AMANDA ROYKA

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EDUCATION

Yale University   *Expected Graduation:* Spring 2026
PhD., Psychology
Advisors: Julian Jara-Ettinger & Laurie Santos

University of Edinburgh   2019-2020
Master's in Linguistics by Research
Advisors: Simon Kirby & Marieke Schouwstra
Dissertation Topic: An examination of the features of symbolic communicative gestures and how those features
may serve to signal communicative intent to observers

Queen Mary University of London   2018 – 2019
Master's in Ecology and Evolutionary Biology with Distinction
Advisor: Lars Chittka
Dissertation Topic: An investigation of cumulative cultural transmission in large earth bumblebees

Yale University   2014 – 2018
BS in Cognitive Science, Summa Cum Laude
Advisors: Laurie Santos & Angie Johnston
Thesis: A comparative study of metacognitive information-seeking in dingoes and domesticated dogs in
order to examine the relationship between the cognitive representations underlying a sensitivity to the mental states

AWARDS AND HONORS

Marr Prize for best student paper at the Annual Meeting of the Cognitive Science Society	2024
Diverse Intelligences Summer Institute Project Accelerator Grant, $3,000	2024
Yale Council of Latin American and Iberian Studies, $500	2023
Yale Ender's Fellowship Grant, $2,000	2022
Marshall Scholar	2018 – 2020
Rhodes Scholarship Finalist	2018
Yale Angiers Prize for best undergraduate thesis in psychology	2018

Publications

Royka, A., & Santos, L. R. (2025). Informing does not require attributing ignorance. *Proceedings of the National Academy of Sciences of the United States of America, 122*(20), e2504155122.

Rane, S., Kirkman, C., **Royka, A.,** Todd, G., Law, R., Gates Foster, J., & Cartmill, E. (in press). Principles of Animal Cognition for LLM Evaluations: A Case Study on Transitive Inference. Accepted as a position paper. ICML 2025.

Bridges, A., **Royka, A.**, Wilson, T., Lockwood, C., Richter, J., Juusola, M., & Chittka, L. (2024). Bumblebees socially learn behaviour too complex to innovate alone. *Nature*.

Royka, A*., Horschler, D*., Bargmann, W., & Santos, L. (2024). Probing Nonhuman Primate Errors on False Belief Tasks to Explore the Evolutionary Roots of Theory of Mind. *46th Annual Meeting of the Cognitive Science Society.*

Royka, A., Heuser, G., Schwoustra, M., Kirby, S., & Jara-Ettinger, J. (2024). Emblems and Improvised Gestures are Structures to Guide their Own Detection. *46th Annual Meeting of the Cognitive Science Society.*

Royka, A., Torok, G., & Jara-Ettinger, J. (2023). Guiding Inference: Signaling intentions using efficient action. *45th Annual Meeting of the Cognitive Science Society*.

Royka, A., Chen, A., Aboody, R., Huanca, T., & Jara-Ettinger, J. (2022). People infer communicative action through an expectation for efficient communication. *Nature Communications*. 13(1), 1-13.

Royka, A., & Santos, L. R. (2022) Theory of Mind in the Wild. *Current Opinions in Behavioral Sciences.*

Royka, A. L., & Jara-Ettinger, J. (2021). Commentary: Ignorance Matters. *Behavioral and Brain Sciences.*

McAuliffe, K., Drayton, L. A., **Royka, A.**, Aellen, M., Santos, L. R., & Bshary, R. (2021). Cleaner fish are sensitive to what their partners can and cannot see. *Communications Biology.*

Royka, A., Schouwstra, M., Kirby, S., & Jara-Ettinger, J. (2021). I Know You Know I'm Signaling: Novel gestures are designed to guide observers' inferences about communicative goals. *43th Annual Meeting of the Cognitive Science Society.*

Royka, A. L., Johnston, A. M., & Santos, L. R. (2020). Metacognition in canids: A comparison of dogs (Canis familiaris) and dingoes (Canis dingo). *Journal of Comparative Psychology*, 134(3), 303.

Johnson, S. G. B., **Royka, A.**, McNally, P., & Keil, F. (2019). When is science considered interesting and important?. *41st Annual Meeting of the Cognitive Science Society.*

Royka, A., Aboody, R., & Jara-Ettinger, J. (2018). Movement as a message: inferring communicative intent from actions. *40th Annual Meeting of the Cognitive Science Society.*

Manuscripts in Preparation

Royka, A*., Suwal, U*., & Jara-Ettinger, J. (*submitted*). Variability in the Speed, Accuracy, and Effort of Mental-State Inferences in Theory of Mind.

Royka, A*., Horschler, D*., Bargmann, W., & Santos, L. (*submitted*). Probing Nonhuman Primate Errors on False Belief Tasks to Explore the Evolutionary Roots of Theory of Mind.

