Psychonomics Society
Society for Neuroscience
Society for Quantitative Analyses of Behavior

EDITORIAL EXPERIENCE

Editor: Behavioural Processes, Special Issue on Comparative Cognition: In Honor of Ed Wasserman, 2016

Associate Editor: Behavioural Processes, 2014-2016

Consulting Editor:

Learning & Behavior, 2003-
Journal of Experimental Psychology: Animal Behavior Processes 2004-
Journal of the Experimental Analysis of Behavior, 2009-
Frontiers in Psychology: Comparative Psychology, 2010-

Reviewer for:

Applied Cognitive Psychology, Behavioral Neuroscience, Behavioural Processes, International Journal of Comparative Psychology, Journal of Cognitive Neuroscience, Learning and Motivation, Mind and Language, Neuroscience, Neuroscience Letters, Perception, Perception & Psychophysics, Psychological Record, Psychonomic Bulletin & Review, Quarterly Journal of Experimental Psychology, Vision Research

OTHER PROFESSIONAL SERVICE

Publications Committee, Psychonomic Society, Member, 2021-2023
Association for Behavioral Analysis International, Science Board, Member, 2020-2022
American Psychological Association, Selection Committee for Distinguished Scientific Award for an Early Career Contribution to Psychology, Chair, 2021
American Psychological Association, Division 3, Elected At-large Member of Executive board, 2011-2013

GRANT REVIEWING EXPERIENCE

External Reviewer for the Economic and Social Research Council, UK, 2004

External Reviewer for the Biotechnology and Biological Sciences Research Council, 2005-2008

External Reviewer for the National Science Foundation, 2010-present

Ad Hoc Member, Biobehavioral Regulation, Learning and Ethology panel, National Institutes of Health, February 2004

Member, Biobehavioral Regulation, Learning and Ethology panel, National Institutes of Health, 2004-2008

Member, Biobehavioral Regulation, Learning and Ethology special emphasis/review conflict panels, National Institutes of Health, October 2009, February 2010, June 2010, October 2010, October 2011, March 2013

Member, Behavioral Neuroscience Fellowship panel, National Institutes of Health, June 2014

Member, Child Psychopathology and Developmental Disabilities panel, National Institutes of Health, November 2014

Member, Circuit Engagement R01 Special Emphasis panel, National Institutes of Mental Health, June 2019

Member, Novel Assays UG3/UH3 Special Emphasis panel, National Institutes of Health, December 2019

Member, Thesis and Dissertation Grant panel, Association for Behavioral Analysis International, 2020, 2021

PEER-REVIEWED JOURNAL ARTICLES

* Indicates student, post-baccalaureate, or post-doctoral trainee co-author

1. Kirkpatrick-Steger, K., Vander Linden, S., & Gormezano, I. (1991a). Effects of MDA on classical conditioning of the rabbit nictitating membrane response. Pharmacology Biochemistry & Behavior, *39*, 183-189.
2. Kirkpatrick-Steger, K., Vander Linden, S., & Gormezano, I. (1991b). Effects of MDA, CS intensity, and UCS intensity on the rabbit's conditioned nictitating membrane response. Bulletin of the Psychonomic Society, *29*, 560-562.
3. Marshall-Goodell, B., Kehoe, E. J., Kirkpatrick-Steger, K., & Gormezano, I. (1992). Laws of the unconditioned reflex in the rabbit nictitating membrane preparation. Psychobiology, *20*, 229-237.
4. Kirkpatrick-Steger, K., Vander Linden, S., & Gormezano, I. (1992). Effects of MDA upon differential serial compound conditioning and reflex modification of the rabbit's nictitating membrane response. Pharmacology Biochemistry & Behavior, *41*, 333-342.
5. Wasserman, E. A., Kirkpatrick-Steger, K., Van Hamme, L. J., & Biederman, I. (1993). Pigeons are sensitive to the spatial organization of complex visual stimuli. Psychological Science, *4*, 336-341.
6. Gagliardi, J. L., Kirkpatrick-Steger, K., Thomas, J., Allen, G. J., & Blumberg, M. S. (1995). Seeing and knowing: Knowledge attribution versus stimulus control in adult humans (Homo sapiens). Journal of Comparative Psychology, *109*, 107-114.
7. Wasserman, E. A., Hugart, J., & Kirkpatrick-Steger, K. (1995). Pigeons learn the same-different concept after training with complex visual stimuli. Journal of Experimental Psychology: Animal Behavior Processes, *21*, 248-252.
8. Kirkpatrick-Steger, K., & Wasserman, E. A. (1996). The what and the where of the pigeon's processing of complex visual stimuli. Journal of Experimental Psychology: Animal Behavior Processes, *22*, 60-67.
9. Kirkpatrick-Steger, K., Wasserman, E. A., & Biederman, I. (1996). Effects of spatial rearrangement of object components on picture recognition in pigeons. Journal of the Experimental Analysis of Behavior, *65*, 465-475.
10. Wasserman, E. A., Gagliardi, J. L., Cook, B. R., Kirkpatrick-Steger, K., Astley, S. L., & Biederman, I. (1996). The pigeon's recognition of drawings of depth-rotated stimuli. Journal of Experimental Psychology: Animal Behavior Processes, *22*, 205-221.

11. Kirkpatrick-Steger, K., Miller, S. S., Betti, C. A., & Wasserman, E. A. (1996). Cyclic responding by pigeons on the peak timing procedure. Journal of Experimental Psychology: Animal Behavior Processes, 22, 447-460.
12. Kirkpatrick-Steger, K., Wasserman, E. A., & Biederman, I. (1998). Effects of geon deletion, scrambling, and movement on picture recognition in pigeons. Journal of Experimental Psychology: Animal Behavior Processes, 24, 34-46.
13. Kirkpatrick, K. & Church, R. M. (1998). Are separate theories of timing and conditioning necessary? Behavioural Processes, 44, 163-182.
14. Kirkpatrick, K., & Church, R. M. (2000). Stimulus and temporal cues in classical conditioning. Journal of Experimental Psychology: Animal Behavior Processes, 26, 206-219.
15. Kirkpatrick-Steger, K., Wasserman, E. A., & Biederman, I. (2000). The pigeon's performance on shape and location discriminations. Visual Cognition, 7, 417-436.
16. Kirkpatrick, K., & Church, R. M. (2000). Independent effects of stimulus and cycle duration on appetitive conditioning in rats: The role of timing processes. Animal Learning & Behavior, 28, 373-388.
17. Kirkpatrick, K. (2002). Packet theory of conditioning and timing. Behavioural Processes, 57, 89-106.
18. Kirkpatrick, K., & Church, R. M. (2003). Tracking the expected time to reinforcement in temporal conditioning procedures. Learning & Behavior, 31, 3-21.
19. Kirkpatrick, K., & Church, R. M. (2004). Temporal learning in random control procedures. Journal of Experimental Psychology: Animal Behavior Processes, 30, 213-228.
20. Jennings, D.*, & Kirkpatrick, K. (2004). CS-US interval duration and the US pre-exposure effect. International Journal of Comparative Psychology, 17, 143-167.
21. Jennings, D.*, & Kirkpatrick, K. (2006). Interval duration effects on blocking in appetitive conditioning. Behavioural Processes, 71, 318-329.
22. Peissig, J. J., Kirkpatrick, K., Young, M. E., Wasserman, E. A., & Biederman, I. (2006). Effects of varying stimulus size on object recognition in pigeons. Journal of Experimental Psychology: Animal Behavior Processes, 32, 419-430.
23. Russell, R.*, & Kirkpatrick, K. (2007). The role of temporal generalization in a temporal discrimination task. Behavioural Processes, 74, 115-125.
24. Kirkpatrick, K., Wilkinson, A.*, & Johnston, S.* (2007). Pigeons discriminate continuous vs. discontinuous line segments. Journal of Experimental Psychology: Animal Behavior Processes, 33, 273-286.
25. Jennings, D. J.*, Bonardi, C., & Kirkpatrick, K. (2007). Overshadowing and stimulus duration. Journal of Experimental Psychology: Animal Behavior Processes, 33, 464-475.
26. Wilkinson, A.*, & Kirkpatrick, K. (2009). Visually-guided capture of a moving stimulus by the pigeon (*Columba livia*). Animal Cognition, 12, 127-144.
27. Galtress, T.*, & Kirkpatrick, K. (2009). Reward value effects on timing in the peak procedure. Learning and Motivation, 40, 109-131.
28. Pizzo, M. J., Kirkpatrick, K., & Blundell, P. J. (2009). The effect of changes in criterion value on differential reinforcement of low rate schedule performance. Journal of the Experimental Analysis of Behavior, 92, 181-198.
29. Galtress, T.*, & Kirkpatrick, K. (2010). The role of the nucleus accumbens core in impulsive choice, timing, and reward processing. Behavioral Neuroscience, 124, 26-43. PMID: 3909469.
30. Galtress, T.*, & Kirkpatrick, K. (2010). Reward magnitude effects on temporal discrimination. Learning and Motivation, 41, 108-124. PMID: 4876720.
31. Wilkinson, A.*, & Kirkpatrick, K. (2011). Tracking and capture of constant and varying velocity stimuli: a cross-species comparison of pigeons and humans. Animal Cognition, 14, 59-71.
32. Galtress, T.*, Marshall, A. T.*, & Kirkpatrick, K. (2012). Motivation and timing: Clues for modeling the reward system. Behavioural Processes, 90, 142-153. PMID: 3335954.
33. Galtress, T.*, Garcia, A.*, & Kirkpatrick, K. (2012). Individual differences in impulsive choice and timing in rats. Journal of the Experimental Analysis of Behavior, 98, 65-87. PMID: 3408726

