

John D. Coley

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Positions Held

Professor of Marine & Environmental Sciences, Northeastern University Marine Science Center / Coastal Sustainability Institute, Nahant, Massachusetts (2022-present)

Professor of Psychology, Northeastern University, Boston, Massachusetts (2021-present)

Visiting Scholar, Marine Science Center / Coastal Sustainability Institute, Northeastern University (2021)

Senior Visiting Fellow, School of Psychology, University of New South Wales, Sydney, Australia (2007-2008)

Associate Professor of Psychology, Northeastern University, Boston, Massachusetts (2004-2021)

Assistant Professor of Psychology, Northeastern University, Boston, Massachusetts (1998- 2004)

Education

Postdoctoral Research Associate in Cognitive Psychology, Northwestern University, Evanston, Illinois (1993-1998)

Ph.D. in Developmental Psychology, University of Michigan, Ann Arbor, Michigan (1986-1993)

B.A. in Psychology, *Magna Cum Laude*, Miami University, Oxford, Ohio (1982-1986)

Affiliations and Fellowships

Faculty Affiliate, Global Resilience Institute, Northeastern University (2020-present)

Core Faculty Member, Coastal Sustainability Institute, Northeastern University (2020-present)

Fellow, Association for Psychological Science (elected 2019)

Fellow, Psychonomic Society (elected 2014)

Research Interests

Environmental Cognition and Sustainability

Essentialist Thinking about Social Categories

Intuitive Biology and Life Science Education

Conceptual Development

Conceptual Structure & Inductive Reasoning

Cultural and Environmental Differences in Human Cognition

Funding History

Active

Collaborative Research: Untangling the Complex Role of Anthropocentric Thinking in Undergraduate Biology Education.
(DUE 2000856; J.D. Coley & K.D. Tanner, PIs). NSF Education and Human Resources (EHR), Division of Undergraduate Education (DUE), Education Core Research Grants (ECR), \$900,000, Oct 2020 - Sept 2023.

Developing Belief Network: Northern Ireland and the Republic of Ireland. (J. Dautel, L. Taylor, A. Feeney, J. Coley, PIs). Templeton Foundation Cross-Cultural Developing Belief Research Network, \$475,000 (total award), Jan 2021-Dec 2025.

Learning Critical Reasoning Skills: A Machine Learning Perspective. (I. Votsis, J.D. Coley, PIs). Northeastern University Tier 1 Interdisciplinary Research Grant, \$49,980, July 2020 - June 2023.

Previously Held

Longitudinal Investigation of the Decision Process in Adoption of Course-Based Research. (1912520, C. Bascom-Slack, PI; J.D. Coley, CoPI;). NSF, EHR, Division of Undergraduate Education (DUE), Improving Undergraduate STEM Education (IUSE), \$75,350, Oct 2019-June 2022.

Cognitive Construals of Urban Waterways: Enhancing Environmental Awareness to Promote Resilience. (D. Adams, J.D. Coley, B. Helmuth, CoPIs). Northeastern University Tier 1 Interdisciplinary Research Grant, \$49,899, July 2019 - June 2022.

CLEAR (Cognitive Laboratory of Environmental and Arts Research). (D. Adams, J. Coley, K. Ellenbogen, B. Helmuth, PIs). New England Biolabs Foundation, \$10,000.

RAPID: Collaborative Research: Designing an Educational Intervention to Address Intuitive Misconceptions about COVID-19. (DRL 2028109; J.D. Coley, D. Kelemen, & S. Ronfard, PIs). NSF, EHR, Division of Learning in Formal and Informal Settings (DRL), \$99,715, May 2020-Apr 2022.

Coastal Sustainability: Clean, Safe, Smart, and Equitable Communities. (G. Trussell, PI; J. Bowen, J.D. Coley, R. Hughes, S. Scyphers, CoPIs). NSF, Office of Integrative Activities, Convergence Accelerator (Conference Grant), \$99,316, (2021).

Research Experience for Undergraduates (REU) Supplement to: Investigating the influence of informal understandings about biology on formal learning of biological concepts. (J.D. Coley, PI; K.D. Tanner, CoPI). NSF, EHR, Education Core Research, \$25,600, Aug 2019-Jul 2020.

The Role of Pedagogical Instruction in Children's Ecological Thinking and Behavior. (I. Zambrana, PI; J.D. Coley, CoPI). Faculty Research Grant, Department of Special Needs Education, University of Oslo, c. \$15,000, Sep 2017-Aug 2018.

Investigating the influence of informal understandings about biology on formal learning of biological concepts. (1535496, J.D. Coley, PI; K.D. Tanner, CoPI). NSF, EHR, Division of Graduate Education (DGE), Education Core Research, \$1,384,554, Aug 2015-July 2020.

Experience and the Development of Folk Biological Reasoning (Supplemental). (J.D. Coley, PI; BCS 0542021, National Science Foundation, Division of Behavioral and Cognitive Sciences, Program in Developmental and Learning Sciences/Children's Research Initiative, \$15,000.

Experience and the Development of Folk Biological Reasoning. (BCS 0236338, J.D. Coley, PI). NSF, Division of Behavioral and Cognitive Sciences, Program in Developmental and Learning Sciences/Children's Research Initiative, \$466,228.

Publications

Refereed Journal Articles

Pizza, L., Ronfard, S., Coley, J.D., & Kelemen, D. (2023) Why we should care about moral foundations when preparing for the next pandemic: Insights from Canada, the UK and the US. *PLOS-ONE*.

Kim, J., Betz, N., Helmuth, B., & Coley, J.D. (2023). Conceptualizing Human-Nature Relationships: Implications of Human Exceptionalist Thinking for Sustainability and Conservation. *Topics in Cognitive Science*.

