

**PETER J. URCUIOLI**

Curriculum Vita

September 2019

**Personal Information:**

Office Address: Department of Psychological Sciences  
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**Education:**

B.A. 1974 University of New Hampshire (Psychology)  
 M.A. 1976 Dalhousie University (Experimental Psychology)  
 Ph.D. 1979 Dalhousie University (Experimental Psychology)

**Academic Honors:**

George M. Haslerud Award in Psychology (UNH)	1972
NSF Undergraduate Research Participation Award	1972
Herbert R. Carroll Award in Psychology (UNH)	1974
New England Psychological Association Student Fellow	1974
National Science Foundation Predoctoral Fellow	1974-1977
Izaak Walton Killam Memorial Scholar	1978-1979
School of Humanities, Social Science, & Education (HSSE)	
Departmental Award for Excellence in Teaching	1986
Fellow of the American Psychological Association	2002
Charter Fellow of the Midwestern Psychological Association	2010
Fellow of the Eastern Psychological Association	2011
Med Associates Distinguished Contribution to Basic Behavioral Research Award (Division 25, American Psychological Association)	2015

**Professional Experience:**

1979-1980	National Eye Institute Postdoctoral Fellow; University of Texas Health Science Center at Houston.
1980-1981	National Institute of Mental Health Postdoctoral Fellow; University of Texas Health Science Center at Houston.
1981-1987	Assistant Professor; Department of Psychological Sciences, Purdue University, West Lafayette, Indiana.
1987-1994	Associate Professor; Department of Psychological Sciences, Purdue University, West Lafayette, Indiana.
1994-Present	Full Professor, Department of Psychological Sciences, Purdue University, West Lafayette, Indiana.

**Professional Affiliations:**

Fellow and Member of the American Psychological Association

Charter Fellow of the Midwestern Psychological Association

Fellow of the Eastern Psychological Association

Member of the Psychonomic Society

Member of the Association for Behavior Analysis

**Professional Activities:**

Associate Editor: *Journal of the Experimental Analysis of Behavior*

Consulting Editor: *International Journal of Psychology and Psychological Therapy*  
*Psychonomic Bulletin & Review*

Ad Hoc Reviewer: *American Psychologist, American Journal of Psychology, Animal Cognition, Behavior Research Methods & Instrumentation, Behavioral Neuroscience, Behavioural Processes, Developmental Psychobiology, Integrative Physiological and Behavioral Science, Journal of Comparative Psychology, Journal of Personality and Social Psychology, Learning & Behavior, Learning and Motivation, Psychological Review, Psychological Science, Quarterly Journal of Experimental Psychology, National Science Foundation, City University of New York Research Award Program, FWO Research Foundation (Belgium), Biobehavioral Regulation, Learning and Ethology (BRLE) NIH Study Section (2012)*

Member: Psychobiology, Behavior, & Neuroscience Review Committee of NIMH (1996-1998)

Reviewer & Chair: NIMH Special Review Panels (1999)

**Grants Received:**

A. Intramural:

"Formation of matching concepts in avians." Purdue Summer XL Grant, 1982.

"Coding processes in animal memory." Purdue Summer XL Grant, 1984.

"Anticipation in animal memory." Purdue David Ross Grant, 1990-1992.

Purdue Research Foundation International Travel Grants, 1992, 1994, 1996, 2004

"Acquired equivalences and mediated generalization in non-human animals." PRF Research Grant, 1995-1996.

"Value and 'Work Ethic' in Non-human animals." PRF Research Grant, 2003-2004.

B. Extramural:

"Memory processing in a SPR task: Comparative study" (with Anthony A. Wright and Stephen F. Sands). National Institutes of Mental Health MH35202 (1981-1984).

"Coding and attention in conditional discriminations." National Institutes of Mental Health MH38174 (1984-1986).

"Determinants of animal memory strategies" (with Thomas Zentall, University of Kentucky). National Science Foundation BNS-8418275 (1985-1987).

"Coding and attention in conditional discriminations." National Science Foundation BNS-8606926 (1987-1990).

"Stimulus equivalence and stimulus-class formation in pigeons." National Science Foundation BNS-9009666 (1990-1993).

"Anticipation effects in animal memory" (with Thomas Zentall, University of Kentucky). National Institutes of Mental Health MH45979 (1991-1994).

"How expectancies influence behavior." National Science Foundation IBN-9419929 (1995-1997).

"Acquired equivalences and mediated generalization." National Institutes of Mental Health MH56487 (1997-2001).

"Responses and equivalence classes." National Institutes of Mental Health MH066195 (2003-2008).

“Basic processes in the development of stimulus classes and emergent behavior.” National Institute of Child Health and Human Development HD061322 (2010-2015 with no-cost extensions to 31 August 2016).

