

Daniel Corral

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Academic History

University of Colorado Boulder Triple Doctor of Philosophy (PhD) in Psychology & Neuroscience: Cognitive Psychology, Cognitive Neuroscience, & Cognitive Science	2017
University of Colorado Boulder Master of Arts (MA) in Psychology & Neuroscience: Cognitive Psychology	2013
California State University, Northridge Master of Arts (MA) in Psychology: General Experimental Psychology	2011
California State University, Northridge Bachelor of Arts (BA) in Psychology & Philosophy	2009

Positions Held

Assistant Professor, Department of Psychology, Syracuse University	08/20 – Present
James S. McDonnell Foundation Postdoctoral Fellow, Iowa State University, Department of Psychology	07/17 – 07/20

Grants, Fellowships, & Awards

<i>Improving STEM-Based Learning through the Use of Category Learning</i> . National Science Foundation (IUSE-2235993). Role: PI (Co-PI: Kenneth Kurtz) Award total: \$600,000; my component: \$357,790. Award status: Declined	2022
<i>Targeting Perception and Metacognition to Improve Problem-Solving in Undergraduate Genetics Students</i> . National Science Foundation (IUSE-2121262). Role: Co-PI (PI: Jennifer Knight) Award total: \$300,000; my component: \$43,392. Award status: Declined	2021
Institute of Cognitive Science Research Grant (\$500)	2017
Institute of Cognitive Science Travel Grant (\$1000)	2016 – 2017
UCB Cognitive Department Travel Fellowship Award (\$3000)	2011 – 2016

First-Year Doctoral Student Fellowship Award (\$1000)	2011
CSUN Award for Excellence in Graduate Quantitative Research	2011
California Pell Grant (\$11940)	2006 – 2011
Graduate Thesis Funding Award (\$500)	2010
Robert Steinmetz Thesis Award (\$750)	2010
California State University, Northridge Achievement Award (\$2000)	2010
1 st place Poster Presentation at the 14 th Annual California State University, Northridge Student Research and Creative Works Symposium	2010
Graduate Fellowship Equity Award (\$2000)	2009 – 2010
Dean's List	2008 – 2009

Peer-Reviewed Publications

^P = Post-doctoral student; ^G = Graduate student; ^U = Undergraduate or post-baccalaureate student
 *Senior author: Paper written by student under my supervision

Corral, D., & Rutchick, A. M. (2023). The effects of explicit justification on moral judgements. *Quarterly Journal of Experimental Psychology*.

Corral, D., Carpenter, S. K., & St. Hilaire, K. J. (2023). Testing versus studying during analogical problem solving. *Psychonomic Bulletin & Review*.

Corral, D., & Carpenter, S. K. (2023). Hypercorrection facilitates comprehension, transfer, and long-term correction of classroom misconceptions. *Journal of Applied Research in Memory and Cognition*, 12, 208–229.

Corral, D., Healy, A. F., & Jones, M. (2022). The effects of testing the relationships Among relational concepts. *Cognitive Research: Principles and Implications*, 7, Article 47.

^UErvin, W. T., & *Corral, D. (2022). The effects of reflective reasoning on philosophical dilemmas. In J. Culbertson, A. Perfors, H. Rabagliati & V. Ramenzoni (Eds.), *Proceedings of the 44th Annual Meeting of the Cognitive Science Society* (pp. 1765-1770). Austin, TX: Cognitive Science Society.