Xu, Y. & Coley, J.D. (2022). Intuitive Biological Thinking in Chinese Eighth Graders. *Journal of Experimental Child Psychology*, 224, <https://doi.org/10.1016/j.jecp.2022.105511>

- Xu, Y., Burns, M., Wen, F., Thor, E. D., Zuo, B., Coley, J. D., & Rhodes, M. (2022). How Culture Shapes Social Categorization and Inductive Reasoning: A Developmental Comparison. *Journal of Cognition and Development*, 23:5, 644-659. <https://doi.org/10.1080/15248372.2022.2085708>
- Betz, N. & Coley, J.D. (2022). Human Exceptionalist Thinking about Climate Change. *Sustainability*, 14, 9519. <https://doi.org/10.3390/su14159519>
- Pickett, S.B., Nielson, C., Marshall, H., Tanner, K.D., & Coley, J.D. (2022). Effects of Reading Interventions on Student Understanding of and Misconceptions about Antibiotic Resistance. *Journal of Microbiology Education*, 23 (1), <https://doi.org/10.1128/jmbe.00220-21>
- Xu, Y., Berryessa, C.M., Dowd, M., Penta, D., & Coley, J.D. (2022). Essentialist Thinking Predicts Culpability Judgments and Sentencing Decisions. *Psychology, Crime & Law*, 28 (3), 246-267. DOI: [10.1080/1068316X.2021.1905812](https://doi.org/10.1080/1068316X.2021.1905812)
- Coley, J.D., Betz, N., Helmuth, B., Ellenbogen, K., Scyphers, S.B., & Adams, D. (2021). Beliefs about Human-Nature Relationships and Implications for Investment and Stewardship Surrounding Land-Water System Conservation. *Land*, 10(12), 1293. <https://doi.org/10.3390/land10121293>
- Xu, Y., Li, X., & Coley, J.D. (2021). How Essentialist Beliefs about National Groups Differ by Cultural Origin and Study-Abroad Experience among Chinese and American College Students. *Asian Journal of Social Psychology*, 24, 537-552. <https://doi.org/10.1111/ajsp.12456>
- Leffers, J.S. & Coley, J.D. (2021). Do I know you? The role of culture in racial essentialism and facial recognition memory. *Journal of Applied Research in Memory and Cognition*, 10 (1), 5-12. <https://doi.org/10.1016/j.jarmac.2020.12.001>
- Betz, N. & Coley, J.D. (2020) Development of Conceptual Flexibility in Intuitive Biology: Effects of Environment and Experience. *Frontiers in Psychology* 11:537672. doi: 10.3389/fpsyg.2020.537672
- Wen, F., Zuo, B., Ma, S., Xu, Y., Coley, J.D., & Wang, Y. (2020). Do We See Masculine Faces as Competent and Feminine Faces as Warm? Effects of Sexual Dimorphism on Facial Perception. *Evolutionary Psychology*, 18 (4), 1-11. DOI: 10.1177/1474704920980642
- Betz, N., Leffers, J., Thor, E.E.D., Fux, M., de Nesnera, K., Tanner, K., & Coley, J.D. (2019.) Cognitive Construal-Consistent Instructor Language in the Undergraduate Biology Classroom. *CBE: Life Science Education*, 18:ar63, 1-16. DOI: <https://doi.org/10.1187/cbe.19-04-0076>
- Swiney, L., Bates, D.G., & Coley, J.D. (2018). Cognitive Constraints Shape Public Debate on the Risks of Synthetic Biology. *Trends in Biotechnology*, 36 (12), 1199-1201. DOI: <https://doi.org/10.1016/j.tibtech.2018.09.002>
- Arenson, M. & Coley, J.D. (2018). Anthropocentric by Default? Attribution of Familiar and Novel Properties to Living Things. *Cognitive Science*, 42, 253-285.
- Richard, M., Coley, J.D. & Tanner, K.D. (2017). Investigating Undergraduate Students' Use of Intuitive Reasoning and Evolution Knowledge in Explanations of Antibiotic Resistance. *CBE: Life Sciences Education*. DOI:10.1187/cbe.16-11-0317
- Smyth, K., Feeney, A., Eidson, R.C., & Coley, J.D. (2017). Development of essentialist thinking about religion categories in Northern Ireland (and the United States). *Developmental Psychology*, 53(3), 475-496.
- Coley, J.D., Arenson, M.B., Xu, Y., & Tanner, K.D. (2017). Intuitive biological thought: Developmental changes and effects of biology education in late adolescence. *Cognitive Psychology*, 92, 1-21.
- Coley, J.D. & Tanner, K.D. (2015). Relations between intuitive biological thinking and biological misconceptions in biology majors and non-majors. *CBE: Life Sciences Education*, 14, 1-19.
- Eidson, R.C. & Coley, J.D. (2014). Not so fast: Gender essentialism in young adults. *Journal of Cognition and Development*, 15 (2), 382-292.
- Smith, J.I., Combs, E.D., Nagami, P.H., Alto, V.M., Goh, H.G., Gourdet, M.A.A., Hough, C.M., Nickell, A.E., Peer, A.G., Coley, J.D. & Tanner, K.D. (2013). Development of the Biology Card Sorting Task to Measure Conceptual Expertise in Biology. *CBE: Life Sciences Education*, 12, 628-644.
- Kutchukian, P.S., Vasilyeva, N.Y., Xu, J., Lindvall, M.K., Dillon, M.P., Glick, M., Coley, J.D. & Brooijmans, N. (2012). Inside the mind of a medicinal chemist: The role of human bias in compound prioritization during drug discovery. *PLoS ONE* 7(11): e48476. doi:10.1371/journal.pone.0048476.