### **Publications in Refereed Journals:**

- Urcuioli, P. J., & Nevin, J. A. (1975). Transfer of hue matching in pigeons. Journal of the Experimental Analysis of Behavior, 24, 149-155.
- Urcuioli, P. J., Mandell, C., & Nevin, J. A. (1976). Fixed-interval punishment of running in hamsters. Learning and Motivation, 7, 290-295.
- Urcuioli, P. J. (1977). Transfer of oddity-from-sample performance in pigeons. Journal of the Experimental Analysis of Behavior, 25, 195-202.
- Urcuioli, P. J., & Honig, W. K. (1980). Control of choice in conditional discriminations by sample-specific behaviors. Journal of Experimental Psychology: Animal Behavior Processes, 6, 251-277.
- Urcuioli, P. J., Klein, R. M., & Day, J. (1981). Hemispheric differences in semantic processing: Category matching is not the same as category membership. Perception and Psychophysics, 29, 343-351.
- Honig, W. K., & Urcuioli, P. J. (1981). The legacy of Guttman and Kalish (1956): 25 years of research on stimulus generalization. Journal of the Experimental Analysis of Behavior, 36, 405-445.
- Wright, A. A., Urcuioli, P. J., Sands, S. F., & Santiago, H. C. (1981). Interference of delayed matching-to-sample in pigeons: Effects of interpolation at different periods within a trial and stimulus similarity. Animal Learning and Behavior, 9, 595-603.
- Urcuioli, P. J. (1984). Overshadowing in matching-to-sample: Reduction in sample-stimulus control by differential sample behaviors. Animal Learning & Behavior, 12, 256-264.
- Urcuioli, P. J. (1985). On the role of differential sample behaviors in matching-to-sample. Journal of Experimental Psychology: Animal Behavior Processes, 11, 502-519.
- Urcuioli, P. J., & Zentall, T. R. (1986). Retrospective coding in pigeons' delayed matching-to-sample. Journal of Experimental Psychology: Animal Behavior Processes, 12, 69-77.
- Zentall, T. R., Jagielo, J., Jackson-Smith, P., & Urcuioli, P. J. (1987). Memory codes in pigeon short-term memory: Effect of number of sample and comparison stimuli. Learning and Motivation, 18, 21-33.
- Urcuioli, P. J., & Kaspro, W. J. (1988). Long-delay learning in the T-maze: Effects of marking and delay-interval location. Learning & Motivation, 19, 66-86.
- Urcuioli, P. J., & Callender, J. (1989). Attentional enhancement in matching-to-sample: Facilitation in acquisition by sample discrimination training. Animal Learning & Behavior, 17, 361-367.

- Urcuioli, P. J., Zentall, T. R., Jackson-Smith, P., & Steirn, J. N. (1989). Evidence for common coding in many-to-one matching: Retention, intertrial interference, and transfer. Journal of Experimental Psychology: Animal Behavior Processes, 15, 264-273.
- Zentall, T. R., Urcuioli, P. J., Jagielo, J. A., & Jackson-Smith, P. (1989). Interaction of sample dimension and sample-comparison mapping on pigeons' performance of delayed conditional discriminations. Animal Learning & Behavior, 17, 172-178.
- Urcuioli, P. J., & Zentall, T. R. (1990). On the role of trial outcomes in delayed discriminations. Animal Learning & Behavior, 18, 141-150.
- Urcuioli, P. J. (1990). Some relationships between outcome expectancies and sample stimuli in pigeons' delayed matching. Animal Learning & Behavior, 18, 302-314.
- Urcuioli, P. J. (1990). Differential outcomes and many-to-one matching: Effects of correlation with correct choice. Animal Learning & Behavior, 18, 410-422.
- Urcuioli, P. J. (1991). Retardation and facilitation of matching acquisition by differential outcomes. Animal Learning & Behavior, 19, 29-36.
- Zentall, T. R., Steirn, J. N., Sherburne, L. M., & Urcuioli, P. J. (1991). Common coding in pigeons assessed through partial versus total reversals of many-to-one conditional and simple discriminations. Journal of Experimental Psychology: Animal Behavior Processes, 17, 194-201.
- Urcuioli, P. J., & Zentall, T. R. (1992). Transfer across delayed discriminations: Evidence regarding the nature of prospective working memory. Journal of Experimental Psychology: Animal Behavior Processes, 18, 154-173.
- DeMarse, T. B., & Urcuioli, P. J. (1993). Enhancement of matching acquisition by differential comparison-outcome associations. Journal of Experimental Psychology: Animal Behavior Processes, 19, 317-326.
- Urcuioli, P. J., & Zentall, T. R. (1993). A test of comparison-stimulus substitutability following one-to-many matching by pigeons. The Psychological Record, 43, 745-759.
- Zentall, T. R., Sherburne, L. M., & Urcuioli, P. J. (1993). Common coding by pigeons in a many-to-one delayed matching task as evidenced by facilitation and interference effects. Animal Learning & Behavior, 21, 233-237.
- Zentall, T. R., & Urcuioli, P. J. (1993). Emergent relations in the formation of stimulus classes by pigeons. The Psychological Record, 43, 795-810.
- Urcuioli, P. J., DeMarse, T., & Zentall, T. R. (1994). Some properties of many-to-one-matching with hue, response, and food samples: Retention and mediated transfer. Learning & Motivation, 25, 175-200.

