

RACHEL C. METZGAR

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EDUCATION

- Ph.D. in Psychology**, Princeton University (Expected Spring 2026) Princeton, NJ
Adviser: Michael S.A. Graziano
Dissertation: Attributions of Mind and Consciousness
- M.A. in Psychology**, Princeton University (October 2023) Princeton, NJ
- B.S. with Distinction in Neuroscience** and **B.A. in Biological Sciences**, University of Delaware (May 2017) Newark, DE

PUBLICATIONS, PRESENTATIONS, AND TALKS

Google Scholar: scholar.google.com/citations?user=dW1JZhAAAAAJ

Peer-Reviewed Journal Articles

- Metzgar, R.**, Lombrozo, T., & Graziano, M.S.A. (2025). Lay perspectives on the physical and non-physical nature of consciousness. *Journal of Consciousness Studies*, 32(11–12), 36–71.
- Metzgar, R.**, Stoll, H., Grafton, S.T., Buxbaum, L.J., & Garcea, F.E. (2022). Single-case disconnectome lesion-symptom mapping: Identifying two subtypes of limb apraxia. *Neuropsychologia*, 170, 108210.

Book Chapters

- Oakman, J., Rexford, J., **Metzgar, R.C.**, & d'Oleire Uquillas, F. (2026). A regional and data-centered approach to workforce development in an AI economy. In J. M. Lavista Ferres (Ed), *Degrees of change: What AI means for education and the next generation*. Wiley.

Peer-Reviewed Conference Papers

- Metzgar, R.C.** & Graziano, M.S.A. (Submitted). Comparing LLM and human responses to human- and AI-labeled partners during naturalistic conversation. *Proceedings of the Cognitive Science Society*.
- Christian, I.R., Graziano, M., **Metzgar, R.**, & Nastase, S. (2024). Cortical semantic encoding varies with attention and habituation. *Conference on Cognitive Computational Neuroscience*, Boston, MA.

Manuscripts in Preparation

- Metzgar, R.C.** (In preparation). LLM conversational behavior and internal representations of human vs. AI partner identity.
- Metzgar, R.C.**, Christian, I.R., Morey, R., & Graziano, M.S.A. (In preparation). Behavioral and neural responses to human- and AI-labeled partners during naturalistic conversation.

Invited Talks

- Metzgar, R.C.** (2025). Thinking machines or thinking minds? Neural and behavioral responses to beliefs about conversational partners. Cognitive Science Lunchtime Talk Series, Princeton University, March 2025.
- Metzgar, R.C.** (2025). Mind or matter? Exploring lay beliefs about consciousness and its physical basis. Cognitive Research Seminar, Princeton University, February 2025.
- Metzgar, R.C.** (2023). A link between social cognition and visual consciousness. Cognitive Research Seminar, Princeton University, November 2023.
- Metzgar, R.C.** (2023). A link between social cognition and visual consciousness. Cognitive Research Seminar, Princeton University, March 2023.
- Metzgar, R.C.** (2022). Attributing awareness to the self and others. Cognitive Research Seminar, Princeton University, April 2022.

Poster Presentations

- Metzgar, R.C.**, Christian, I.R., & Graziano, M.S.A. (2025). Thinking machines or thinking minds? Neural and behavioral responses to beliefs about conversational partners. Twenty Eighth Annual Meeting of the Association for the Scientific Studies of Consciousness, Heraklion, Greece.
- Metzgar, R.C.**, Lombrozo, T., & Graziano, M.S.A. (2024). Public opinion on whether consciousness is physical or nonphysical. Twenty Seventh Annual Meeting of the Association for the Scientific Studies of Consciousness, Tokyo, Japan.
- Metzgar, R.C.** & Graziano, M.S.A. (2023). A link between social cognition and visual consciousness. Twenty Sixth Annual Meeting of the Association for the Scientific Studies of Consciousness, New York, NY.