- Coley, J.D. & Tanner, K.D. (2012). Common origins of diverse misconceptions: Cognitive principles and the development of biological thinking. *CBE: Life Sciences Education*, 11, 1-7.
- Coley, J.D. (2012). Where the wild things are: Informal experience and ecological reasoning. *Child Development*, 83 (3), 992-1006.
- Feeney, A., Coley, J.D. & Crisp, A. (2010). The relevance framework for category-based induction: Evidence from garden-path arguments. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 36(4), 906-919.
- Shafto, P., Kemp, C., Bonawitz, L.B., Coley, J.D. & Tenenbaum, J.B. (2008). Inductive reasoning about causally transmitted properties. *Cognition*, 109, 175-192.
- Coley, J.D. (2007). The human animal: Developmental changes in judgments of taxonomic and psychological similarity among humans and other animals. *Cognition, Brain, Behavior*, 11, 733-756.
- Shafto, P., Coley, J.D. & Baldwin, D. (2007). Effects of time pressure on context-sensitive property induction. *Psychonomic Bulletin & Review*, 14, 890-894
- Medin, D.L., Ross, N.O., Atran, S., Cox, D., Coley, J.D., Proffitt, J.B. & Blok, S. (2006). Folkbiology of freshwater fish. *Cognition*, 99, 237-273.
- Coley, J.D., Hayes, B., Lawson, C., & Moloney, M. (2004). Knowledge, expectations, and inductive inferences within conceptual hierarchies. *Cognition*, 90, 217-253
- Medin, D., Coley, J.D., Storms, G. & Hayes, B. (2003). A relevance theory of induction. *Psychonomic Bulletin and Review*, 10, 517-532.
- Shafto, P. & Coley, J.D. (2003). Development of categorization and reasoning in the natural world: Novices to experts, naïve similarity to ecological knowledge. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 29, 641-649
- Ross, N., Medin, D.L., Coley, J.D. & Atran, S. (2003). Cultural and experiential differences in the development of biological induction. *Cognitive Development*, 18, 25-47.
- Stepanova, O. & Coley, J.D. (2002). The green-eyed monster: Concepts of envy and jealousy in Russian and English. *Journal of Cognition & Culture*, 2, 235-262.
- Bailenson, J.B., Shum, M.S., Atran, S., Medin, D. & Coley, J.D. (2002). A bird's eye view: Biological categorization and reasoning within and across cultures. *Cognition*, 84, 1-53.
- Atran, S., Medin, D.L., Ross, N., Lynch, E., Vapnarsky, V., Ucan Ek, E., Coley, J., Timura, C., & Baran, M. (2002). Folkecology, cultural epidemiology, and the spirit of the commons: A garden experiment in the Maya lowlands. *Current Anthropology*, 43(3), 421-450.
- Ahn, W., Kalish, C., Gelman, S.A., Medin, D.L., Luhmann, C., Atran, S., Coley, J.D. & Shafto, P. (2001). Why essences are essential in the psychology of concepts. *Cognition*, 82, 59-69.
- Proffitt, J.B., Coley, J.D. & Medin, D.L. (2000). Expertise and category-based induction. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 26, 811-828.
- Coley, J.D. (2000). On the importance of comparative research: The case of folkbiology. *Child Development*, 71, 82-90.
- Lynch, E.B., Coley, J.D., & Medin, D.L. (2000). Tall is typical: Central tendency, ideal dimensions, and graded category structure among tree experts and novices. *Memory & Cognition*, 28, 41-50.
- Atran, S., Medin, D.L., Ross, N., Lynch, E.B., Coley, J.D., Ucan Ek', E., & Vapnarsky, V. (1999). Folkecology and commons management in the Maya Lowlands. *Proceedings of the National Academy of Sciences U.S.A.*, 96, 7598-7603.
- Gelman, S.A., Coley, J.D., Rosengren, K.R., Hartman, E.E., & Pappas, A.S. (1998). Beyond labeling: The role of parental input in the acquisition of richly-structured categories. *Monographs of the Society for Research in Child Development*, 63, Serial No. 253.
- Coley, J.D., Medin, D.L., & Atran, S. (1997). Does rank have its privilege? Inductive inferences within folkbiological taxonomies. *Cognition*, 64(1), 73-112.
- Atran, S., Estin, P., Coley, J.D., & Medin, D.L. (1997). Generic species and basic levels: Essence and appearance in folk biology. *Journal of Ethnobiology*, 17(1), 22-45.

- López, A., Atran, S., Coley, J.D., Medin, D.L. & Smith, E.E. (1997). The tree of life: Universal and cultural features of folkbiological taxonomies and inductions. *Cognitive Psychology*, *32*, 251-295.
- Medin, D.L., Lynch, E.B., Coley, J.D. & Atran, S. (1997). Categorization and reasoning among tree experts: Do all roads lead to Rome? *Cognitive Psychology*, *32*, 49-96.
- Coley, J.D. (1995). Emerging differentiation of folkbiology and folkpsychology: Attributions of biological and psychological properties to living things. *Child Development*, *66*, 1856-1874.
- Gelman, S.A. & Coley, J.D. (1990). The importance of knowing a dodo is a bird: Categories and inferences in 2-year-old children. *Developmental Psychology*, *26*, 796-804.
- Coley, J.D. & Gelman, S.A. (1989). The effects of object orientation and object type on children's interpretation of the word "big." *Child Development*, *60*, 372-380.