- Urcuioli, P. J., & DeMarse, T. (1994). On the relationship between differential outcomes and differential sample responding in matching-to-sample. Journal of Experimental Psychology: Animal Behavior Processes, 20, 249-263.
- Urcuioli, P. J., Zentall, T. R., & DeMarse, T. (1995). Transfer to derived sample-comparison relations by pigeons following many-to-one versus one-to-many matching with identical training relations. Quarterly Journal of Experimental Psychology, 48B, 158-178.
- Zentall, T. R., Sherburne, L. M., & Urcuioli, P. J. (1995). Coding of hedonic and nonhedonic samples by pigeons in many-to-one delayed matching. Animal Learning & Behavior, 23, 189-196.
- Urcuioli, P. J., & DeMarse, T. (1996). Associative processes in differential outcome discriminations. Journal of Experimental Psychology: Animal Behavior Processes, 22, 192-204.
- Urcuioli, P. J., & DeMarse, T. (1997). Some further tests of response-outcome associations in differential outcome matching-to-sample. Journal of Experimental Psychology: Animal Behavior Processes, 23, 171-182.
- Urcuioli, P. J., & DeMarse, T. (1997). Memory processes in delayed spatial discriminations: Response intentions or response mediation? Journal of Experimental Analysis of Behavior, 67, 323-336.
- Urcuioli, P. J., DeMarse, T., & Zentall, T. R. (1998). Transfer across delayed discriminations. II. Differences in the substitutability of initial versus test stimuli. Journal of Experimental Psychology: Animal Behavior Processes, 24, 47-59.
- Urcuioli, P. J., DeMarse, T. B., & Lionello, K. M. (1998). Transfer of performance to new comparison choices following differential outcome matching-to-sample. Animal Learning & Behavior, 26, 139-153.
- Lionello, K. M., & Urcuioli, P. J. (1998). Control by sample location in pigeons' matching-to-sample. Journal of the Experimental Analysis of Behavior, 70, 235-251.
- Urcuioli, P. J., DeMarse, T. B., & Lionello, K. M. (1999). Sample duration effects on pigeons' delayed matching as a function of predictability of duration. Journal of the Experimental Analysis of Behavior, 72, 279-297.
- Lionello-DeNolf, K. M., & Urcuioli, P. J. (2000). Transfer of pigeons' matching-to-sample to novel sample locations. Journal of the Experimental Analysis of Behavior, 73, 141-161.
- Urcuioli, P. J., DeMarse, T., & Lionello-DeNolf, K. M. (2001). Assessing the contributions of S-O and R-O associations to differential outcome matching through outcome reversals. Journal of Experimental Psychology: Animal Behavior Processes, 27, 239-251.
- Urcuioli, P. J., & Lionello-DeNolf, K. M. (2001). Some tests of the anticipatory mediated generalization model of acquired sample equivalence in pigeons' many-to-one matching. Animal Learning & Behavior, 29, 265-280.

- Urcuioli, P. J., Pierce, J. N., Lionello-DeNolf, K. M., Friedrich, A., Fetterman, J. G., & Green, C. (2002). The development of emergent differential sample behavior in pigeons. Journal of the Experimental Analysis of Behavior, 78, 409-432.
- Lionello-DeNolf, K. M., & Urcuioli, P. J. (2002). Stimulus control topographies and tests of symmetry in pigeons. Journal of the Experimental Analysis of Behavior, 78, 467-495.
- Lionello-DeNolf, K. M., & Urcuioli, P. J. (2003). A procedure for generating differential "sample" responding without different exteroceptive stimuli. Journal of the Experimental Analysis of Behavior, 79, 21-35.
- Vu, K.-P. L., Proctor, R. W., & Urcuioli, P. (2003). Transfer effects of incompatible location-relevant mappings on subsequent visual or auditory Simon tasks. Memory & Cognition, 31, 1146-1152.
- DeMarse, T. B., & Urcuioli, P. J. (2005). Control of matching by differential outcome expectancies in the absence of differential sample-outcome associations: A serial compound view. Journal of Experimental Psychology: Animal Behavior Processes, 31, 449-466.
- Urcuioli, P. J., Vu, K-P. L., & Proctor, R. W. (2005). A Simon effect in pigeons. Journal of Experimental Psychology: General, 134, 93-107.
- Urcuioli, P. J. (2005). Behavioral and associative effects of differential outcomes in discrimination learning. Learning & Behavior, 33, 1-21.
- Urcuioli, P. J., & Lionello-DeNolf, K. M. (2005). The role of common reinforced comparison responses in acquired sample equivalence. Behavioural Processes, 69, 207-222.
- Urcuioli, P. J., Lionello-DeNolf, K., Michalek, S., & Vasconcelos, M. (2006). Some tests of response membership in acquired equivalence classes. Journal of the Experimental Analysis of Behavior, 86, 81-107.
- Urcuioli, P. J. (2006). When discrimination fails (or at least falters). Journal of Experimental Psychology: Animal Behavior Processes, 32, 359-370.
- Vasconcelos, M., Urcuioli, P. J., & Lionello-DeNolf, K. M. (2007). Failure to replicate the "work ethic" effect in pigeons. Journal of the Experimental Analysis of Behavior, 87, 383-399.
- Vasconcelos, M., Urcuioli, P. J., & Lionello-DeNolf, K. M. (2007). When is a failure to replicate not a Type II error? Journal of the Experimental Analysis of Behavior, 87, 405-407.
- Urcuioli, P. J. (2007). Sample and comparison location as factors in matching acquisition, transfer and acquired equivalence. Learning & Behavior, 35, 252-261.
- Urcuioli, P. J., & Michalek, S. (2007). Value transfer contributes to ambiguous-cue discrimination learning. Psychonomic Bulletin & Review, 14, 658-662.
- Urcuioli, P. J. (2008). The nature of the response in Simon discriminations by pigeons. Learning & Behavior, 36, 200-209.