34. Marshall, A. T.*, & Kirkpatrick, K. (2013). The effects of the previous outcome on probabilistic choice in rats. Journal of Experimental Psychology: Animal Behavior Processes, 39, 24-38, PMID: 3906648.
35. Garcia, A.*, & Kirkpatrick, K. (2013). Impulsive choice behavior in four strains of rats: Evaluation of possible models of Attention Deficit/Hyperactivity Disorder. Behavioural Brain Research, 238, 10-22. PMID: 3513624.
36. Kirkpatrick, K., Marshall, A. T.*, Clarke, J.*, & Cain, M. E. (2013). Environmental rearing effects on impulsivity and reward sensitivity. Behavioral Neuroscience, 127, 712-724, PMID: 3906647.
37. Kirkpatrick, K. (2014). Interactions of timing and prediction error learning. Behavioural Processes, 101, 135-145. DOI: 10.1016/j.beproc.2013.08.005, PMID: 3926915.
38. Kirkpatrick, K., Bilton, T.*, Hansen, B. C., & Loschky, L. C. (2014). Scene gist categorization by pigeons. Journal of Experimental Psychology: Animal Learning and Cognition, 40, 162-177.
39. Marshall, A. T.*, Smith, A. P.*, & Kirkpatrick, K. (2014). Mechanisms of impulsive choice: I. Individual differences in interval timing and reward processing. Journal of the Experimental Analysis of Behavior, 102, 86-101. DOI: 10.1002/jeab.88, PMID: 4232211
40. Kirkpatrick, K., Marshall, A. T.*, Smith, A.*, Koci, J., & Park, Y. (2014). Individual differences in impulsive and risky choice: Effects of environmental rearing conditions. Behavioural Brain Research, 269, 115-127, DOI: 10.1016/j.bbr.2014.04.024, PMID: 4069030.
41. Peterson, J. R.*, Hill, C. C.*, & Kirkpatrick, K. (2015). Measurement of impulsive choice in rats: Same and alternate form test-retest reliability and temporal tracking. Journal of the Experimental Analysis of Behavior, 103, 166-179. DOI: 10.1002/jeab.124, PMID: 4875579.
42. Smith, A. P.*, Marshall, A. T.*, & Kirkpatrick, K. (2015). Mechanisms of impulsive choice: II. Time-based interventions to improve self-control. Behavioural Processes, 112, 29-42. DOI: 10.1016/j.beproc.2014.10.010, PMID: 4314470.
43. Marshall, A. T.*, & Kirkpatrick, K. (2015). Relative gains, losses, and reference points in probabilistic choice in rats. PLoS ONE, 10, e0117697. DOI:10.1371/journal.pone.0117697, PMID: 4319772.
44. Kirkpatrick, K., Marshall, A. T.*, Smith, A. P.* (2015). Mechanisms of individual differences in impulsive and risky choice. Comparative Cognition and Behavior Reviews, 10, 45-72. PMID: 5045043.
45. Peterson, J. R.*, Hill, C. C.*, Marshall, A. T.*, Stuebing, S. L.*, & Kirkpatrick, K. (2015). I can't wait: Methods for measuring and moderating individual differences in impulsive choice. Journal of Agricultural and Food Industrial Organization, 13, 89-99. PMID: 5045041.
46. Marshall, A. T.*, & Kirkpatrick, K. (2015). Everywhere and everything: The power and ubiquity of time. International Journal of Comparative Psychology, 28, 1-29. PMID: 5382961
47. Marshall, A. T.*, & Kirkpatrick, K. (2016). Mechanisms of impulsive choice: III. The role of reward processes. Behavioural Processes, 123, 134-148. DOI:10.1016/j.beproc.2015.10.013. PMID: 4729665.
48. Smith, A. P.*, Peterson, J. R.*, & Kirkpatrick, K. (2016). Reward contrast effects on impulsive choice and timing in rats. Timing and Time Perception, 4, 147-166. PMID: 5113731.
49. Peterson, J. R.*, & Kirkpatrick, K. (2016). The effects of a time-based intervention on experienced middle-aged rats. Behavioural Processes, 133, 44-51. DOI: 10.1016/j.beproc.2016.11.002. PMID: 5124529
50. Wang, M. Z.*, Marshall, A. T.*, & Kirkpatrick, K. (2017). Differential effects of social and novelty enrichment on individual differences in impulsivity and behavioral flexibility. Behavioural Brain Research, 327, 54-64. PMID: 5473952
51. Marshall, A. T.*, & Kirkpatrick, K. (2017). Reinforcement learning models of risky choice and the promotion of risk-taking by losses-disguised-as-wins in rats. Journal of Experimental Psychology: Animal Learning and Cognition, 43, 262-279. DOI: 10.1037/xan0000141. PMID: 5682951
52. Steele, C. C.*, Pirkle, J. R. A.*, & Kirkpatrick, K. (2017). Diet-induced impulsivity: Effects of a high-fat and a high-sugar diet on impulsive choice in rats. PLoS ONE, 12, e0180510. DOI: 10.1371/journal.pone.0180510. PMID: 5491254