Refereed Conference Proceedings

- Swiney, L., Kelemen, D., Shtulman, A., Coley, J.D., Betz, N., & Blancke, S. (2017). Intuitive Biology and Global Challenges: Applying Theoretical Insights for Public Good. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 33-34). Austin TX: Cognitive Science Society.
- Vasilyeva, N. & Coley, J.D. (2013). Evaluating two mechanisms of flexible induction: Selective memory retrieval and evidence explanation. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 3645-3651). Austin, TX: Cognitive Science Society.
- Smyth, K., Pendergrast, C., Feeney, A., Coley, J.D., Eidson, R.C., & Niens, U. (2012). The inductive potential of religion categories in Northern Ireland. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 2351-2356). Austin, TX: Cognitive Science Society.
- Vasilyeva, N., Coley, J.D. & Muratore, T. (2009). Interaction of Taxonomic and Contextual Knowledge in Categorization of Cross-Classified Instances. In N. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (721-726). Cognitive Science Society Inc.
- Baker, A. & Coley, J.D. (2005). Taxonomic and ecological relations in open-ended induction. In B.G. Bara, L. Barsalou & M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (181-183). Mahwah NJ: Lawrence Erlbaum Associates.
- Coley, J.D., Vitkin, A.Z., Seaton, C.E. & Yopchick, J.E (2005). Effects of Experience on Relational Inferences in Children: The Case of Folk Biology. In B.G. Bara, L. Barsalou & M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (471-475). Mahwah NJ: Lawrence Erlbaum Associates.
- Shafto, P., Kemp, C., Baraff, E., Coley, J.D. & Tenenbaum, J.B. (2005). Context-sensitive Induction. In B.G. Bara, L. Barsalou & M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (2003-2008). Mahwah NJ: Lawrence Erlbaum Associates.
- Vitkin, A.Z., Coley, J.D. & Hu, R. (2005). Children's Use of Relevance in Open-Ended Induction in the Domain of Biology. In B.G. Bara, L. Barsalou & M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (2319-2324). Mahwah NJ: Lawrence Erlbaum Associates.

Chapters in Edited Volumes

- Feeney, A., Dautel, J., Phillips, K., Leffers, J., & Coley, J.D. (2020). The development of essentialist, ethnic, and civic intuitions about national categories. *Advances in Child Development and Behavior*.
- Coley, J.D. & Betz, N.J. (2018). Expertise. In M.H. Bornstein, M.E. Arteberry, K.L. Fingerman, & J.E. Lansford (Eds.), *The Sage Encyclopedia of Lifespan Human Development*. Thousand Oaks, CA: Sage Publications Inc.
- Coley, J. D. & Muratore, T.M. (2012). Trees, Fish, and Other Fictions: Folk Biological Thought and its Implications for Understanding Evolutionary Biology. In K. S. Rosengren, S. Brem, E. M. Evans, & G. Sinatra (Eds.). *Evolution challenges: Integrating research and practice in teaching and learning about evolution* (22-46). Cambridge: Oxford University Press.
- Coley, J.D. & Vasilyeva, N.Y. (2010). Generating inductive inferences: Premise relations and property effects. In B.H. Ross (Ed.) *The Psychology of Learning and Motivation*, *53*, 183-226. Burlington MA: Academic Press.

- Shafto, P., Coley, J.D. & Vitkin, A. (2007). Availability in category-based induction. In A. Feeney & E. Heit (Eds.), *Inductive reasoning: Experimental, developmental, and computational approaches*. Cambridge University Press, 114-136.
- Sachs, O.S. & Coley, J.D. (2006). Envy and jealousy in Russian and English: Labeling and conceptualization of emotions by native speakers and bilinguals. In A. Pavlenko (Ed.), *Bilingual minds: Emotional experience, expression, and representation* (209-231). Clevedon: Multilingual Matters Ltd.
- Coley, J.D., Shafto, P., Stepanova, O., & Barraff, E. (2005). Knowledge and category-based induction. In Ahn, W., Goldstone, R. L., Love, B. C., Markman, A. B., & Wolff, P. (Eds.), *Categorization inside and outside the laboratory: Essays in honor of Douglas L. Medin* (69-85). Washington, DC: American Psychological Association.
- Coley, J.D., Solomon, G.E.A., & Shafto, P. (2002). The development of folkbiology: A cognitive science perspective on children's understanding of the biological world. In P. Kahn & S. Kellert (Eds.), *Children and nature: Psychological, sociocultural and evolutionary investigations* (65-91). Cambridge, MA: MIT Press.
- Coley, J. D., Medin, D. L., Proffitt, J. B., Lynch, E. B., & Atran, S. (1999). Inductive reasoning in folkbiological thought. In D.L. Medin, D. L. & S. Atran (Eds.), *Folkbiology* (205-232). Cambridge, MA: MIT Press.
- Medin, D. L. & Coley, J. D. (1998). Concepts and categorization. In Hochberg, J. & Cutting, J. E. (Eds.), *Handbook of Perception and Cognition (2nd Ed.): Perception and Cognition at Century's End* (403-440). San Diego: Academic Press.
- Gelman, S. A., Coley, J. D., & Gottfried, G. M. (1994). Essentialist beliefs in children: The acquisition of concepts and theories. In L. W. Hirschfeld & S. A. Gelman (Eds.), *Mapping the mind: Domain specificity in cognition and culture* (341-365). Cambridge: Cambridge University Press.
- Gelman, S. A., & Coley, J. D. (1991). Language and categorization: The acquisition of natural kind terms. In J. P. Byrnes & S. A. Gelman (Eds.), *Perspectives on language and thought: Interrelations in development* (pp. 146-196). Cambridge: Cambridge University Press.

Presentations

Recent Invited Presentations

- 2019 Invited Keynote, Hispanic Serving Institutions *STEM Bridges Across Eastern Queens* Course Redesign Workshop, Queens College, CUNY, Queens NY (January).
Invited Talk, Developmental Science, Department of Psychology, University of Massachusetts Amherst (September).
- 2018 Invited Keynote, 2018 Project Kaleidoscope Upstate New York Regional Network Meeting, Oneonta NY (February).
Invite presentation (with Brian Helmuth), *Science for the Public 2018 Science Lecture Series* at MIT (February).
Invited Lecture, *Academic Seminar of Social and Cultural Psychology*, Central China Normal University, Wuhan, China (June).
Invited Keynote, 2018 Meeting of the Hubei Province Psychological Association, Wuhan, China (July)
Invited Research Symposium, 2018 Meeting of the Hubei Province Psychological Association, Wuhan, China (July)
Invited Lecture, Faculty of Education, University of Oslo, Oslo, Norway (December).
- 2017 Invited Discussant, *Cultural Variation in the Development of Folkecological Knowledge*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Austin TX (April).
Yale *Current Works in Developmental Psychology* Speaker Series, New Haven CT (October).
Warwick Integrative Synthetic Biology Centre Workshop, Venice, Italy (September).
- 2016 Cognition & Development Group, Boston College (March).
- 2014 Invited Keynote (with Kimberly Tanner), Meeting of the Society for the Advancement of Biology Education Research (SABER), Minneapolis (July).
- 2013 Center for Mind, Brain and Culture, Emory University