- Vasconcelos, M., & Urcuioli, P. J. (2008). Deprivation level and choice in pigeons: A test of within-trial contrast. Learning & Behavior, 36, 12-18.
- Vasconcelos, M., & Urcuioli, P. J. (2008). Certainties and mysteries in the within-trial contrast literature. Learning & Behavior, 36, 23-25.
- Urcuioli, P. J., & Vasconcelos, M. (2008). Effects of within-class differences in sample responding on acquired sample equivalence. Journal of the Experimental Analysis of Behavior, 89, 341-358.
- Urcuioli, P. J., & Vasconcelos, M. (2008). On the origins of emergent differential sample behavior. Journal of the Experimental Analysis of Behavior, 90, 61-80.
- Urcuioli, P. J. (2008). Symmetry, anti-symmetry, and a theory of pigeons' equivalence-class formation. Journal of the Experimental Analysis of Behavior, 90, 257-282.
- Vasconcelos, M., & Urcuioli, P. J. (2009). Extensive training is insufficient to produce the work-ethic effect in pigeons. Journal of the Experimental Analysis of Behavior, 91, 143-152.
- Urcuioli, P. J. (2010). Associative symmetry and stimulus-class formation by pigeons: The role of non-reinforced baseline relations. Behavioural Processes, 85, 226-235.
- Sweeney, M. M., & Urcuioli, P. J. (2010). Reflexivity in pigeons. Journal of the Experimental Analysis of Behavior, 94, 267-282.
- Vasconcelos, M., & Urcuioli, P. J. (2011). Associative symmetry in a spatial-response paradigm. Behavioural Processes, 86, 305-315.
- Urcuioli, P. J. (2011). Emergent identity matching after successive matching training. Reflexivity or generalized identity? Journal of the Experimental Analysis of Behavior, 96, 329-341
- Urcuioli, P. J., & Swisher, M. (2012). Emergent identity matching after successive matching training. II. Reflexivity or transitivity? Journal of the Experimental Analysis of Behavior, 97, 5-27.
- Urcuioli, P. J., & Swisher, M. (2012). A replication and extension of the anti-symmetry effect in pigeons. Journal of the Experimental Analysis of Behavior, 98, 283-293.
- Urcuioli, P. J., Jones, B. M., & Lionello-DeNolf, K. M. (2013). Evidence for response membership in stimulus classes by pigeons. Journal of the Experimental Analysis of Behavior, 99, 129-149.
- Swisher, M., & Urcuioli, P. J. (2013). Symmetry in pigeons with sample and comparison stimuli in different locations. Journal of the Experimental Analysis of Behavior, 100, 49-60.
- Campos, H. C., Urcuioli, P. J., & Swisher, M. (2014). Concurrent identity training is not necessary for associative symmetry in successive matching. Journal of the Experimental Analysis of Behavior, 101, 10-25.



- Zentall, T. R., Wasserman, E. A., & Urcuioli, P. J. (2014). Associative concept learning in animals. Journal of the Experimental Analysis of Behavior, 101, 130-151.
- Urcuioli, P. J., Zentall, T. R., & Wasserman, E. A. (2014). Associative concept learning in animals: Issues and opportunities. Journal of the Experimental Analysis of Behavior, 101, 165-170.
- Urcuioli, P. J., & Swisher, M. J. (2015). Transitive and anti-transitive emergent relations in pigeons: Support for a theory of stimulus-class formation. Behavioural Processes, 112, 49-60.
- Urcuioli, P. J. (2015). A successful search for symmetry (and other derived relations) in the conditional discriminations of pigeons. International Journal of Interbehaviorism and Behavior Analysis, 3, 4-25. ([www.conductual.com](http://www.conductual.com))
- Swisher, M., & Urcuioli, P. J. (2015). Symmetry in the pigeon with sample and comparison stimuli in different locations. II. Journal of the Experimental Analysis of Behavior, 104, 119-132.
- Proctor, R. W., & Urcuioli, P. J. (2016). Functional relations and cognitive psychology: Lessons from human performance and animal research. International Journal of Psychology, 51, 58-63.
- Swisher, M. J., & Urcuioli, P. J. (2018). Reflexivity without identity matching training: A first demonstration. Journal of the Experimental Analysis of Behavior, 109, 125-147.

### **Book Chapters & Reviews:**

- Honig, W. K. & Urcuioli, P. J. (1977). Reizgeneralisierung und Reizkontrolle (Stimulus generalization and Stimulus control.) In H. Zeier (Ed.), Pawlow und die Folgen, (pp. 250-305). Kinder-Verlag.
- Wright, A. A., Santiago, H. C., Urcuioli, P. J., & Sands, S. F. (1983). Monkey and pigeon acquisition of same/different concept using pictorial stimuli. In M. L. Commons, R. J. Herrnstein, and A. R. Wagner (Eds.), Quantitative analyses of behavior: Discrimination processes, Vol. IV (pp. 295-317). Cambridge, MA: Ballinger.
- Sands, S. F., Urcuioli, P. J., Wright, A. A., & Santiago, H. C. (1984). Serial position effects and rehearsal in primate visual memory. In H. L. Roitblat, T. Bever, and H. S. Terrace (Eds.), Animal cognition, (pp. 375-388). Hillsdale, NJ: Lawrence Erlbaum.
- Wright, A. A., Santiago, H. C., Sands, S. F., & Urcuioli, P. J. (1984). Pigeon and monkey serial probe recognition: Acquisition, strategies, and serial position effects. In H. L. Roitblat, T. Bever, and H. S. Terrace (Eds.), Animal cognition, (pp. 353-373). Hillsdale, NJ: Lawrence Erlbaum.
- Wright, A. A., Urcuioli, P. J., & Sands, S. F. (1986). Proactive interference in animal memory. In D. Kendrick, M. Rilling, & M. R. Denny (Eds.), Theories of animal memory, (pp. 101-125). Hillsdale, NJ: Lawrence Erlbaum.