53. Steele, C. C.*, Peterson, J. R.*, Marshall, A. T.*, Stuebing, S. L.*, & Kirkpatrick, K. (2018). Nucleus accumbens core lesions induce sub-optimal choice and reduce sensitivity to magnitude and delay in impulsive choice tasks. Behavioural Brain Research, *339*, 28-38. DOI: 10.1016/j.bbr.2017.11.013. PMID: 5729075
54. Kirkpatrick, K., Marshall, A. T.*, Steele, C. C.*, & Peterson, J. R.* (2018). Resurrecting the individual in behavioral analysis: Using mixed effects models to address nonsystematic discounting data. Behavior Analysis: Research and Practice, *18*, 219-238. DOI: 10.1037/bar0000103. PMID: 6101656
55. Bailey, C.*, Peterson, J. R.*, Schnegelsiepen, A.*, Stuebing, S. L.*, & Kirkpatrick, K. (2018). Durability and generalizability of time-based intervention effects on impulsive choice in rats. Behavioural Processes, *152*, 54-62. DOI: 10.1016/j.beproc.2018.03.003. PMID: 5966323
56. Jennings, D.*, & Kirkpatrick, K. (2018). Temporal map formation in second-order conditioning. Behavioural Processes, *154*, 60-72. DOI: 10.1016/j.beproc.2018.02.001.
57. Stuebing, S. L.*, Marshall, A. T.*, Triplett, A.*, & Kirkpatrick, K. (2018). Females in the forefront: time-based intervention effects on impulsive choice and interval timing in female rats. Animal Cognition, *21*, 759-772. DOI: 10.1007/s10071-018-1208-9. PMID: 6264917
58. Steele, C. C.*, Pirkle, J. R. A.*, Davis, I. R.*, & Kirkpatrick, K. (2019). Dietary effects on the determinants of food choice: Impulsive choice, discrimination, incentive motivation, preference, and liking. Appetite, *136*, 160-172. DOI: 10.1016/j.appet.2019.01.023. PMID: 6430664
59. Smith, T.*, Panfil, K.*, Bailey, C.*, & Kirkpatrick, K. (2019). Cognitive and behavioral training interventions to promote self-control. Journal of Experimental Psychology: Animal Learning and Cognition, *45*, 259-279. DOI: 10.1037/xan0000208. PMID: 671382.
60. Steele, C. C.*, Gwinner, M.*, Smith, T.*, Young, M., & Kirkpatrick, K. (2019). Experience matters: The effects of hypothetical versus experiential delays and magnitudes on impulsive choice in delay discounting tasks. Brain Sciences, *379*, 1-16. DOI: doi:10.3390/brainsci9120379
61. Panfil, K.*, Bailey, C.*, Davis, I.*, Mains, A.*, & Kirkpatrick, K. (2020). A time-based intervention to treat impulsivity in male and female rats. Behavioural Brain Research, *379*, 112316. DOI: 10.1016/j.bbr.2019.112316. PMID: 6917889
62. Wilkinson, A.*, & Kirkpatrick, K. (2020). Tracking of unpredictable moving stimuli by pigeons. Learning & Behavior, *48*, 27-40. DOI: 10.3758/s13420-020-00412-x
63. Steele, C. C.*, Steele, T. J., Gwinner, M.*, Rosenkranz, S. K., & Kirkpatrick, K. (2021). The relationship between dietary fat intake, impulsive choice, and metabolic health. Appetite, *165*, 105292. DOI: 10.1016/j.appet.2021.105292. PMID: 8206036
64. Voss, N.*, & Kirkpatrick, K. (2021). An assessment tool for evaluating the National Institute of General Medical Sciences COBRE and INBRE mentoring programs. Advances in Physiology Education, *45*, 626-633. DOI: 10.1152/advan.00237.2020. PMID: 8461797
65. Bailey, C.*, Panfil, K.*, & Kirkpatrick, K. (2021). Hazard function effects on promoting self-control in variable interval time-based interventions in rats. Journal of the Experimental Analysis of Behavior, *116*, 279-299. DOI: 10.1002/jeab.722. PMID: 8595656
66. Smith, T. R.*, Panfil, K.*, & Kirkpatrick, K. (2022). Generalizability of time-based interventions: Effects of choice procedure and smaller-sooner delay. Behavioural Processes, *196*, 104584. DOI: 10.1016/j.beproc.2022.104584. PMID: 35033629.

BOOK CHAPTERS AND OTHER PUBLICATIONS

67. Church, R. M., & Kirkpatrick, K. (2001). Theories of conditioning and timing. In R. R. Mowrer & S. B. Klein (Eds.), Handbook of contemporary learning theories, (pp. 211-253). Hillsdale, NJ: Lawrence Erlbaum Assoc.
68. Kirkpatrick, K. (2001). Object recognition. In R. Cook (Ed.), Avian visual cognition. www address: <http://www.pigeon.psy.tufts.edu/avc/>.
69. Kirkpatrick, K. (2001). Picture perception in animals (book review). Perception, *30*, 1027-1028.

70. Church, R. M., Guilhardi, P., Keen, R., MacInnis, M., & Kirkpatrick, K. (2003). Simultaneous temporal processing, (pp. 3-19). In H. Helfrich (Ed.), Time and mind II. Seattle, WA, USA: Hogrefe & Huber.
71. Kirkpatrick, K., & Hall, G. (2005). Learning and memory. In J. J. Bolhuis & L.-A. Giraldeau (Eds.), The behavior of animals: Mechanisms, function and evolution, (pp. 146-169). Oxford, UK: Blackwell.
72. Kirkpatrick, K. (2013). Data mining and neurocomputational modeling in the neurosciences. In M. L. Rice (Ed.), The Merrill Series on The Research Mission of Public Universities (pp. 81-89). Lawrence, KS: The University of Kansas Merrill Advanced Studies Center.
73. Kirkpatrick, K., & Lazareva, O. (2016). Exploring animal minds: A tribute to the contributions of Edward Wasserman (editorial). Behavioural Processes, 123, 1-3.
74. Kirkpatrick, K., & Balsam, P. D. (2016). Associative learning and timing. Current Opinion in Behavioral Sciences, 8, 181-185. DOI: 10.1016%2Fj.cobeha.2016.02.023. PMCID: 4861159
75. Marshall, A. T.*, & Kirkpatrick, K. (2017). Accumbens D2: Raters of the Loss Outcome. Learning & Behavior, 45, 3-4. DOI: 10.3758/s13420-016-0244-z. PMCID: 5253126
76. Kirkpatrick, K. (2017). Packet theory. In J. Vonk & T. Shackelford (Eds.), Encyclopedia of Animal Cognition and Behavior (pp. 1-5). Cham: Springer International Publishing.
77. Kirkpatrick, K., & Hall, G. (2022). Learning and memory. In J. J. Bolhuis, L.-A. Giraldeau, and J. A. Hogan (Eds.), The behavior of animals: Mechanisms, function, and evolution 2nd Edition (pp. 197-222). Hoboken, NJ: John Wiley & Sons.
78. Kirkpatrick, K. (2022). Junior faculty research career development in the era of COVID-19. In M. L. Rice (Ed.), The Merrill Series on The Research Mission of Public Universities, Vol. 124 (pp. 49-56). Lawrence, KS: The University of Kansas Merrill Advanced Studies Center.
79. Crystal, J. D., & Kirkpatrick, K. (2022). Russell Miller Church (1930-2021). American Psychologist.