- Metzgar, R.C.** & Graziano, M.S.A. (2022). Attributing awareness to the self and others. Twenty Fifth Annual Meeting of the Association for the Scientific Studies of Consciousness, Amsterdam, NL.
- Metzgar, R.C.**, Bonner, M.F., & Epstein, R.A. (2019). What lies beyond: Representations of the connectivity structure of the local environment. Nineteenth Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Lompado, A., **Metzgar, R.**, Stibolt, O., & Hoffman, J.E. (2017). Can targets be semantically primed during the emotional blink? 25th Annual Meeting of the Object Perception, Attention, and Memory Workshop, Vancouver, BC.
- Metzgar, R.C.** & Hoffman, J.E. (2017). How does emotion interfere with attention? University of Delaware Undergraduate Research and Service Celebratory Symposium, Newark, DE.
- Metzgar, R.C.** & Hoffman, J.E. (2016). How does emotion interfere with attention? University of Delaware Undergraduate Research and Service Celebratory Symposium, Newark, DE.
- Metzgar, R.C.**, Osborne, B.F., & Schwarz, J.M. (2015). Impact of sex and neonatal infection on neuroimmune and peripheral immune responses in the juvenile rat. University of Delaware Undergraduate Research and Service Celebratory Symposium, Newark, DE.

RESEARCH EXPERIENCE

- Graduate Researcher, Princeton University** 2021–Present
- Lead multi-experiment investigation into how partner identity beliefs (human vs. AI) shape conversational behavior and neural processing, using fMRI, computational linguistics, and mechanistic interpretability methods on large language models.
 - Mentor undergraduate students and coordinate data collection across behavioral, survey, and neuroimaging paradigms.
- Lab Manager, Moss Rehabilitation Research Institute** 2019–2021
- Led lesion-symptom mapping study of stroke patients with disordered action production; published in *Neuropsychologia*.
- Research Specialist, University of Pennsylvania** 2017–2019
- Designed and executed fMRI research on the neural link between visual scene perception and spatial memory using virtual reality.
- Research Assistant, University of Delaware** 2016–2017
- Conducted independent honors thesis on effects of emotion on visual attention using EEG, behavioral, and eye-tracking methods.

FELLOWSHIPS IN AI ETHICS, POLICY, AND COMMUNICATION

- Communications Fellow**, Princeton Laboratory for Artificial Intelligence 2025–2026
- Author blog series synthesizing philosophical, cognitive science, and technical perspectives on machine understanding for general audiences.
- Social Impact Fellow**, New Jersey AI Hub 2025
- Co-authored Wiley book chapter on regional AI workforce development; designed student engagement strategy for AI research and policy.
- Social Impact Fellow**, Responsible AI Institute 2024
- Developed accessible guide and toolkit on AI explainability/interpretability for non-technical stakeholders.
- Social Impact Fellow**, All Tech Is Human 2023
- Curated research themes for journal collection on social impacts of AI on youth and children.

LEADERSHIP AND SERVICE

- Head Cognitive Science Fellow**, Princeton University 2025–2026
- Coordinate programming for the cognitive science graduate and undergraduate community, including professional development, research events, and community building.
- Professional Development Committee**, Princeton University Graduate School 2024–2025
- Helped plan events on career development, job market preparation, and skills beyond traditional academic training for Princeton graduate students.
- Student Committee Member**, Association for the Scientific Study of Consciousness (ASSC) 2024–2025
- Co-organized the Professional Development Q&A event at the 2024 and 2025 annual meetings, connecting early-career researchers with established scientists to discuss career paths in academia and industry.
- University Administrative Fellow, Responsible AI Learning Cohort**, Princeton GradFUTURES 2024
- Designed and facilitated a cross-disciplinary series bringing graduate students together to discuss ethical AI practice.

TEACHING EXPERIENCE

Assistant in Instruction, Introduction to Psychology , Princeton University	Fall 2024
Assistant in Instruction, Psychotherapy Theories and Skills , Princeton University	Spring 2024
Teaching Assistant, Deep Learning , Neuromatch Academy	Summer 2023
Assistant in Instruction, Developmental Psychology , Princeton University	Fall 2022

HONORS AND AWARDS

Cognitive Science Fellow (Head Fellow), Princeton University (\$1,000)	2025
Cognitive Science Graduate Student Research Funding, Princeton (\$1,000)	2025
Cognitive Science Fellow, Princeton University (\$1,000)	2024
Cognitive Science Graduate Student Research Funding, Princeton (\$4,684)	2024
Cognitive Science Graduate Student Research Funding, Princeton (\$1,500)	2023
Honors Degree with Distinction, University of Delaware	2017

SELECTED GRADUATE COURSEWORK

Princeton University

Machine Learning: A Practical Introduction for Humanists and Social Scientists (2022)
AI Safety & Alignment (2023)

Neuromatch Academy

NeuroAI (2024)