- Urcuioli, P. J. (1991). A search for anticipatory codes in pigeon working memory. In W. C. Abraham, M. Corballis, & K. G. White (Eds.), Memory mechanisms: A tribute to G. V. Goddard (pp. 315-328). Hillsdale, NJ: Erlbaum.
- Zentall, T. R., Urcuioli, P. J., Jackson-Smith, P., & Steirn, J. N. (1991). Memory strategies in pigeons. In L. Dachowski & C. F. Flaherty (Eds.), Current topics in animal learning, brain, emotion, and cognition (pp. 119-138). Hillsdale, NJ: Erlbaum.
- Urcuioli, P. J. (1996). Concerning a fundamental problem in psychology. Contemporary Psychology, *41*, 280-282.
- Urcuioli, P. J. (1996). Acquired equivalences and mediated generalization in pigeon's matching-to-sample. In T. R. Zentall & P. M. Smeets (Eds.), Stimulus class formation (pp. 55-70). Amsterdam: North Holland.
- Urcuioli, P. J. (2001). Categorization and acquired equivalence. In R. G. Cook (Ed.), Avian visual cognition [On-line]. Available: [www.pigeon.psy.tufts.edu/avc/urcuioli/](http://www.pigeon.psy.tufts.edu/avc/urcuioli/)
- Urcuioli, P. J. (2003). Generalization. In Encyclopedia of cognitive science (Vol. 2, pp. 275-281). London: Macmillan.
- Urcuioli, P. J. (2006). Responses and acquired equivalence classes. In E. A. Wasserman & T. R. Zentall (Eds.), Comparative cognition: Experimental explorations of animal intelligence (pp. 405-421). NY: Oxford.
- Urcuioli, P. J. (2013). Stimulus control and stimulus class formation. In G. J. Madden, W. V. Dube, T. D., Hackenberg, G. P. Hanley, & K. A. Lattal (Eds.), APA Handbook of Behavior Analysis (Vol. 1, pp. 361-386). Washington, DC: American Psychological Association.

### **Conference Presentations:**

- Urcuioli, P. J., Santiago, H. C., Wright, A. A., & Sands, S. F. Same/different concept learning in pigeons and monkeys. Paper presented at the 22nd Annual Meeting of the Psychonomic Society, Philadelphia, November 1981.
- Urcuioli, P. J. Overshadowing of samples by sample-specific behaviors in matching-to-sample. Paper presented at the 55th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1983.
- Urcuioli, P. J. On the role of differential sample behaviors in matching-to-sample. Paper presented at the 25th Annual Meeting of the Psychonomic Society, San Antonio, November 1984.
- Urcuioli, P. J., & Zentall, T. R. Retrospective memory in pigeons' delayed matching-to-sample. Paper presented at the 26th Annual Meeting of the Psychonomic Society, Boston, November 1985.
- Urcuioli, P. J. Attentional enhancement in matching-to-sample. Paper presented at the 27th Annual Meeting of the Psychonomic Society, New Orleans, November 1986.

- Zentall, T. R., Urcuioli, P. J., Jagielo, J. A., & Jackson-Smith, P. Prospective memory in pigeons' performance of delayed conditioned discriminations. Paper presented at the 27th Annual Meeting of the Psychonomic Society, New Orleans, November 1986.
- Urcuioli, P. J., & Zentall, T. R. A search for anticipatory response mediation in delayed simple discriminations. Paper presented at the 29th Annual Meeting of the Psychonomic Society, Chicago, November 1988.
- Zentall, T. R., Jackson-Smith, P., Steirn, J. N., & Urcuioli, P. J. Many-to-one mapping of conditional discriminations results in common sample coding. Paper presented at the 29th Annual Meeting of the Psychonomic Society, Chicago, November 1988.
- Urcuioli, P. J. The role of outcome expectancies in delayed simple discriminations. Paper presented at the 59th Annual Meeting of the Eastern Psychological Association, Boston, March 1989.
- Urcuioli, P. J. Overshadowing of samples by outcome expectancies in matching-to-sample (MTS). Paper presented at the 61st Annual Meeting of the Eastern Psychological Association, Philadelphia, March 1990.
- Urcuioli, P. J., & Zentall, T. R. Transfer across delayed discriminations: Evidence for the nature of the memory code. Paper presented at the 82nd Annual Meeting of the Southern Society for Philosophy & Psychology, Louisville, April 1990.
- Zentall, T. R., Steirn, J. N., Sherburne, L. M., & Urcuioli, P. J. Common coding by pigeons in a spatial one-to-many matching task. Paper presented at the 31st Annual Meeting of the Psychonomic Society, New Orleans, November, 1990.
- Urcuioli, P. J., & Zentall, T. R. Transfer across delayed discriminations: Evidence for the nature of anticipatory memory. Paper presented at the 31st Annual Meeting of the Psychonomic Society, New Orleans, November 1990.
- Urcuioli, P. J. Functional equivalences in pigeon's matching-to-sample. Paper presented at the Annual Conference of the Experimental Analysis of Behaviour Group, London, England, March 1992.
- Urcuioli, P. J. The origin(s) of the differential outcomes effect. Paper presented at the Annual Conference of the Experimental Analysis of Behaviour Group, London, England, March 1992.
- DeMarse, T., & Urcuioli, P. J. Enhanced matching acquisition by differential comparison-outcome associations. Paper presented at the 64th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1992.
- Urcuioli, P. J., & DeMarse, T. Are differential outcome effects mediated by differential sample behaviors? Paper presented at the 33rd Annual Meeting of the Psychonomic Society, St. Louis, November 1992.