Earlier International Invited Talks

- 2009 Invited Talk, Queen's University (Belfast, UK), School of Psychology
- 2008 Invited Talk, University of Queensland (Brisbane, Australia), School of Psychology
Invited Talk, University of New South Wales (Sydney, Australia), School of Psychology

Recent Conference Presentations (2015-present)

- Nielson, C., Pitt, E., Fux, M., Leffers, J., & Coley, J. D. (2022). *All about humans?: Anthropocentrism, but not essentialism or teleology, related to misconceptions and expertise across biological concepts*. Poster presented at the Annual Convention of the Association for Psychological Science, Chicago, IL (May).
- Kim J., Betz, N., Watson, K., Marchese, K., Scyphers, S.B., Adams, D., Ellenbogen, K., Helmuth, Bl, & Coley, J.D. (2022). *Nature in the Balance: Symmetry in perceived human-nature relations predicts pro-environmental attitudes*. Poster presented at the Annual Convention of the Association for Psychological Science, Chicago, IL (May).
- Genne-Bacon, E.A., Fux, M., Wilks, J., Coley, J.D., & Bascom-Slack, C. (2020). Longitudinal tracking of instructors shows that a short-duration CURE can catalyze expansion to longer CURE experiences. Poster presentation at the 10th Annual National Meeting of the Society for the Advancement of Biology Education Research (SABER), Online (July).
- Leffers, J., Atkins, K., Bisson, J., Lolis, Z., Rutherford, A., & Coley, J.D. (2019). Children's Racial Essentialism Predicts Facial Recognition Memory Performance. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville KY (October).
- Thor, E.D., Masilamani, R., Bascom-Slack, C., Jacque, B., & Coley, J.D. (2019). Relationships Between Intuitive Thoughts and Learning About Infectious Disease in High School Students. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville KY (October).
- Xu, Y., Wen, F., Thor, E.D., Zuo, B., & Coley, J.D. (2019). A Cross-Cultural Comparison of the Development of Social Categorization and Reasoning Preferences. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville KY (October).
- Fux, M., Cruz, N., & Coley, J.D. (2019) The Relationship Between Intuitive Biology Thinking and Different Levels of Scientific Expertise. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville KY (October).
- Coley, J.D., Krigger, A., Alvarez, M., Chamard, E., Marchese, K., & Zambrana, I. (2019). Ecological Thinking in Preschoolers: Evidence from Free Play. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville KY (October).
- Dautel, J.B., Taylor, L.K., Feeney, A., Coley, J.D., & Rylander, R. (2019). School and family environments influence children's essentialist beliefs about ethno-religious categories in Northern Ireland. Symposium presentation at Biennial meeting of the *Society for Research in Child Development*, Baltimore, MD. (March)
- Leffers, J.S., Strella, S., Potts-Santone, M., & Coley, J.D. (2019). *Relations between Intuitive Thinking and Evolutionary Understanding in 8th Graders and Undergraduates*. Poster presentation at the Biennial Meetings of the Society for Research in Child Development (SRCD), Baltimore, MD. (March).
- Betz, N., Leffers, J.S., Ganguly, P., & Coley, J.D. (2019). *Psychological Essentialism Negatively Predicts Dehumanization of Outgroups: Evidence from India*. Poster presented at the International Convention of Psychological Science (ICPS), Paris (March 2019).
- Coley, J.D., Cohen-Pilat, M., Eidson, R.C., Smyth, K., Dautel, J., & Feeney, A., (2019). *Essentialist Thinking about Social Categories in the US and Northern Ireland*. Poster presented at the International Convention of Psychological Science (ICPS), Paris (March 2019).
- Pickett SB, Marshall H, Coley JD, Tanner KD. (2019) *Investigating the Influence of Instructional Language on Student Misconceptions and Intuitive Reasoning about Antibiotic Resistance*. Poster presentation at the SABER West Meeting, Irvine, CA. (January).
- Coley, J.D., George, L., Sabane, S., Acosta Lane, G., & Zambrana, I.M. (2018). *Ecological Thinking in Preschoolers: Evidence from Free Play and Semantic Organization*. Poster presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans LA (November).
- Leffers, J. and Coley, J.D. (2018). *Essentialist Thinking about Outgroups Predicts Own-Race Bias*. Poster presented at the 59th Psychonomic Society Annual Meeting in New Orleans, Louisiana (November).
- Xu, Y., Wen, F.F., Thor, E.E.D., Zuo, B., & Coley, J.D. (2018). *A Cross-Cultural Comparison on Category-based Induction*. Poster to be presented at the 39th Society of Judgment and Decision-Making Annual Meeting, New Orleans, Louisiana (November).
- Li, X., Xu, Y., & Coley, J.D. (2018). *Intercultural experiences and Intergroup Perceptions of Chinese and American College Students Studying Home and Abroad*. Talk presented at the 2nd Cultural Diversity, Migration, and Education Conference, Potsdam, Germany (August).