CONFERENCE PRESENTATIONS

* Indicates student, post-baccalaureate, or post-doctoral trainee co-author

1. Kirkpatrick-Steger, K., Vander Linden, S., & Gormezano, I. (1991). *Effects of MDA on classical conditioning of the rabbit nictitating membrane reflex*. Midwestern Psychological Association, Chicago, IL.
2. Kirkpatrick-Steger, K., Wasserman, E. A., Van Hamme, L. J., & Biederman, I. (1993). *Pigeons are sensitive to the spatial organization of complex visual stimuli*. Midwestern Psychological Association, Chicago, IL.
3. Wasserman, E. A., Kirkpatrick-Steger, K., Oden, G. C., & Biederman, I. (1993). *Pigeons differentially observe drawings that differ only in spatial organization*. The Psychonomic Society, 34th Annual Meeting, Washington, DC.
4. Kirkpatrick-Steger, K., Wasserman, E. A., & Betti, C. (1994). *The development of temporal responding on the peak procedure*. Midwestern Psychological Association, Chicago, IL.
5. Kirkpatrick-Steger, K., Wasserman, E. A., & Biederman, I. (1994). *Effects of spatial rearrangement of object components on picture recognition in pigeons*. The Psychonomic Society, 35th Annual Meeting, Saint Louis, MO.
6. Kirkpatrick-Steger, K., Hall, F. D., & Wasserman, E. A. (1995). *The what and the where of the pigeon's processing of complex visual stimuli*. Midwestern Psychological Association, Chicago, IL.
7. Kirkpatrick-Steger, K., Wasserman, E. A., & Biederman, I. (1995). *Effects of deletion, movement, and scrambling of object components on picture recognition in pigeons*. The Psychonomic Society, 36th Annual Meeting, Los Angeles, CA.
8. Kirkpatrick-Steger, K., & Wasserman, E. A. (1996). *Pigeon picture perception*. International Conference on Comparative Cognition, Melbourne, FL.
9. Kirkpatrick, K., & Church, R. M. (1997). *The timing of three behaviors under the peak procedure*. International Conference on Comparative Cognition, Melbourne, FL.

10. Kirkpatrick, K., & Church, R. M. (1997). *Blocking of conditioned approach behavior in rats using time as a stimulus*. The Psychonomic Society, 38th Annual Meeting, Philadelphia, PA.
11. Kirkpatrick, K., Lacourse, D. M., & Church, R. M. (1998). *The conditioned approach response in rats: Autoshaping, negative automaintenance, and temporal control*. Eastern Psychological Association, Boston, MA.
12. Kirkpatrick, K. (1998). *Application of the timing process to classical conditioning*. International Conference on Comparative Cognition, Melbourne, FL.
13. Church, R. M., & Kirkpatrick, K. (1998). *A comparison of models of conditioning and timing*. The Psychonomic Society, 39th Annual Meeting, Dallas, TX.
14. Kirkpatrick, K. (1999). *Stimulus and temporal content in classical conditioning*. International Conference on Comparative Cognition, Melbourne, FL.
15. Kirkpatrick, K., & Church, R. M. (1999). *Acquisition of conditioning and timing in classical conditioning procedures*. Eastern Psychological Association, Providence, RI.
16. Kirkpatrick, K., & Church, R. M. (1999). *Simultaneous temporal processing in a classical conditioning procedure*. The Psychonomic Society, 40th Annual Meeting, Los Angeles, CA.
17. Kirkpatrick, K., & Church, R. M. (2000). *An expected time analysis of classical conditioning*. New England Sequence and Timing Meeting, New Haven, CT.
18. Kirkpatrick, K., & Church, R. M. (2000). *Tracking of expected times until food in classical conditioning procedures*. International Conference on Comparative Cognition, Melbourne, FL.
19. Kirkpatrick, K., & Church, R. M. (2000). *Temporal conditioning of irrelevant stimuli*. Eastern Psychological Association, Baltimore, MD.
20. Kirkpatrick, K., & Church, R. M. (2000). *Tracking the expected time to reinforcement*. Psychonomics Society Annual Meeting, New Orleans, LA.
21. Kirkpatrick, K. (2001). *Simultaneous timing in trace conditioning*. Associative Learning Symposia, Gregynog, Wales.
22. Kirkpatrick, K., & Church, R. M. (2001). *Analysis of timing and conditioning under partial reinforcement procedures*. XIII Congreso de la Sociedad Española de Psicología Comparada Reunión Internacional. San Sebastián, Spain.
23. Kirkpatrick, K., & Jennings, D.* (2002). *Characteristics of response bouts in appetitive conditioning*. Associative Learning Symposium, Gregynog, Wales.
24. Jennings, D.*, & Kirkpatrick, K. (2002). *Comparison of blocking and US pre-exposure effects*. Associative Learning Symposium, Gregynog, Wales.
25. Kirkpatrick, K., (2002). *The role of temporal intervals in blocking*. Psychonomics Society, Kansas City, KS, USA.
26. Jennings, D.*, & Kirkpatrick, K. (2003). *Evidence for blocking during appetitive conditioning: The role of serial versus simultaneous compounds*. Associative Learning Symposium, Gregynog, Wales.
27. Russell, R.*, & Kirkpatrick, K. (2003). *An investigation of peak shift in a temporal generalization task in rats*. Associative Learning Symposium, Gregynog, Wales.
28. Russell, R.*, & Kirkpatrick, K. (2004). *A demonstration of the instability of temporal bisection*. International Conference on Comparative Cognition, Melbourne, FL, USA.
29. Kirkpatrick, K., & Jennings, D.* (2004). *Temporal predictability modulates the magnitude of the blocking effect in rats*. International Conference on Comparative Cognition, Melbourne, FL, USA.
30. Russell, R.*, & Kirkpatrick, K. (2004). *Rat's sensitivity to alterations made to a VI food schedule*. Associative Learning Symposium, Gregynog, Wales.
31. Jennings, D.*, & Kirkpatrick, K. (2004). *Temporal encoding during second-order conditioning*. Associative Learning Symposium, Gregynog, Wales.
32. Blundell, P., & Kirkpatrick, K. (2005). *The effect of pre-training lesions of the basolateral amygdala on the acquisition of timing*. Associative Learning Symposium, Gregynog, Wales.
33. Galtress, T.*, & Kirkpatrick, K. (2005). *Choice as a function of reward magnitude and delay*. Associative Learning Symposium, Gregynog, Wales.