- Urcuioli, P. J., & Zentall, T. R. An apparent order-of-training effect in mediated transfer by pigeons. Paper presented at the 34th Annual Meeting of the Psychonomic Society, Washington, DC, November 1993.
- Urcuioli, P. J. On the relationship between differential outcomes and differential sample responding in conditional discrimination learning. Paper presented at Annual Conference of the Experimental Analysis of Behaviour Group, London, England, April 1994.
- DeMarse, T., & Urcuioli, P. J. The role of sample responding in matching-to-sample with differential outcomes. Paper presented at the 65th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1994.
- Urcuioli, P. J. On the associative structure of differential outcome discriminations. Paper presented at the Annual Conference of the Experimental Analysis of Behaviour Group, London, England, March 1996.
- DeMarse, T., & Urcuioli, P. J. Differential expectations following samples paired with nondifferential outcomes in a one-to-many task. Paper presented at the 68th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1996.
- Urcuioli, P. J. Acquired equivalences and mediated generalization. Paper presented at the 69th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1996.
- Urcuioli, P. J. Response-outcome associations and transfer of matching-to-sample. Paper presented at the 37th Annual Meeting of the Psychonomic Society, Chicago, November 1996.
- Urcuioli, P. J. The role of response intentions in pigeons' working memory. Paper presented at the 38th Annual Meeting of the Psychonomic Society, Philadelphia, November 1997.
- Lionello, K. M., & Urcuioli, P. J. Transfer across sample locations in pigeons' matching-to-sample. Paper presented at the 71st Annual Meeting of the Midwestern Psychological Association, Chicago, April-May 1999.
- Urcuioli, P. J., Lionello-DeNolf, K. M., Friedrich, A. M., & Pierce, J. N. The development of emergent sample-specific behavior in pigeons' many-to-one matching. Paper presented at the Fourth European Meeting for the Experimental Analysis of Behavior, Amiens, France, July 2000.
- Urcuioli, P. J., Green, C., & Fetterman, J. G. Emergent differential sample responding in pigeons' many-to-one-matching. Paper presented at the 41st Annual Meeting of the Psychonomic Society, New Orleans, November 2000.
- Urcuioli, P. J., & Lionello-DeNolf, K. M. Testing the anticipatory mediated generalization account of acquired equivalence. Paper presented at the 42nd Annual Meeting of the Psychonomic Society, Orlando, FL, November 2001.
- Urcuioli, P. J. Responses and equivalence classes. Paper presented at the 110th Annual Convention of the American Psychological Association, Chicago, August 2002.

- Lionello-DeNolf, K. M., & Urcuioli, P. J. Development of and conditional control by "unsigned" differential sample responding. Paper presented at the 43rd Annual Meeting of the Psychonomic Society, Kansas City, MO, November 2002.
- Urcuioli, P. J. When discrimination fails (or at least falters). Paper presented at the Annual International Conference on Comparative Cognition, Melbourne Beach, FL, March 2004.
- Urcuioli, P. J. A Simon effect in pigeons. Paper presented at the 8<sup>th</sup> Annual Associative Learning Symposium, Gregynog, Wales, April 2004.
- Urcuioli, P. J. Simon effects and value transfer in pigeons. Paper presented at Festschrift for John A. (Tony) Nevin, University of New Hampshire, Durham, NH, May 2004.
- Urcuioli, P. J. When discrimination fails (or at least falters). Paper presented at the 27<sup>th</sup> Annual Meeting of the Society for the Quantitative Analysis of Behavior, Boston, May 2004.
- Urcuioli, P. J., Vu, K.-P. L., & Proctor, R. W. A Simon effect in pigeons. Paper presented at the 45th Annual Meeting of the Psychonomic Society, Minneapolis, November 2004.
- Urcuioli, P. J., & Lionello-DeNolf, K. M. Can differential sample-response patterns become members of acquired equivalence classes? Paper presented at the 31st Annual Convention of the Association for Behavior Analysis, Chicago, May 2005.
- Michalek, S. A., Vasconcelos, M., & Urcuioli, P. J. The effects of partial reinforcement on the ambiguous-cue effect. Paper presented at the Annual International Conference on Comparative Cognition, Melbourne Beach, FL, March 2006.
- Vasconcelos, M., Michalek, S. A., & Urcuioli, P. J. "Work ethic" and the anticipation of effort. Paper presented at the 13<sup>th</sup> Annual International Conference on Comparative Cognition, Melbourne Beach, FL, March 2006.
- Vasconcelos, M., & Urcuioli, P. J. The role of initial investment in the sunk cost effect in pigeons. Paper presented at the 14<sup>th</sup> Annual International Conference on Comparative Cognition, Melbourne Beach, FL, March 2007.
- Vasconcelos, M., & Urcuioli, P. J. Sunk cost and initial investment in pigeons. Paper presented at the 79<sup>th</sup> Annual Meeting of the Midwestern Psychological Association, Chicago, May 2007.
- Vasconcelos, M., & Urcuioli, P. J. State-dependent learning in pigeons. Poster presented at the Joint Meeting of the Experimental Psychology Society (U. K.) & the Psychonomic Society (U. S. A.), Edinburgh, Scotland, July 2007.
- Urcuioli, P. J., & Vasconcelos, M. Within-class differences in sample responding can preclude acquired sample equivalence in pigeons' many-to-one matching. Paper presented at the 33<sup>rd</sup> Annual Convention of the Association for Behavior Analysis, San Diego, May 2007.
- Vasconcelos, M., & Urcuioli, P. On the origins of emergent differential sample behavior. Paper presented at the 15<sup>th</sup> Annual International Conference on Comparative Cognition, Melbourne, FL, March 2008.

Vasconcelos, M., & Urcuioli, P. Emergent differential sample behavior: Acquired sample equivalence, adventitious reinforcement, or symmetry? Paper presented at the 21<sup>st</sup> Annual Tri-State Conference on Animal Learning & Behavior, University of Kentucky, Lexington, KY, April 2008.

Urcuioli, P. J. Associative symmetry, anti-symmetry and a theory of pigeons' equivalence-class formation. Paper presented at the 49<sup>th</sup> Annual Meeting of the Psychonomic Society, Chicago, November 2008.

Urcuioli, P. J., & Sweeney, M. M. *Reflexivity in pigeons*. Paper presented at the 50<sup>th</sup> Annual Meeting of the Psychonomic Society, Boston, MA, November 2009.