- Xu, Y., Wen, F., Thor, E.E.D., Zuo, B., & Coley, J.D. (2018). *Social Categorization and Reasoning under Cross-Cultural Contexts*. Talk presented at Hubei Province Psychological Association Annual Meeting, Wuhan, China (July).
- Fux, M., de Nesnera, K., Xu, Y., Betz, N., Leffers, J., Tanner, K & Coley, J.D. (2018). *Demonstrating Contingency between Intuitive Biological Reasoning and Persistent Biological Misconceptions across Levels of Academic Expertise*. Poster presented at the 30th Annual Convention of the Association for Psychological Science, San Francisco, CA (May).
- Betz, N., Leffers, J., Dahlgard Thor, E., Fux, M., de Nesnera, K., Tanner, K & Coley, J.D. (2018). *Intuitive Instruction: Evidence of Anthropocentric, Teleological and Essentialist Language in Instructor Lectures during Undergraduate Biology Courses*. Poster presented at the 30th Annual Convention of the Association for Psychological Science, San Francisco CA (May).
- Betz, N. & Coley, J.D. (2018). *Thinking of Humans as Exceptional May Decrease Ecological Concern*. Poster presented at the 30th Annual Convention of the Association for Psychological Science, San Francisco CA (May).
- Leffers, J., Atkins, K., Chan, A., Govan, T., Strella, S., & Coley, J.D. (2018). *Learning through the Intuitive Lens: Relations between Evolutionary Understanding and Intuitive Thinking in Undergraduates and 8th graders*. Poster presented at the Annual Meeting of the Eastern Psychological Association in Philadelphia, Pennsylvania (March).
- Xu, Y., Luken, A., Kim, N., & Coley, J.D. (2018). *Essentialist Belief in Mental Disorder Diagnosis and Treatment Decisions*. Poster presented at the Society for Personality and Social Psychology 2018 Annual Convention, Atlanta, GA (March).
- de Nesnera, K., Fux, M., Cooper, A., Betz, N., Leffers, J., Xu, Y., Coley, J.D., & Tanner, K.D. (2018). *Investigations of the relationship between intuitive thinking and biological misconceptions across levels of expertise in the context of Vision and Change*. Poster presented at the SABER (Society for the Advancement of Biology Education Research) West 2018 (January).
- Leffers, J., Coats, S., Govan, T., & Coley, J.D. (2017). *Relations between intuitive beliefs about race and facial recognition memory*. Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver (November).
- Xu, Y., Luken, A., Kim, N., & Coley, J.D. (2017). *Mental disorder diagnosis and treatment decisions: Symptoms, beliefs, and stigma*. Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver (November).
- Coley, J.D., Betz, N., Leffers, J., Xu, Y., Fux, M., de Nesnera, K., & Tanner, K.D. (2017). *Relations Between Intuitive Biological Thought and Scientific Misconceptions*. Poster presented at the Annual Meeting of the Cognitive Science Society, London (July).
- Betz, N. & Coley, J.D. (2017). *Intuitive Thinking Impacts Understanding Causes and Effects of Global Climate Change*. Paper presented at the Annual Meeting of the Cognitive Science Society, London (July).
- Leffers, J., Fux, M., Pitt, M., Douglas, E., Hut, K., Luken, A., Wilkins, H., & Coley, J.D. (2017). *Cheetahs, Penguins and Salamanders, Oh My! Intuitive Thinking and Formal Biology Education: The Case of Evolution*. Paper presented at 11th Annual Northeastern Evolutionary Psychology Society Conference, Binghamton NY (June).
- Leffers, J., Douglas, E., Hut, K., Luken, A., Pitt, M., Wilkins, H., & Coley, J.D. (2017). *Relations between intuitive thinking and evolutionary understanding: Cheetahs, Penguins, and Salamanders, oh my!* Poster presented at the 29th Annual Convention of the Association for Psychological Science, Boston MA (May).
- Coley, J.D., Xu, Y., Eidson, C., Feeney, A., & Dautel, J. (2017). *Cultural Differences in Essentialist Thinking about Social Categories: The Role of Perceived Social Conflict*. Paper presented at the 29th Annual Convention of the Association for Psychological Science, Boston MA (May).
- Vasilyeva, N., Ruggeri, A., Coley, J.D., & Lombrozo, T. (2017). *Development of Coordination between Explanation and Generalization*. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Austin TX (April).
- Coley, J.D., Betz, N., Xu, Y., Leffers, J., de Nesnera, K., & Tanner, K.D. (2017). *Relations Between Intuitive Biological Thought and Scientific Misconceptions in Undergraduate Biology Majors and Non-Majors*. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Austin TX (April).
- Feeney, A., Smyth, K., & Coley, J.D. (2017). *Essentialist reasoning about culturally salient social categories in Northern Ireland (and the US)*. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Austin TX (April).
- Leffers, J., Alto, A., Douglas, E., Hut, K., Luken, A., Wilkins, H., & Coley, J.D. (2017). *Relations between intuitive thinking and evolutionary understanding in Middle Schoolers*. Poster presented at the Annual Meeting of the Eastern Psychological Association, Boston MA (March).
- Coley, J.D., Xu, Y., Eidson, R.C., Feeney, A., & Dautel, J. (2017). *Cultural Differences in Essentialist Thinking about Social Categories*. Society for Applied Research in Memory and Cognition, Sydney, Australia (January).
- Arenson, M.B. & Coley, J.D. (2016). *Anthropocentric Thinking About Familiar and Novel Properties*. Poster presented at the 28th Annual Convention of the Association for Psychological Science, Chicago (May).
- Betz, N., Barrett, L.F. & Coley, J.D. (2016). *Priming Essentialist Beliefs about Emotions Increases In-Lab Negative Emotional Experiences (but Only for Women)*. Society for Affective Science Conference, Chicago, IL (March).