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- Yueng, K. L., Carpenter, S. K., & Corral, D. (2021). A comprehensive review of educational technology and student learning outcomes in academic contexts. *Educational Psychology Review*, *33*, 1583–1630.
- Corral, D., Carpenter, S. K., & Clingan-Siverly, S. (2021). The effects of delayed versus immediate explanatory feedback on complex concept learning. *Quarterly Journal of Experimental Psychology*, *74*, 786-799.
- Corral, D., & Carpenter, S. K. (2020). Facilitating transfer through incorrect examples and explanatory feedback. *Quarterly Journal of Experimental Psychology*, *73*, 1340-1359.
- Corral, D., Carpenter, S. K., Perkins, K. M., & Gentile, D. A. (2020). Assessing students' use of optional online reviews. *Applied Cognitive Psychology*, *34*, 318-329.
- Corral, D., Quilici, J. L., & Rutchick, A. M. (2020). The effects of early schema acquisition on mathematical problem solving. *Psychological Research*, *84*, 1495-1506.
- Corral, D., Healy, A. F., Rozbruch, E. V., & Jones, M. (2019). Building a testing-based training paradigm from cognitive psychology principles. *Scholarship of Teaching and Learning in Psychology*, *5*, 189-208.
- Corral, D., Kurtz, K. J. & Jones, M. (2018). Learning relational concepts from within- vs. between-category comparisons. *Journal of Experimental Psychology: General*, *147*, 1571-1596.
- Carpenter, S. K., Haynes, C. L., Corral, D., & Yeung, K. L. (2018). Hypercorrection of high-confidence errors in the classroom. *Memory*, *26*, 1379-1384.
- Corral, D., & Jones, M. (2017). Learning relational concepts through unitary- versus compositional-based representations. In G. Gunzelmann, A. Howes, T. Tenbrink & E. Davelaar (Eds.), *Proceedings of the 39th Annual Meeting of the Cognitive Science Society* (pp. 1830-1835). Austin, TX: Cognitive Science Society.
- Corral, D., & Jones, M. (2014). The effects of relational structure on analogical learning. *Cognition*, *132*, 280-300.
- Corral, D., & Jones, M. (2012). Learning of relational categories as a function of higher-order structure. In N. Miyake, D. Peebles & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Meeting of the Cognitive Science Society* (pp. 1434-1439). Austin, TX: Cognitive Science Society.

Submitted Manuscripts

- Corral, D. & Kurtz, K. J. *Improving the transfer of learning in education through category learning*. Invited revision at *Educational Psychology Review*.

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- Corral, D., & Burte, H. *The relationship between visuospatial and analogical reasoning*. Invited revision at *Memory & Cognition*.
- Corral, D., Foster, J. M., & Jones, M. *The duality of relational concept representation*. Under review.
- Corral, D., & Jones, M. *Representational primacy: The effects of early categorization on rule-contingent learning*. Under review.
- Corral, D., & Carpenter, S. K. *Acquiring complex concepts through classification versus observation*. Under review.
- Corral, D., Witherby, A. E., & Carpenter, S. K. The relationship between effort and students' study strategies. Under review.
- ^UErvin, W. T., & *Corral, D. *The effects of reflective reasoning on philosophical scenarios*. Under review.
- Zemla, J., & Corral, D. *The relationship between internal complexity and subjective understanding*. Under review.
- Corral, D., & Jones, M. *The role of unitary and compositional representations in learning relationally structured concepts*. Under review.
- Corral, D., Kurtz, K. J. & Jones, M. *The effects of comparison and task type on relational concept acquisition*. Under review.
- Corral, D., Lurquin, J., & Rutchick, A. M. *Wait a minute and think about it: The effects of counter-attitudinal reasoning and delayed responding on political judgments*. Under review.

Manuscripts in Preparation

- ^GBurkle, J. L., Goldwater, M. B., & *Corral, D. *The effects of causal structure on causal attribution judgments*. Manuscript in preparation.
- ^GBurkle, J. L., Goldwater, M. B., & *Corral, D. *Learning causal concepts as a function of causal structure*. Manuscript in preparation.
- ^GBurkle, J. L., & *Corral, D. *Differences in the alignability of relational causal structures*. Manuscript in preparation.
- Corral, D., & Carpenter, S. K. *The effects of testing on concept-based transfer*. Manuscript in preparation.
- Corral, D., & Goldwater, M. B. *Acquiring complex concepts through between- versus within-category comparisons*. Manuscript in preparation.

Corral, D., Healy, A. F., & Jones, M. *Decomposing the clicker technique*. Manuscript in preparation.

Corral, D., & Jones, M. *Carving analogy by its joints*. Manuscript in preparation.

Corral, D., & Jones, M. *The effects of forming misconceptions with a complex stimulus space*. Manuscript in preparation.

^GSumakpoyaa, E., & *Corral, D. *Extending the testing effect to category learning: Observational versus classification training with feature- and relation-based*. Manuscript in preparation.