34. Jennings, D.*, Kirkpatrick, K., & Bonardi, C. (2005). *Temporal uncertainty and the overshadowing effect*. Associative Learning Symposium, Gregynog, Wales.
35. Kirkpatrick, K., & Jennings, D.* (2005). *Temporal map formation in second-order conditioning?* Associative Learning Symposium, Gregynog, Wales.
36. Kirkpatrick, K., Johnston, S.*, & Wilkinson, A.* (2005). *Discrimination of continuous vs. discontinuous lines in pigeons (Columba livia)*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
37. Wilkinson, A.*, & Kirkpatrick, K. (2005). *Complex tracking behaviour in pigeons (Columba livia)*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
38. Galtress, T.*, & Kirkpatrick, K. (2006). *Reward value and reward timing are not independent*. International Conference on Comparative Cognition, Melbourne, FL, USA.
39. Wilkinson, A.*, & Kirkpatrick, K. (2006). *Complex catching and tracking behavior in pigeons (Columba livia)*. International Conference on Comparative Cognition, Melbourne, FL, USA.
40. Wilkinson, A.*, & Kirkpatrick, K. (2007). *The effects of training history on pigeons' tracking and capture of moving objects*. International Conference on Comparative Cognition, Melbourne, FL, USA.
41. Galtress, T.*, & Kirkpatrick, K. (2007). *Manipulating reward value modifies the perception of temporal cues*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
42. Pizzo, M.*, & Kirkpatrick, K. (2007). *A quantitative analysis of responding on maintained versus shifted DRL schedules*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
43. Pizzo, M.*, Galtress, T.*, & Kirkpatrick, K. (2008). *Temporal expectation under pre-feeding in the peak procedure*. International Conference on Comparative Cognition, Melbourne, FL, USA.
44. Galtress, T.*, & Kirkpatrick, K. (2008). *Changing the value of food reinforcement retards learning about a shift in the time of delivery*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
45. Wilkinson, A.*, & Kirkpatrick, K. (2009). *Tracking and capture of constant and sinusoidal velocities in pigeons and humans*. International Conference on Comparative Cognition, Melbourne, FL.
46. Galtress, T.*, & Kirkpatrick, K. (2009). *Reinforcer magnitude effects on temporal discrimination*. International Conference on Comparative Cognition, Melbourne, FL.
47. Pizzo, M. J.*, Kirkpatrick, K., & Blundell, P. (2009). *Changes in criterion value alter performance on DRL schedules*. International Conference on Comparative Cognition, Melbourne, FL.
48. Kirkpatrick, K., & Galtress, T.* (2009). *The effect of changes in reward magnitude and delay on impulsive behaviour in the Nucleus Accumbens Core*. Annual Meeting of the Psychobiology Section of the British Psychological Society, Windermere, UK.
49. Kirkpatrick, K., Ghormley, D.*, Guevara, M.*, Garcia, A.*, Sears, T.*, Hansen, B.C., & Loschky, L.C. (2010). *Scene gist categorization in pigeons*. Annual Meeting of the Society for the Quantitative Analyses of Behavior, San Antonio, TX.
50. Garcia, A.*, & Kirkpatrick, K. (2010). *Timing, reward processing and choice behavior in Wistar and Sprague-Dawley rats*. Annual Meeting of the Society for the Quantitative Analyses of Behavior, San Antonio, TX.
51. Garcia, A.*, Vilardo, M.*, & Kirkpatrick, K. (2011). *Factors influencing impulsive choice behavior in different strains of rats*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
52. Marshall, A.*, Clarke, J.*, Crumer, A.*, Cain, M., & Kirkpatrick, K. (2011). *Differential rearing environment effects on impulsive action and impulsive choice in rats*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
53. Galtress, T.*, Crumer, A.*, Garcia, A.*, & Kirkpatrick, K. (2011). *Individual differences in impulsive choice behavior*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
54. Galtress, T.*, & Kirkpatrick, K. (2011). *The effect of changes in motivational state on timing*. Annual Meeting of the Society for the Quantitative Analyses of Behavior, Denver, CO.

55. Garcia, A.*, Crumer, A.*, & Kirkpatrick, K. (2011). *Individual differences in impulsive choice behavior in different strains of rats*. Annual Meeting of the Society for the Quantitative Analyses of Behavior, Denver, CO.
56. Marshall, A.*, & Kirkpatrick, K. (2011). *Probabilistic choice in rats*. Fall Meeting of the International Conference on Comparative Cognition, Seattle, WA.
57. Galtress, T.*, & Kirkpatrick, K. (2011). *Individual differences in delay discounting*. Fall Meeting of the International Conference on Comparative Cognition, Seattle, WA.
58. Kirkpatrick, K., Clarke, J.*, & Cain, M. E. (2011). *Environmental enrichment effects on reward sensitivity*. Annual Meeting of the Psychonomic Society, Seattle, WA.
59. Marshall, A.*, & Kirkpatrick, K. (2012). *Previous outcome effects on sequential probabilistic choice behavior*. Oklahoma/Kansas Judgment and Decision Making Group Workshop, Manhattan, KS.
60. Galtress, T.*, & Kirkpatrick, K. (2012). *A rat model of impulsive choice behavior: Reward-related correlates of performance*. Oklahoma/Kansas Judgment and Decision Making Group Workshop, Manhattan, KS.
61. Marshall, A.*, & Kirkpatrick, K. (2012). *Modeling sequential choices in a risky choice task*. Annual Meeting of the Society for the Quantitative Analyses of Behavior, Seattle, WA.
62. Vilardo, M.*, Katz, B., & Kirkpatrick, K. (2012). *A rodent model for detection of oxygen based explosives and propellants*. Society for the Quantitative Analyses of Behavior, Seattle, WA.
63. Smith, A.*, Galtress, T.*, & Kirkpatrick, K. (2012). *Predictors of impulsive choice behavior*. Society for the Quantitative Analyses of Behavior, Seattle, WA.
64. Galtress, T.*, & Kirkpatrick, K. (2012). *Timing, reward discrimination, and impulsive choice behavior*. Society for the Quantitative Analyses of Behavior, Seattle, WA.
65. Galtress, T.*, Smith, A.*, & Kirkpatrick, K. (2012). *DRL intervention effects on an impulsive choice task*. Fall Meeting of the International Conference on Comparative Cognition, New Orleans, LA.
66. Marshall, A.*, & Kirkpatrick, K. (2012). *Reward magnitude effects on sequential risky choices in rats*. Fall Meeting of the International Conference on Comparative Cognition, New Orleans, LA.
67. Kirkpatrick, K. (2012). *Adventures in data mining*. Fall Meeting of the International Conference on Comparative Cognition, New Orleans, LA.
68. Marshall, A.*, Galtress, T.*, & Kirkpatrick, K. (2013). *Impulsive choice mechanisms: A reductionist approach*. Society for the Quantitative Analyses of Behavior, Minneapolis, MN.
69. Smith, A.*, Galtress, T.*, & Kirkpatrick, K. (2013). *Reward contrast effects on timing and impulsive choice behavior*. Society for the Quantitative Analyses of Behavior, Minneapolis, MN.
70. Hyder, J.*, Marshall, A.*, & Kirkpatrick, K. (2013). *The effects of relative gains and losses on probabilistic choice in rats*. Society for the Quantitative Analyses of Behavior, Minneapolis, MN.
71. Marshall, A.*, Hyder, J.*, & Kirkpatrick, K. (2013). *Probabilistic choice in rats: the effects of differential losses and alternative outcomes*. Fall Meeting of the International Conference on Comparative Cognition, Toronto, Canada.
72. Smith, A.*, & Kirkpatrick, K. (2013). *Delay exposure as a potential mechanism to increase self-control in rats*. Fall Meeting of the International Conference on Comparative Cognition, Toronto, Canada.
73. Kirkpatrick, K. (2013). *Measurement of delay discounting: methodological issues*. Annual Meeting of the Psychonomic Society, Toronto, Canada.
74. Hill, C. C.*, Peterson, J. R.*, & Kirkpatrick, K. (2014). *Measurement of impulsive choice in rats: I. Preliminary assessment*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
75. Marshall, A. T.*, Fardette, E.*, & Kirkpatrick, K. (2014). *The effects of certain outcome magnitude on probabilistic choice in rats*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
76. Peterson, J. R.*, Hill, C. C.*, & Kirkpatrick, K. (2014). *Measurement of impulsive choice in rats: II. Test-retest reliability*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
77. Wang, Z.*, Marshall, A. T.*, & Kirkpatrick, K. (2014). *Environmental rearing effects on behavioral flexibility*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.