- Betz, N., Barrett, L.F., & Coley, J.D. (2016). The Malleability and Consequences of Essentialist Beliefs about Emotions. Poster presented at the 28th Annual Convention of the Association for Psychological Science, Chicago (May).
- Coley, J.D. & Tanner, K.D. (2016). Developmental and Instructional Changes in Intuitive Biological Thought. Paper presented at the International Meeting of the Psychonomic Society, Grenada, Spain (May).
- Coley, J.D. & Xu, Y. (2016). Perceived Social Conflict Predicts Essentialist Thinking about Social Categories in Adults: Experimental and Cross-Cultural Evidence. Paper presented at the British Psychological Society, Developmental Psychology Section Annual Conference, Belfast UK (September).
- Xu, Y. & Coley, J.D. (2016). Diversity in Conflict: How Perception of Social Environment Shapes Essentialist Thinking about Social Categories. Poster presented at the 31st International Congress of Psychology, Yokohama, Japan (July).
- Xu, Y. & Coley, J.D. (2016). How Perception of Social Environment Shapes Essentialist Thinking about Social Categories: A Cross-Cultural Comparison. Paper presented at the 23rd Congress of International Association for Cross-Cultural Psychology, Nagoya, Japan (July).
- Xu, Y., Penta, D., Hurley, J., Dowd, M., & Coley, J.D. (2016). Essentialist thinking predicts culpability and punishment judgments in crime scenarios. Poster presented at the Society of Judgment and Decision-Making Annual Meeting, Boston, MA (November).
- Xu, Y. & Coley, J.D. (2016). Cognitive Construals in U.S and Chinese 8th Graders' Intuitive Biology Thinking. 57th Annual Meeting of the Psychonomic Society, Boston MA (November).
- Coley, J.D. (2015). Environment, experience, and the salience of ecological relations. Talk presented at the Biennial Meetings of the Society for Research in Child Development, Philadelphia (March).
- Coley, J.D., Smyth, K., Feeney, A. & Eidson, R.C. (2015). Development of Essentialist Thinking about Social Categories in Northern Ireland and the USA. Talk presented at the Biennial Meetings of the Society for Research in Child Development, Philadelphia (March).
- Eidson, R. C. & Coley, J.D. (2015). Young adults' essentialist beliefs about social change. Poster presented at the Biennial Meetings of the Society for Research in Child Development, Philadelphia (March).
- Betz, N., Shang, J., Lindquist, K., Coley, J.D., & Barrett, L.F. (2015). Psychological Essentialism of Emotions in Chinese Samples. Poster presented at the Society for Affective Science, San Francisco, CA (April).
- Xu, Y. & Coley, J.D. (2015) Cognitive construals in US and Chinese 8th graders' intuitive biological thinking. Poster presented at the Cognitive Development Society, Columbus OH (October).
- Eidson, R.C. & Coley, J.D. (2015). Reassessing adults' social essentialist beliefs: The case of social induction. Poster presented at the Cognitive Development Society, Columbus OH (October).

Awards and Honors

2021	Interdisciplinary Research Sabbatical Fellowship, Northeastern University
2004-2005	Northeastern University Center for Work and Learning Faculty Research Fellowship
2000	Teaching Excellence Award, Department of Psychology, Northeastern University
1991-1992	Rackham Predoctoral Fellowship, University of Michigan
1990-1991	NICHD Training Fellowship, University of Michigan
1986-1990	University of Michigan Regents Graduate Fellowship
1986	Phi Beta Kappa, Miami University
1986	E.F. Patten Prize, Outstanding Senior Psychology Major, Miami University
1982-1986	Leroy S. Galvin Alumni Scholarship, Miami University
1982-1986	Ohio Regents Scholarship, Miami University

Professional Memberships

Association for Psychological Science
Cognitive Development Society
Cognitive Science Society

Eastern Psychological Association
Psychonomic Society
Society for the Advancement of Biology Education Research
Society for Applied Research in Memory and Cognition
Society for Conservation Biology
Society for Research in Child Development

Teaching

Undergraduate Courses Taught

Cognition
Cognitive Development
Developmental Psychology
Environmental Psychology
Honors Cognition
Honors Interdisciplinary Seminar: *Of Two Minds: Intuition and Deliberation in Human Decision Making*
Honors First-Year Inquiry Seminar: *Of Two Minds: Intuition and Deliberation in Human Decision Making*
Honors First-Year Inquiry Seminar: *Humans and Nature: The Psychology of Socio-Ecological Systems*
Laboratory in Developmental Psychology
Laboratory in Cognition
Research in Psychology
Seminar in Cognition: *Culture & Cognition*
Seminar in Cognition: *Differences in Thinking*
Seminar in Cognition: *The Psychology of Thinking*
Seminar in Cognition: *The Development of Social Thinking*
Seminar in Cognition: *Ecological Cognition*

Graduate Courses Taught

Proseminar in Cognition
Research Methodologies in Psychology
Seminar in Cognition: *Reasoning*
Seminar in Cognition: *Concepts*
Seminar in Cognition: *Essentialist Thinking*

Graduate Students Supervised

Kristen Kilgallen (Ph.D. expected 2028)
Subina Shrestha (Ph.D. expected 2028)
Jo Hyun (Joan) Kim (Ph.D. expected 2026)
Emma Pitt (Ph.D. expected 2025)
Eloise Davenport (M.S., 2023)
Catherine Nielson (Ph.D. expected 2023)
Jessica Leffers (Ph.D. 2021)
Nicole Betz (Ph.D. 2019)
Yian Xu (Ph.D. 2019)
Emily Dahlgaard Thor (M.S. 2019)
R. Cole Eidson (Ph.D. 2014)
Nadya Vasilyeva (Ph.D. 2010)
Tara Muratore (M.A. 2009)
Anna Vitkin (M.A. 2006)
Allison Baker (Ph.D. 2005)
Olga Stepanova Sachs (Ph.D. 2004)
Patrick Shafto (Ph.D. 2004)

Service to Northeastern (2013-present)

Department Service

Elected Positions

Psychology Department Workload Advisory Committee (2018)

Psychology Department Tenure/Tenure Track Faculty Merit Review Committee (2013, 2015, 2016, 2017, 2018)

Search Committees

Mental Health Search Committee (2022)

Chair, Environmental Psychology Search Committee (2020-2021)

Vision Search Committee (2019-20)