Conference Presentations

^P = Post-doctoral student; ^G = Graduate student; ^U = Undergraduate or post-baccalaureate student

*Senior author: Project conducted by student under my supervision

^GBurkle, J. L., Goldwater, M.B., & *Corral, D. (2023). Learning causal concepts as a function of causal Structure. Poster presentation at the 64th *Annual Meeting of The Psychonomic Society*, San Francisco, CA.

^GSumakpoyaa, E., & *Corral, D. (2023). The effects of classification versus observation during category learning. Poster presentation at the 64th *Annual Meeting of The Psychonomic Society*, San Francisco, CA.

^GBurkle, J. L., Goldwater, M.B., & *Corral, D. (2023). The effects of causal structure on causal attribution judgements. Poster presentation at the *Proceedings of the 45th Annual Meeting of the Cognitive Science Society*. Sydney, Australia: Cognitive Science Society.

^GBurkle, J. L., & *Corral, D. (2022). The effects of causal structure on the perception of causality. Poster presentation at the 63rd *Annual Meeting of The Psychonomic Society*, Boston, MA.

^GSumakpoyaa, E., & *Corral, D. (2022). Partitioning problem solving into its component parts and its effect on learning. Poster presentation at the 63rd *Annual Meeting of The Psychonomic Society*, Boston, MA.

^GSumakpoyaa, E., & *Corral, D. (2022). Testing the testing effect with featural and relational categories. Poster presentation at the *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*. Toronto, Canada: Cognitive Science Society.

^UErvin, W., & *Corral, D. (2022). The effects of reflective reasoning on philosophical dilemmas. Poster presentation at the *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*. Toronto, Canada: Cognitive Science Society.

Corral, D., & Burte, H. (2021). Improving analogical learning and reasoning through visuospatial training. Poster presentation at the 62nd *Annual Meeting of The Psychonomic Society*, New Orleans, LA.

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- Corral, D., Carpenter, S. K., St. Hilaire, K. J., Hickman, C., Reese, E., & Benshoof, C. (2019). The effects of retrieval practice on analogical problem solving. Poster presentation at the *60th Annual Meeting of The Psychonomic Society*, Montreal, Canada.
- Corral, D., Carpenter, S. K., Reese, E., Fenimore, P., Hickman, C., & Benshoof, C. (2019). The benefits of testing and feedback on complex concept learning. Paper talk presented at the *8th Annual Meeting of Society for Applied Research in Memory and Cognition*, Cape Cod, MA.
- Corral, D., Carpenter, S. K., Clingan, S., Fenimore, P., Reese, E., Hickman, C., & Benshoof, C. (2019). Acquiring complex concepts through immediate versus delayed feedback. Paper talk presented at the *91st Annual Meeting of the Midwestern Psychological Association*, Chicago, IL.
- Corral, D., Carpenter, S. K., & Clingan, S. (2018). Using testing to improve concept learning. Poster presentation at the *59th Annual Meeting of The Psychonomic Society*, New Orleans, LA.
- Corral, D., Carpenter, S. K., & Clingan, S. (2018). When being wrong makes you right: Incorrect examples improve complex concept learning. Poster presentation at the *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*. Madison, WI: Cognitive Science Society.
- Corral, D., & Carpenter, S. K. (2018). Predicting course performance through students' use of online reviews. Symposium talk at the *90th Annual Meeting of the Midwestern Psychological Association*, Chicago, IL.
- Corral, D., & Jones, M. (2017). Leveraging different types of comparisons and representations to improve relational category learning. Poster presentation at the *58th Annual Meeting of The Psychonomic Society*, Vancouver, Canada.
- Corral, D., & Jones, M. (2017). Learning relational concepts through unitary- versus compositional-based representations. Poster presentation at the *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*. London, United Kingdom: Cognitive Science Society.
- Corral, D., & Jones, M. (2016). Representational primacy: The effects of early classification training on rule-contingent learning. Poster presentation at the *57th Annual Meeting of The Psychonomic Society*, Boston, MA.
- Corral, D., Healy, A. F., & Jones, M. (2015). The effects of testing the relationships of relational concepts. Poster presentation at the *56th Annual Meeting of The Psychonomic Society*, Chicago, IL.
- Jones, M., Healy, A. F., Anderson, L., Corral, D., Lalchandani, L., & Rozburch, E. V. (2015). Assessing student knowledge with real-time in-classroom quizzing. Symposium talk at the *56th Annual Meeting of The Psychonomic Society*, Chicago, IL.