Urcuioli, P. J. *A transitivity effect in pigeons*. Paper presented at the 51<sup>st</sup> Annual Meeting of the Psychonomic Society, St. Louis, MO, November 2010.

Swisher, M., & Urcuioli, P. J. *Does stimulus location matter for emergent performances in go/no-go symmetry tests?* Paper presented at the 37<sup>th</sup> Annual Convention of the Association for Behavior Analysis, Seattle, May 2012.

Campos, H. C., & Urcuioli, P. J. Associative symmetry after oddity training in successive matching. Poster presented at the 39<sup>th</sup> Annual Conference of the Association for Behavior Analysis, Minneapolis, May 2013.

Swisher, M. J., & Urcuioli, P. J. *Is location a part of the functional stimulus in pigeons' successive matching?* Paper presented at the 39<sup>th</sup> Annual Conference of the Association for Behavior Analysis, Minneapolis, May 2013.

Urcuioli, P. J., Campos, H. C., & Swisher, M. *Associative symmetry after arbitrary and dual-oddity successive matching training in pigeons*. Paper presented at the 7<sup>th</sup> International Conference of the Association for Behavior Analysis International, Merida Mexico, October 2013.

Urcuioli, P. J., & Swisher, M. J. *Transitive and anti-transitive emergent relations in pigeons' successive matching*. Paper presented at the 21<sup>st</sup> International Conference on Comparative Cognition, Melbourne Beach, FL, March 2014

Swisher, M. J., & Urcuioli, P. J. *Stimulus location and symmetry: A systematic replication*. Paper presented at the 40<sup>th</sup> Annual Conference of the Association for Behavior Analysis, Chicago, May 2014.

Proctor, R., & Urcuioli, P. J. *Human performance research: Functional relations and cognitive psychology*. Paper presented at "Building bridges between functional and cognitive psychology" Conference, Ghent, Belgium, May 2014.

Swisher, M. J., & Urcuioli, P. J. "Emergent symmetry and transitivity with pigeons". Poster presented at the 42<sup>st</sup> annual convention of the Association for Behavior Analysis International, Chicago, May, 2016.

### Colloquia and Invited Presentations:

“Attentional enhancement in conditional discrimination learning.” Seminar presented at the University of New Hampshire, November 1985.

“Retrospective coding in pigeons' delayed matching-to-sample.” Invited paper (with T. R. Zentall) presented at the 58th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1986.

“A peek down the beak: What's represented in pigeon short-term memory?” Colloquium presented at Wilfrid Laurier University, March 1988.

“The nature of anticipation in pigeons' working memory.” Presentation to the Population Biology group, Purdue University, March 1991.

“Transfer of matching to derived sample-comparison relations in pigeons.” Presented (with T. R. Zentall) at the 15th Symposium on the Quantitative Analyses of Behavior, Harvard University, June 1992.

“On the origins of the differential outcome effect.” Invited paper presented at the 65th Annual Meeting of the Midwestern Psychological Association, Chicago, April 1993.

“Transfer to derived stimulus relations in pigeons: An effect of training sequence.” Presented at the Annual Conference of the Experimental Analysis of Behaviour Group, London, England, April 1994.

“Acquired equivalences and mediated generalization.”

- The Terry Anders Memory Lecture honoring W. K. Honig, Dalhousie University, Halifax, October 1995
- Colloquium presented at the University of New Mexico, December 1995
- Colloquium presented at the University of Wales College at Cardiff, March 1996
- Colloquium presented at the Eunice Kennedy Shriver Center for Mental Retardation, Waltham, MA, April 1996
- Paper presented at the 68th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1996

“Categorization and emergent stimulus-relations in animals.” Invited symposium at the 68th Annual Meeting of the Midwestern Psychological Association, Chicago, May 1996.

“Acquired equivalence in pigeons.” Invited presentation at the 70th Annual Meeting of the Eastern Psychological Association, Providence, RI, April 1999.

“Acquired equivalence effects following many-to-one and one-to-many training in pigeons.” Invited presentation at the 25th Annual Convention of the Association for Behavioral Analysis, Chicago, May 1999.

- "Acquired equivalence classes: Origins and mechanisms of within-class generalization." Invited paper presented at the Mid-American Association of Behavior Analysis Convention, Kalamazoo, MI, October 2002.
- "Responses and acquired equivalence classes". Invited Keynote Address at the Experimental Analysis of Behaviour Group Conference, London, England, April 2004.
- "A Simon effect in pigeons". Invited talk at the 76<sup>th</sup> Annual Meeting of the Midwestern Psychological Association, Chicago, May 2004.
- "When discrimination fails (or at least falters)". Invited talk at the 27<sup>th</sup> Annual Meeting of the Society for the Quantitative Analysis of Behavior, Boston, MA, May 2004.
- "Acquired equivalence in non-human animals: Origins, effects, and mechanisms". Invited address at the 33<sup>rd</sup> Annual Convention of the Association for Behavior Analysis, San Diego, May 2007.
- "The nature of ambiguous-cue discrimination learning: Simon effects, discrimination failure, and value transfer". Invited talk presented at *SpenceFest (Learning and Behavior: A tribute to Kenneth W. Spence)*, University of Iowa, Iowa City, September 2007.
- "Symmetry, anti-symmetry, and a theory of pigeon equivalence-class formation". Invited talk presented at the 24<sup>th</sup> Annual Meeting of the Southeastern Association for Behavior Analysis, Athens, GA, October 2007.
- "The pigeon as realtor: Location! Location! Location!" Invited talk at *Responding to the source of stimulation: An interdisciplinary conference in tribute to J. Richard Simon*, University of Iowa, Iowa City, October 2008.
- "Some emergent relations of equivalence and a theory of pigeons' equivalence-class formation." Invited talk presented at the 9<sup>th</sup> Annual Convention of the Mid-American Association of Behavior Analysis, Davenport, IA., October 2009.
- "Emergent relations and stimulus class formation."
- Invited address presented at the 26<sup>th</sup> Meeting of the Spanish Society for Comparative Psychology, Braga, Portugal, September 2014.
  - Colloquium presented at the Department of Psychology, University of Seville, Seville, Spain, September 2014.
  - Inaugural address presented at the 3<sup>rd</sup> International Congreso de la Sociedad para el Avance del Estudio Científico del Comportamiento (SAVECC - Society for the Advancement of the Scientific Study of Behavior), Huelva, Spain, September 2014.
- "Associative Symmetry, Emergent Relations and Stimulus Class Formation". Invited tutorial presented at the 39<sup>th</sup> annual meeting of the Society for the Quantitative Analysis of Behavior, Chicago, May, 2016.