78. Marshall, A. T.*, & Kirkpatrick, K. (2014). *Mechanisms of impulsive choice: reward sensitivity and devaluation*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
79. Wang, Z.*, Marshall, A. T.*, & Kirkpatrick, K. (2014). *Environmental rearing effects on impulsivity in rats*. Society for Neuroscience, Washington, DC.
80. Peterson, J. R.*, Hill, C. C.*, & Kirkpatrick, K. (2014). *The role of timing processes in three different impulsive choice procedures*. Society for Neuroscience, Washington, DC.
81. Hill, C. C.*, & Kirkpatrick, K. (2015). *Mechanisms of impulsive choice: IV. Individual differences in timing and reward processes*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
82. Lott, J. R.*, Peterson, J. R.*, & Kirkpatrick, K. (2015). *The effect of dominance on risky and impulsive choice*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
83. Marshall, A. T.*, Wang, Z.*, & Kirkpatrick, K. (2015). *Individual differences in impulsivity and behavioral flexibility: Effects of early rearing environment*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
84. Peterson, J. R.*, & Kirkpatrick, K. (2015). *A time-based intervention to promote self-control in middle-aged rats*. Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
85. Hill, C. C.*, & Kirkpatrick, K. (2015). *Effects of dietary manipulations on body weight, locomotor activity, and impulsive choice in rats*. Fall Meeting of the International Conference on Comparative Cognition, Chicago, IL.
86. Stuebing, S. L.*, Marshall, A. T.*, Triplett, A.*, & Kirkpatrick, K. (2015). *Exploring the gender gap: individual differences in impulsive choice and timing in female rats*. Fall Meeting of the International Conference on Comparative Cognition, Chicago, IL.
87. Hill, C. C.*, & Kirkpatrick, K. (2015). *Short- and long-term effects of dietary manipulations on impulsive choice behavior and motivation in rats*. Society for Neuroscience, Chicago, IL.
88. Edmisten, S.*, Campa, M.*, Peterson, J. R.*, & Kirkpatrick, K. (2015). *Nucleus accumbens core lesions decrease reward magnitude sensitivity in steady state impulsive choice*. Society for Neuroscience, Chicago, IL.
89. Lott, J.*, Davis, C.*, Peterson, J. R.*, & Kirkpatrick, K. (2015). *Social dominance increases risky choice but not impulsive choice*. Society for Neuroscience, Chicago, IL.
90. Marshall, A. T.*, Stuebing, S. L.*, Triplett, A.*, & Kirkpatrick, K. (2015). *Females in the forefront: the effects of a temporal intervention on impulsive choice in Sprague Dawley rats*. Society for Neuroscience, Chicago, IL.
91. Marshall, A. T.*, Davis, C.*, & Kirkpatrick, K. (2016). *Losses-disguised-as-wins and risky choice in rats: A reinforcement learning perspective*. Eastern Psychological Association, New York, NY.
92. Hill, C. C.*, Pirkle, J. R. A.*, & Kirkpatrick, K. (2016). *The effect of diet on individual differences in impulsive choice*. Nebraska Symposium on Motivation, Lincoln, NE.
93. Edmisten, S.*, Campa, M. S.*, Peterson, J. R.*, & Kirkpatrick, K. (2016). *Nucleus accumbens core lesions have little effect on temporal sensitivity in impulsive choice*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
94. Lott, J. R.*, Davis, C.*, Marshall, A. T.*, Peterson, J. R.*, & Kirkpatrick, K. (2016). *Dominance and housing effects on individual differences in choice and motivation*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
95. Marshall, A. T.*, Davis, C.*, & Kirkpatrick, K. (2016). *Reinforcement learning models of dynamic decision making in rats*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
96. Hill, C. C.*, Pirkle, J. R. A.*, & Kirkpatrick, K. (2016). *The effect of diet exposure on impulsive choice in rats: delay and reward sensitivity*. Society for Neuroscience, San Diego, CA.
97. Stuebing, S. L.*, & Kirkpatrick, K. (2016). *A novel open-field task for the analysis of episodic-like memory and its components*. Society for Neuroscience, San Diego, CA.
98. Marshall, A. T.*, Peterson, J. R.*, Turpen, C.*, & Kirkpatrick, K. (2016). *The durability and generalizability of neurocognitive intervention effects on impulsive choice in rats*. Society for Neuroscience, San Diego, CA.

99. Bailey, C.*, Marshall, A. T.*, Peterson, J. R.*, Schnegelsiepen, A.*, Stuebing, S. L.*, & Kirkpatrick, K. (2017). *Generalizability of a fixed-interval intervention effects on impulsive choice in rats*. Society for the Quantitative Analyses of Behavior, Denver, CO.
100. Binkley, C. M.*, Stuebing, S. L.*, Peterson, J. R.*, Critcher, B.*, Davis, I. R.*, Koehn, P.*, & Kirkpatrick, K. (2017). *Fading in and out of time: Interventions to promote self-control*. Society for the Quantitative Analyses of Behavior, Denver, CO.
101. Pirkle, J. R. A.*, Steele, C. C.*, & Kirkpatrick, K. (2017). *The effects of dietary exposure on hedonic (liking) responses in rats*. Society for the Quantitative Analyses of Behavior, Denver, CO.
102. Steele, C. C.*, Pirkle, J. R. A.*, Davis, I. R.*, & Kirkpatrick, K. (2017). *Diet-induced impulsivity: An investigation into bias and sensitivity to delay*. Society for the Quantitative Analyses of Behavior, Denver, CO.
103. Bailey, C.*, Schnegelsiepen, A.*, Stuebing, S.*, Marshall, A. T.*, Peterson, J. R.*, & Kirkpatrick, K. (2017). *Testing order and generalizability of intervention effects on impulsive choice in rats*. Pavlovian Society, Philadelphia, PA.
104. Steele, C. C.*, Davis, I. R.*, Pirkle, J. R. A.*, & Kirkpatrick, K. (2017). *Diet-induced impulsivity: The relationship between obesity and impulsive choice*. Pavlovian Society, Philadelphia, PA.
105. Duran, J. K.*, Koehn, P.*, Steele, C.*, & Kirkpatrick, K. (2018). *Computerized money and food tasks use real delays and pseudo-real rewards to measure impulsive choice*. Kansas Association for Behavior Analysis, Lawrence, KS.
106. Pirkle, J. R. A.*, Steele, C.*, & Kirkpatrick, K. (2018). *The relationship between percent body fat and liking and wanting*. Kansas Association for Behavior Analysis, Lawrence, KS.
107. Schnegelsiepen, A.*, Davis, I.*, Panfil, K.*, Bailey, C.*, Mains, A.*, & Kirkpatrick, K. (2018). *Girls just want to LL: An investigation of a fixed interval intervention effect on impulsive choice between sexes*. Kansas Association for Behavior Analysis, Lawrence, KS.
108. Mains, A.*, Critcher, B. T.*, Stuebing, S. L.*, & Kirkpatrick, K. (2018). *Effects of behavioral interventions on episodic-like memory in aged and young rats*. Kansas Association for Behavior Analysis, Lawrence, KS.
109. Critcher, B. T.*, Mains, A.*, Stuebing, S. L.*, & Kirkpatrick, K. (2018). *Episodic-like memory: Effects of aging, behavioral Interventions, and cholinergic activity*. Society for the Quantitative Analyses of Behavior, San Diego, CA.
110. Panfil, K.*, Bailey, C.*, Mains, A.*, Davis, I.*, Schnegelsiepen, A.*, & Kirkpatrick, K. (2018). *Sex differences in the efficacy of time-based interventions to promote self-control*. Society for the Quantitative Analyses of Behavior, San Diego, CA.
111. Pirkle, J. R. A.*, Steele, C. C.*, Critcher, B. T.*, & Kirkpatrick, K. (2018). *The effect of disrupted insulin signaling on impulsive choice*. Society for the Quantitative Analyses of Behavior, San Diego, CA.
112. Steele, C. C.*, Pirkle, J. R. A.*, Davis, I. R.*, & Kirkpatrick, K. (2018). *The influence of dietary history and body fat percentage on impulsive choice behavior in rats*. American Society for Nutrition, Boston, MA.
113. Steele, C. C.*, Pirkle, J. R. A.*, Duran, J. K.*, Davis, I. R.*, & Kirkpatrick, K. (2018). *Diet and time discrimination in rats and humans*. Obesity Week, Nashville, TN.
114. Small, R.*, Panfil, K.*, & Kirkpatrick, K. (2018). *Exploration of the Lewis rat as a model for the impulsivity subtype of ADHD*. Kansas Honors Connections Conference. Emporia, KS.
115. Smith, T. R.*, Bailey, C.*, Panfil, K.*, & Kirkpatrick, K. (2019). *Time-based interventions on fixed- and adjusting-delay procedures in rats*. Four Corners Association for Behavior Analysis, Santa Fe, NM.
116. Bailey, C.*, Cunningham-Younger, E.*, Lonker, T.*, & Kirkpatrick, K. (2019). *Time-based interventions to promote self-control: Effects of the hazard function of variable-interval schedules*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
117. Smith, T. R.*, Fitch, A.*, Rumbach, K.*, and Kirkpatrick, K. (2019). *The effects of the ratio of smaller-sooner and larger-later delays in an impulsive choice task*. Society for the Quantitative Analyses of Behavior, Chicago, IL.
118. Panfil, K.*, & Kirkpatrick, K. (2019). *Comparing analysis methodologies: R tutorial for nonlinear repeated measures analyses*. Society for the Quantitative Analyses of Behavior, Chicago, IL.