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- Corral, D., Rozbruch, E. V., Healy, A. F., & Jones, M. (2014). Predicting memory retention from an initial quiz. Poster presentation at the *55th Annual Meeting of The Psychonomic Society*, Long Beach, CA.
- Lurquin, J., Corral, D., & Rutchick, A. M. (2014). Endorsing the other Side. The effect of a delay before considering counter-attitudinal political judgments. Poster presentation at the *15th annual meeting of the Society for Personality and Social Psychology*, Austin, TX.
- Corral, D., Kurtz, K. J., & Jones, M. (2013). Learning relational and feature-based categories from matched or contrasting comparisons. Poster presentation at the *54th Annual Meeting of The Psychonomic Society*, Toronto, Canada.
- Corral, D. (2013). Learning the category before the rule: The effects of forming categories at the outset of learning. Paper talk presented at the *32nd Annual Ekstrand Mini-Convention*, University of Colorado Boulder, Boulder, CO.
- Corral, D., Lurquin, J., & Rutchick, A. M. (2013). Counter-attitudinal reasoning and delayed responding as predictors of polarized political judgments. Poster presentation at the *14th annual meeting of the Society for Personality and Social Psychology*, New Orleans, LA.
- Camacho, T.C., Corral, D., Grover, M., & Otten, M.P. (2013). Believing is achieving: Belief as a predictor of athletic success for collegiate athletes. Poster presentation at the *14th annual meeting of the Society for Personality and Social Psychology*, New Orleans, LA.
- Corral, D. & Jones, M. (2012). Acquiring higher-order relations through schema elaboration. Poster presentation at the *53rd Annual Meeting of The Psychonomic Society*, Minneapolis, MN.
- Corral, D. & Jones, M. (2012). Learning of relational categories as a function of higher-order structure. Poster presentation at the *34th Annual Meeting of the Cognitive Science Society*, Sapporo, Japan: Cognitive Science Society.
- Corral, D. (2012). The connections matter: The acquisition of higher-order structures. Paper talk presented at the *31st Annual Ekstrand Mini-Convention*, University of Colorado Boulder, Boulder, CO.
- Grover, M., Camacho, T.C., Corral, D., & Otten, M.P. (2012). Great Expectations: Confidence, control, and junior college football. Poster presentation at the *92nd Annual meeting of the Western Psychological Association*, San Francisco, CA.
- Camacho, T.C., Corral, D., & Otten, M.P. (2011). The psychological determinants of success: Differences between starting and non-starting athletes. Poster presentation at the *Annual Association for Applied Sport Psychology*, Honolulu, HA.

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- Corral, D. (2011). Predicting successful quantitative problem solving: The effects of successfully categorizing problem types. Poster presentation at the *15th Annual California State University, Northridge Student Research and Creative Works Symposium*, Northridge, CA.
- Corral, D., & Quilici, J. (2011). Reducing the load: Forming quantitative problem schemas through structural categorization. Poster presentation at the *91st Annual meeting of the Western Psychological Association*, Los Angeles, CA.
- Corral, D., & Rutchick, A.M. (2011). The timing is everything: Moral reasoning and decision outcomes before and after a delay. Paper swap at the *10th Annual meeting of the Society for Personality and Social Psychology, Justice and Morality Preconference*, San Antonio, TX.
- Corral, D., Bravo, D.Y., Sanchez, A., & Rutchick, A.M. (2011). Is morality relative? Effects of group size on moral judgments. Poster presentation at the *91st Annual meeting of the Western Psychological Association*, Los Angeles, CA.
- Corral, D., Ratsch, L., & Otten, M.P. (2011). Developing expertise: Years of experience, anxiety regulation, and pressure performance. Symposium presentation at the *91st Annual meeting of the Western Psychological Association*, Los Angeles, CA.
- Ramsburg, J. T., Otten, M.P., & Corral, D. (2011). Can mindfulness exercises promote clutch performance under pressure in sport? Symposium presentation at the *91st Annual meeting of Western Psychological Association*, Los Angeles, CA.
- Sanchez, A. & Corral, D. (2010). The large man lives: Large groups and non-utilitarian outcomes in moral dilemmas. Poster presentation for the *Psi Chi Student Research Competition*, Northridge, CA.
- Kosar S., Corral, D. Ramsburg, J.T., Bultman, A. (2010). Run away trolley, praying for non-christians when stuck on the track: The effects of religious affiliation on utilitarian choices. Poster presentation at the *Psi Chi Student Research Competition*, Northridge, CA.
- Corral, D. (2010). The large man, the footbridge, and the trolley: The ironic effects of explicit suggestion on choices for moral dilemmas. Paper talk presented at the *12th Annual Sigma Xi Student Research Symposium*, California State University, Northridge.
- Corral, D., & Rutchick, A.M. (2010). Effects of explicit justification on decision outcomes in moral dilemmas. Poster presented at the *90th Annual meeting of the Western Psychological Association*, Cancun, Mexico.
- Rutchick, A. M., Coleman, S. R., Corral, D., Ferber, S., & Swan, A. B. (2010). The pen is mightier than the word: Priming evaluative harshness. Poster presented at the *90th Annual meeting of the Western Psychological Association*, Cancun, Mexico.