Royka, A., Muchovej, J., Heuser, G., Schwoustra, M., Kirby, S., & Jara-Ettinger, J. (*in prep*). Emblems and Improvised Gestures are Structures to Guide their Own Detection.

Royka, A., Jara-Ettinger, J., & Santos, L. (*in prep*). Do nonhuman primates have an "atheoretical" theory of mind?.

Horschler, D*., Berke, M*., **Royka, A.**, Santos, L., & Jara-Ettinger, J. (*in prep*). Differences Between Human and Nonhuman Primate Theory of Mind: Evidence from computational modeling.

CONFERENCE PRESENTATIONS AND INVITED TALKS

Presentation: Muchovej, J., Lee, J., **Royka, A.**, & Jara-Ettinger, J. (2025). Large Language Models Show No Coherence Across Different Theory of Mind Tasks: Evidence From GPT-4o. Advancing Artificial Intelligence through Theory of Mind (ToM4AI): Bridging Human Cognition and Artificial Intelligence Workshop @AAAI 2025.

Poster: Rane, S., Kirkman, C., **Royka, A.**, Todd, G., Law, R., Gates, J., & Cartmill, E. (2024). Principles of Animal Cognition for LLM Evaluations: A Case Study on Transitive Inference. Behavioral Machine Learning Workshop @NeurIPS 2024.

Presentation: **Royka, A.**, Horschler, D., Bargmann, W., & Santos, L. (2024). Probing Nonhuman Primate Errors on False Belief Tasks to Explore the Evolutionary Roots of Theory of Mind. 46th Annual Meeting of the Cognitive Science Society.

Presentation: **Royka, A.**, Heuser, G., Schwoustra, M., Kirby, S., & Jara-Ettinger, J. (2024). Emblems and Improvised Gestures are Structures to Guide their Own Detection. 46th Annual Meeting of the Cognitive Science Society.

Invited Talk: Gesture as Mindsharing (2024). ConCats, New York University.

Guest Lecture: 20 Years of Theory of Mind Research on Cayo Santiago (2024). Trinity College.

Invited Talk: Shaped to Communicate: Gesture as a form of goal inference (2023). Consortium for Interacting Minds, Dartmouth College.

Poster: **Royka, A.**, Torok, G., & Jara-Ettinger, J. (2023). Guiding Inference: Signaling intentions using efficient action. Computational Summer School on Modeling Social and Collective Behavior.

Poster: **Royka, A.**, Torok, G., & Jara-Ettinger, J. (2023). Guiding Inference: Signaling intentions using efficient action. 45th Annual Meeting of the Cognitive Science Society. [Virtual]

Presentation: **Royka, A.**, Schwoustra, M., Kirby, S., & Jara-Ettinger, J. (2021). I Know You Know I'm Signaling: Novel gestures are designed to guide observers' inferences about communicative goals. Society for Philosophy and Psychology.

Presentation: **Royka, A.**, Schwoustra, M., Kirby, S., & Jara-Ettinger, J. (2021). I Know You Know I'm Signaling: Novel gestures are designed to guide observers' inferences about communicative goals. 43rd Annual Meeting of the Cognitive Science Society.

Presentation: **Royka, A.**, Aboody, R., & Jara-Ettinger, J. (2018). Movement as a message: inferring communicative intent from actions. 40th Annual Meeting of the Cognitive Science Society.

Poster: **Royka, A.L.**, Johnston, A.M. & Santos, L. R. (2017). Metacognition across domestication: A comparison of dogs and dingoes. Poster Presentation, North American International Canine Science Conference.

TEACHING

TA, Introduction to Psychology	Spring 2023
TA, Introduction to Cognitive Science	Fall 2022
TA, Perspectives on Human Nature	Spring 2022
TA, Introduction to Psychology	Fall 2021

ADDITIONAL TEACHING TRAINING

Inclusive Syllabus Design	Spring 2025
Antiracist Pedagogy	Spring 2024
Using Group Work Effectively	Spring 2024
Fundamentals of Equitable Teaching	Fall 2023

SERVICE

Ad-hoc reviewing for Cognition, PNAS, BBS, and OpenMind	
Mentor for Yale's Sneak Peek Program, assisting URM students applying to grad school	Fall 2022 – ongoing
Residential College Graduate Affiliate	Spring 2022 – ongoing
Organized department panel on applying to non-academic careers	Spring 2025
Organized department panel on applying to academic jobs	Spring 2024
Organized a department workshop on inclusive pedagogy	Spring 2023
Student representative on department colloquium committee	Spring 2021 – Spring 2023
Student representative on cognitive-developmental current works speaker series committee	Summer 2021 – Spring 2022
Student representative on the developmental area space planning committee	Fall 2020 – Spring 2021