119. Cunningham, E.*, Deavours, A.*, Panfil, K.*, Bailey, C.*, Small, R.*, & Kirkpatrick, K. (2019). *The influence of estrous cycle on the impulsive choice behavior of female rats*. Mid-American Association for Behavioral Analysis, Omaha, NE.
120. Fitch, A.*, Rumbach, K.*, Smith, T.*, & Kirkpatrick, K. (2019). *The effects of smaller-sooner delays on the efficacy of impulsive choice interventions and choice reaction times*. Mid-American Association for Behavioral Analysis, Omaha, NE.
121. Lonker, T.*, Bailey, C.*, Cunningham, E.*, & Kirkpatrick, K. (2019). *Effects of varying delay distributions in time-based interventions to improve self-control*. Mid-American Association for Behavioral Analysis, Omaha, NE.
122. Rumbach, K.*, Fitch, A.*, Deavours, A.*, Smith, T.*, & Kirkpatrick, K. (2019). *The unexpected populations: The effects of impulsivity and food valuation on food choice*. Mid-American Association for Behavioral Analysis, Omaha, NE.
123. Steele, C.*, Gwinner, M.*, Smith, T.*, & Kirkpatrick, K. (2019). *Parsing the role of experiencing rewards and delays in a novel impulsive choice task for food*. Mid-American Association for Behavioral Analysis, Omaha, NE.
124. Panfil, K.*, Small, R.*, & Kirkpatrick, K. (2019). *Effects of methylphenidate on impulsive choice and timing processes in Lewis rats*. Society for Neuroscience, Chicago, IL.
125. Rumbach, K.*, Fitch, A.*, Deavours, A.*, Smith, T.*, & Kirkpatrick, K. (2019). *The unexpected populations: The effects of impulsivity and food valuation on food choice*. Kansas Honor's Connection Conference, Emporia, KS.
126. Steele, C. C.*, Gwinner, M.*, Steele, T. J.*, Duran, J. K.*, & Kirkpatrick, K. (2019). *Diet, body fat, and fasting glucose as predictors of impulsive choice for food in rats and humans*. Obesity Week, Las Vegas, NV.
127. Favreau, L.*, Haas, C.*, Panfil, K.*, Smith, T.*, Deavours, A.*, & Kirkpatrick, K. (2020). *Chemogenetic manipulation of pre-limbic cortex increases impulsive choices following time-based intervention training in rats*. International Behavioral Neuroscience Society, Virtual Conference.
128. Fitch, A.*, Rumbach, K.*, Smith, T.*, and Kirkpatrick K. (2020). *The effects of time-based interventions on self-control and choice latency in an impulsive choice task*, International Behavioral Neuroscience Society, Virtual Conference.
129. Rumbach, K.*, Fitch, A.*, Deavours, A.*, Smith, T.*, & Kirkpatrick, K. (2020). *The consequences of a high-fat diet on impulsive decision-making*, International Behavioral Neuroscience Society, Virtual Conference.
130. Fitch, A.*, Smith, T.*, Deavours, A.*, & Kirkpatrick, K. (2021). *Attention to delay: The effects of fixed-interval and fixed-time interventions on impulsive choice and timing*. Society for the Quantitative Analyses of Behavior, Virtual Conference.
131. Panfil, K.*, Haas, C.*, & Kirkpatrick, K. (2021). *Fixed-interval intervention dose-response effects on impulsive choices*. Society for the Quantitative Analyses of Behavior, Virtual Conference.
132. Rumbach, K.*, & Kirkpatrick, K. (2021). *The effects of a high-fat diet on impulsivity*. Kansas Honor's Connection Conference, Emporia, KS.
133. Smith, T. R., Fitch, A.*, Deavours, A.*, & Kirkpatrick, K. (2022). *Attention to delay: Response contingency effects on impulsive decision-making*. Conference on Comparative Cognition, Virtual Conference.
134. Panfil, K.*, West, L.*, Smith, T., Rumbach, K.*, Southern, R.*, & Kirkpatrick, K. (2022). *Abbreviated fixed-interval interventions promote self-control in rats*. Conference on Comparative Cognition, Virtual Conference.

COLLOQUIA AND INVITED TALKS

135. Kirkpatrick-Steger, K. (1995). *The pigeon: A particulate perceiver of visual information?* Colloquium at University of Iowa, Iowa City, IA.
136. Kirkpatrick-Steger, K. (1995). *Visual object recognition in pigeons*. Colloquium at Cornell College, Mount Vernon, IA.