Corral, D. (2010). Effects of explicit justification on decision outcomes in moral dilemmas. Poster presented at *14th Annual California State University, Northridge Student Research and Creative Works Symposium*, Northridge, CA.

Invited Talks

Corral, D. (2017). Learning relational concepts through within- and between-category comparisons. Paper talk presented at Iowa State University, *Cognitive Psychology Brown Bag Series*, Ames, IA.

Corral, D. (2017). How representation affects relational concept learning. Paper talk presented at University of Colorado Boulder, *Cognitive Lunch*, Boulder, CO.

Corral, D. (2016). A dual model of relational concept representation. Paper talk presented at University of Colorado Boulder, *Cognitive Lunch*, Boulder, CO.

Corral, D. (2015). Using comparison to learn relational concepts. Paper talk presented at University of Colorado Boulder, *Cognitive Lunch*, Boulder, CO.

Corral, D. (2014). The effects of between- and within-category comparison on relation- and feature-based learning. Paper talk presented at University of Colorado Boulder, *Cognitive Lunch*, Boulder, CO.

Corral, D. (2011). Learning the what before the how: The effects of order of categorization and worked examples on quantitative problem solving. *California State University, Northridge Brown Bag Series*, Northridge, CA.

Corral, D. (2011). Writing a personal statement. *California State University Northridge Graduate Peer Mentorship Workshop*, Northridge, CA.

Teaching Experience

Syracuse University

Psychology of Film	Spring 2023
Complex Cognition & Learning	Fall 2022
Advanced Experimental Psychology: Programing for Psychologists	Fall 2022
Proseminar Methods: Cognitive Psychology	Spring 2022
Complex Cognition & Learning	Spring 2022
Proseminar Methods: Cognitive Psychology	Fall 2021

Complex Cognition & Learning	Fall 2021
Complex Cognition & Learning	Spring 2021
Advanced Experimental Psychology: Programing for Psychologists	Fall 2020

University of Colorado Boulder

Statistics and Research Methods: Lab Instructor/Teaching Assistant	Spring 2017
Cognitive Neuroscience: Lab Instructor/Teaching Assistant	Fall 2016
Statistics and Research Methods: Lab Instructor/Teaching Assistant	Fall 2012
Neurobiology: Lead Teaching Assistant	Spring 2012
Introductory Psychology: Lead Teaching Assistant	Fall 2011

California State University Northridge

Statistical Methods in Psychology: Lab Instructor/Lead Teaching Assistant	Spring 2011
Psychology of Stress: Teaching Assistant	Fall 2010
Applied Cognitive Psychology: Teaching Assistant	Fall 2010
Statistical Methods in Psychology: Lab Instructor/Lead Teaching Assistant	Summer 2010

Journal Reviewing

- Cognitive Science
- Journal of Educational Psychology
- Educational Psychology Review
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Journal of Language and Memory
- Learning & Instruction
- Memory
- Memory & Cognition
- Perceptual and Motor Skills
- Psychonomic Bulletin & Review
- Psychological Research
- Scholarship of Teaching and Learning in Psychology