Cognitive Neuroscience Search Committee (2018-19)

Cognition/Perception Search Committee (2014)

M. Kwon Third Year Review Committee (2023)

A. Satpute Tenure Review Committee (2022)

Cognition Area Meeting Coordinator (2016-2019)

Non-Tenure/Tenure Track Faculty Merit Review Committee (2017)

Research presentations to PSYC1000 (2017, 2018, 2019)

Departmental Undergraduate Awards Coordinator (2016-present)

R. Shansky Tenure Review Committee (2016)

Psychology Department Welcome Day (2015-20)

Faculty Advisor, Undergraduate PsyClub (2013-16)

Psychology Department Undergraduate Curriculum Committee (2013-14)

College Service

College of Science Experiential Education Strategic Plan Drafting Committee (2018)

Faculty Facilitator, HHMI Inclusive Excellence Initiative at Northeastern (NUSCI - Northeastern University Skills and Capacity for Inclusion; 2017-19)

Participant, College of Science "Family Feud" (2016)

College of Science Undergraduate Awards Committee (2013-18)

Psychology Department Representative, College of Science Council (2013-present)

University Service

College of Science Representative, University Honors Advisory Committee (2017-present)

Honors Admitted Student Day "Master Lecture" (2017, 2018)

Invited participant, admitted student yield brainstorming session, Northeastern University Law School (2013)

Honors Program Teaching (2015, 2016, 2018, 2022,)

Volunteer, College of Science Graduation Celebration (2023)

Volunteer Faculty Marshal, Undergraduate Commencement (2013-19)

Service to the Discipline/Profession (2013-present)**Editorships and Editorial Board Memberships**

Academic Editor, *PLOS ONE*, 2018-present

Associate Editor, *Life Science Education*, 2017-2022

Editorial Board Member, *Journal of Cognition and Development*, 2009-2012

Symposia Chaired or Co-Chaired

How Intuitive Thinking Impacts Science Education. 26th International Conference on Learning, Belfast UK. (2019)

Exploring the Role of Intuitive Beliefs in the Way People Learn About and Understand Science. Society for Applied Research in Memory and Cognition (SARMAC XIII), Cape Cod. (2019)

Questioning Assumptions of Social Essentialism. International Conference on Psychological Science (ICPS 2019), Paris (2019).

Stereotypes and Essentialism Under Different Sociocultural Contexts. 29th Annual Convention of the Association for Psychological Science, Boston MA. (2017)

Relations Between Intuitive Thinking and Scientific Understanding Across Development. Biennial Meeting of the Society for Research in Child Development, Austin TX. (2017)

Categories and Conflict: The Development of Social Essentialism. British Psychological Society, Developmental Psychology Section Annual Conference, Belfast UK. (2016)

Intuitive Concepts Versus Biological Science: The Case of Evolution. Biennial Meeting of the Society for Research in Child Development, Seattle WA. (2013)

Reviewing**Journal Reviewing**

American Journal of Psychology, British Journal of Developmental Psychology, Canadian Journal of Psychology, Child Development, Child Development Perspectives, Cognition, Cognition-Brain-Behavior, Cognitive Development, Cognitive Psychology, Cognitive Science, Developmental Psychology, Ecopsychology, European Journal of Developmental Psychology, Evolution: Education & Outreach, International Journal of Behavioral Development, Journal of Applied Developmental Psychology, Journal of Cognition and Development, Journal of Environmental Psychology, Journal of Experimental Child Psychology, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory & Cognition, Life Sciences Education, Memory & Cognition, Merrill-Palmer Quarterly, Monographs of the Society for Research in Child Development, Personality & Social Psychology Bulletin, PLOS-ONE, Psychological Bulletin, Psychological Science, Psychonomic Bulletin & Review, Social Cognition, Thinking & Reasoning

Grant Reviewing

National Science Foundation

Social, Behavioral and Economic Science Directorate (SBE)

Developmental Sciences College of Reviewers (2017-present)

Education and Human Resources Directorate (EHR)

Panelist, *Education Core Research: Building Capacity in STEM Education Research* (2019)

Invited ad hoc reviewer, *Division of Research on Learning in Formal and Informal Settings* (2017)

Panelist, *Education Core Research Program* (2015)

Israel Science Foundation (2020)

Netherlands Organization for Scientific Research (2017)

Social Sciences and Humanities Research Council of Canada (2017)

Conference Reviewing

Annual Meeting of the Cognitive Science Society, Biennial Meetings of the Society for Research in Child Development

Award Reviewing

Society for Research in Child Development Early Researcher Award Review Committee (2020)

Service to the Community/Public (2013-present)

Public Lecture, *Art and Environmental Stewardship*, Ipswich Lyceum Thursdays, Ipswich MA (2022).

Public Lecture, *A Photographic Journey with the River Herring of Plymouth Town Brook*, Plymouth Center for the Arts, Plymouth MA (2021).

Urban Ecology: Bringing New Lenses on the Sea. Museum of Science Boston online forum (with Dan Adams, Keith Ellenbogen, and Brian Helmuth) presented in conjunction with United Nations World Oceans Day (2020).

Advisory Board Member, *The Phenomenal Genome*, NIH Science-Education Partnership Award, San Francisco Exploratorium (2019-2022)

Invited Keynote, *Hispanic Serving Institutions STEM Bridges Across Eastern Queens Course Redesign Workshop*, Queens College, CUNY, Queens NY (2019).

Invited Keynote, *Project Kaleidoscope Upstate New York Regional Network Meeting*, Oneonta NY (2018). Note: Project Kaleidoscope is AAC&U's center of STEM higher education reform dedicated to empowering STEM faculty, including those from underrepresented groups, to graduate more students in STEM fields who are competitively trained and liberally educated.

Ecological and Psychological Perspectives on Climate Change. Invited presentation (with Brian Helmuth), *Science for the Public Science Literacy Lecture Series*, MIT (2018).