137. Kirkpatrick-Steger, K. (1999). *The role of object components and their spatial organization in the pigeon's visual recognition of complex objects*. Invited talk as recipient of the Division 25 Outstanding Dissertation Award at Annual Meeting of the American Psychological Association, Boston, MA.
138. Kirkpatrick, K. (2000). *How to know when dinner will be served*. Colloquium at University of Manchester.
139. Kirkpatrick, K. (2001). *Packet theory of conditioning and timing*. Invited talk at the Society for the Quantitative Analyses of Behavior, New Orleans, LA.
140. Kirkpatrick, K. (2001). *The temporal structure of behavior*. Colloquium at University of Newcastle.
141. Kirkpatrick, K. (2003). *The role of temporal information in structuring behavior*. Colloquium at University of Southampton.
142. Kirkpatrick, K. (2004). *Detection of variability: How interval timing may operate in unpredictable situations*. Colloquium at University of Cambridge.
143. Jennings, D.*, & Kirkpatrick, K.* (2003). *CS-US interval duration and the US pre-exposure effect*. Invited talk at the Annual Meeting of the Pavlovian Society, Bloomington, IN, USA.
144. Kirkpatrick, K., & Russell, R.* (2006). *The role of temporal generalization and categorical learning in the bisection task in rats*. Invited symposium contribution at the International Conference on Comparative Cognition, Melbourne, FL, USA.
145. Kirkpatrick, K. (2007). *Reward timing and reward value are not independent*. Colloquium at Brown University.
146. Kirkpatrick, K. (2007). *Choice, timing, and reward magnitude*. Colloquium at Columbia University.
147. Kirkpatrick, K. (2007). *Choice, timing, and reward value*. Colloquium at Duke University.
148. Kirkpatrick, K. & Wilkinson, A.* (2007). *Visually-guided capture of moving objects by pigeons: Effects of disappearance and occlusion*. Invited talk at the Society for the Quantitative Analyses of Behavior, San Diego, CA, USA.
149. Kirkpatrick, K., & Galtress, T.* (2008). *Changes in reward value systematically alter timing*. Invited symposium contribution at the 49th Annual Meeting of the Psychonomic Society, Chicago, IL, USA.
150. Kirkpatrick, K. (2011). *Individual differences in impulsivity*. Invited address at the 25th Annual Meeting of the Texas Applied Behavior Analysis Association, Galveston, TX.
151. Kirkpatrick, K. (2011). *Reward processing, timing, and impulsivity*. Invited symposium contribution at the Annual Meeting of the Southwestern Psychological Association, San Antonio, TX.
152. Kirkpatrick, K., & Galtress, T.* (2011). *Motivation and timing*. Invited talk at the Annual Meeting of the Society for the Quantitative Analyses of Behavior, Denver, CO.
153. Marshall, A.*, & Kirkpatrick, K. (2012). *Analysis of interval timing in two discounting procedures*. Invited symposium contribution at the 38th annual meeting of Association for Behavior Analysis International, Seattle, WA.
154. Kirkpatrick, K., Sears, T.*, Hansen, B., & Loschky, L. (2012). *Factors influencing scene gist categorization by pigeons*. Invited symposium contribution at the 38th Annual Meeting of Association for Behavior Analysis International, Seattle, WA.
155. Kirkpatrick, K. & Vilardo, M.* (2012). *Olfactory discrimination of oxygen based explosives and propellants by rats*. Invited talk at the Pavlovian Society, Jersey City, NJ.
156. Kirkpatrick, K. (2013). *Environmental rearing effects on decision making*. Invited symposium contribution at the Eastern Psychological Association, New York, NY.
157. Kirkpatrick, K. (2013). *Data mining and neurocomputational modeling in the neurosciences*. Invited talk at the Merrill Center for Advanced Studies Annual Retreat, Nebraska City, NE.
158. Kirkpatrick, K. (2013). *Differential rearing effects on impulsivity*. Invited symposium contribution at the Applied Behavioral Analysis International meeting. Merida, Mexico.
159. Kirkpatrick, K., & Marshall, A. T.* (2014). *Why is time so powerful?* Invited symposium contribution at the Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
160. Kirkpatrick, K. (2014). *Individual differences in impulsive and risky choice*. Invited address presented at the Meeting on Addictions, Mexico City, MX.

161. Kirkpatrick, K. (2015). *The trouble with the (discounting) curve*. Invited talk at the Winter Conference on Animal Learning and Behavior, Winter Park, CO.
162. Kirkpatrick, K. (2015). *Individual differences in impulsive and risky choice*. Invited colloquium presented at the Center for Visual and Cognitive Neuroscience, North Dakota State University, Fargo, ND.
163. Kirkpatrick, K., & Marshall, A. T.* (2015). *Mechanisms of impulsive choice: III. The role of reward processes*. Invited symposium contribution at the Spring Meeting of the International Conference on Comparative Cognition, Melbourne, FL.
164. Kirkpatrick, K. (2015). *A mechanistic analysis of individual differences in impulsive choice in rats*. Invited address at the Southeastern Association for Behavior Analysis. Roanoke, VA.
165. Kirkpatrick, K. (2015). *Multiple pathways to impulsive choice*. Invited colloquium at the State University of New York – Binghamton, Binghamton, NY.
166. Kirkpatrick, K. (2016). *Theory-driven versus theory-free modeling of decision-making data*. Invited talk at the Winter Conference on Animal Learning and Behavior, Winter Park, CO.
167. Kirkpatrick, K. (2016). *Origins of impulsive choice*. Invited talk at the University of Kansas, Lawrence, KS.
168. Kirkpatrick, K. (2017). *Using interval schedules to promote self-control in rats*. Invited talk at the Midwestern Psychological Association, Chicago, IL.
169. Kirkpatrick, K. (2017). *Time-based interventions to promote self-control*. Invited talk at the Society for the Quantitative Analyses of Behavior, Denver, CO.
170. Kirkpatrick, K. (2018). *The role of timing processes in delay discounting*. Invited address at the Texas Association for Behavior Analysis, Houston, TX.
171. Kirkpatrick, K. (2018). *Improving choice and timing processes through time-based interventions*. Invited address at the Kansas Association for Behavior Analysis, Lawrence, KS.
172. Kirkpatrick, K., & Bailey, C.* (2018). *Moderating sub-optimal choices in delay discounting tasks in rats*. Invited symposium contribution at the American Psychological Association, San Francisco, CA.
173. Kirkpatrick, K., & Steele, C.* (2018). *Perturbations of delay discounting in rats*. Invited address at the Southeastern Association for Behavior Analysis. Chattanooga, TN.
174. Kirkpatrick, K. (2019). *Factors that alter impulsive choices*. Invited colloquium at the Academic Scholarship Conference, University of Kansas Medical Center, Kansas City, KS.
175. Kirkpatrick, K. & Steele, C. C.* (2019). *Adventures in translational research*. Invited address at the Four Corners Association for Behavior Analysis, Santa Fe, NM.
176. Kirkpatrick, K. (2019) *Neuroscience of timing and decision making*. Invited talk at the IDeA Central Region Conference, Oklahoma City, OK.
177. Kirkpatrick, K. (2019) *Evaluation practices for COBRE projects and mentoring programs*. Invited talk at the IDeA Central Region Conference, Oklahoma City, OK.
178. Kirkpatrick, K., & Steele, C. C.* (2019) *High-fat diets increase impulsive choices*. Invited symposium contribution at the American Psychological Association, Chicago, IL.
179. Kirkpatrick, K. (2019). *The neurobiology of timing and impulsivity*. Invited talk for the Biochemistry and Molecular Biophysics Seminar Series, Kansas State University, Manhattan, KS.
180. Kirkpatrick, K. (2019). *Top-down control of impulsive choices using time-based interventions in rats*. Invited talk at the Cofrin Logan Center for Addiction Research and Treatment, University of Kansas, Lawrence, KS.
181. Kirkpatrick, K. (2021). *Adventures in translational research*. Invited talk for the Anatomy and Physiology Seminar Series, Kansas State University, Manhattan, KS.
182. Smith, T.*, Steele, C.*, & Kirkpatrick, K. (2021). *Parallel procedures of impulsive choice: Effects of a high-fat diet in humans and rats*. Invited symposium contribution at the Association for Behavior Analysis International meeting, Virtual Conference.
183. Kirkpatrick, K. (2021). *Junior investigator development in the era of COVID-19*. Invited talk at the Merrill Center for Advanced Studies Annual Retreat, Nebraska City, NE.