Emergent Relations and Stimulus Class formation”. Invited presentation at the 42<sup>st</sup> annual convention of the Association for Behavior Analysis International, Chicago, May, 2016. “

### **Directed Research:**

Thomas DeMarse - Master's thesis (1992): "Enhanced matching acquisition by differential comparison-outcome associations."

Thomas DeMarse - Ph.D. thesis (1997): “Differential expectations produced by stimuli followed by nondifferential outcomes.”

Karen Lionello - Master's thesis (1997): “Pigeons’ performance on matching-to-sample with moving samples.”

Karen Lionello-DeNolf - Ph.D. thesis (2001): “Stimulus control topographies and tests of symmetry in pigeons.”

Marco Vasconcelos – Ph.D. thesis (2008): “Proprioceptive sample stimuli and associative symmetry in pigeons”

Melissa Swisher - Ph.D thesis, 2016: “Reflexivity: A first demonstration.”

### **Master Thesis Committees:**

Tim Nawrocki (1982)

Joan Sheffer (1983)

Fran Blumberg (1983)

Charles Atanasio (1984)

Dan Miller (1986)

David Drobes (1987)

Thomas DeMarse (1992)

Stephen Benoit (1994)

Kimberly Birmingham (1996)

Karen Lionello (1996)

Alicia Altizer (1997)

Erika Buckner (1999)

Steffani Bailey (2003)

Mamta Behl (2004)

Scott Kanoski (2005)

Althea Bauernschmidt (2010)

### **Preliminary Examination Committees:**

Ken Reed (1982)

Donna Vivieros (1984)

David Campbell (1985)

Daniel Miller (1990)

Joan Sheffer (1991)

Thomas DeMarse (1995)

Karen Lionello (1999)

Cynthia Conklin (2000)

Jennifer Renner (2004)

Marco Vasconcelos (2007)

Scott Kanoski (2007)

Jay Horton (2012)

Ashley Martin (2012)

Melissa Swisher (2014)

**Ph.D. Committees:**

David Myers (1982)	Dan Miller (1994)
Ken Reed (1984)	Thomas DeMarse (1997)
David Campbell (1986)	Karen Lionello-DeNolf (2001)
Donna Vivieros (1987)	Marco Vasconcelos (2008)
Joan Sheffer (1992)	Scott Kanoski (2009)
Ana Martins (2009)	Ashley Martin (2012-2013)
Melissa Swisher (2016)	

**Teaching Experience:**

Psychology 120	-	Elementary Psychology
Psychology 203	-	Introduction to Research Methods in Psychology
Psychology 314	-	Introduction to Learning
Psychology 333	-	Motivation
Psychology 410	-	Animal Memory & Cognition
Psychology 622	-	Animal Learning
Psychology 633D	-	Seminar on Stimulus Generalization and Stimulus Control
Psychology 633G	-	Seminar on Animal Cognition
Psychology 692B	-	Experimental Analysis of Behavior

**Departmental Service Activities:**

Admissions & Awards Committee	1984-1991 1997-1998
Advisory Committee	1983-1988 Fall 1992 2004-2010, 2013- 2016
Animal Care Committee	1981-1982 1983-1984 1990-1991
Area Coordinator for Learning & Memory	1983-2016
Associate Head of Department	2004-2010
Colloquium Committee	1982-1983 2002-2003
David Ross Review Committee	1990
Director of Graduate Studies	1998-2001
Director of Undergraduate Studies	2004-2010
Graduate Committee	2012-2014

PRF Review Committee (Chair)	1995
Search Committees:	
Clinical Psychology	1986
I/O Psychology	2002/2003
Learning & Memory (Chair)	1987/1988
	1989/1990
Quantitative	1997/1998
Undergraduate Committee	1997-1998
Undergraduate Committee (Chair)	2004-2010

**College, University, and other Service Activities:**

Andrews Fellowship Reader	1997
Animal Care & Use Planning Committee	1987
Behavioral Sciences Area Committee of Graduate Council (member)	2000
College of Health and Human Sciences Transition Team	2010
International Travel Grants Committee	1992
Mentor for Dean's Freshman Scholar Program	1996-1997
Purdue Animal Care & Use Committee	Spring, 2018
Purdue Incentive Grant Review Committee	2013
School of Liberal Arts Senate	1990-1991
School of Liberal Arts Psychology UG Counselor Search Committee	1997
School of Health Sciences Primary Committee	2012-
Sigma Xi representative	1992-2001
-- Organizer of Sigma Xi Graduate Student Poster Competition	2000
Organizer --Annual Tri-State Conference on Animal Learning & Behavior (held at Purdue)	2007, 2011