

# ERIK BROCKBANK

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*Last Updated: Spring, 2025*

## APPOINTMENTS

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<b>Stanford University</b> Postdoctoral Fellow <i>Department of Psychology</i>	<i>Sep. 2023 -</i>
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## EDUCATION

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<b>University of California, San Diego</b> Ph.D. <i>Experimental Psychology</i>	<i>2023</i>
<b>Stanford University</b> B.S., M.S. <i>Symbolic Systems</i>	<i>2014</i>

## ACADEMIC HONORS & AWARDS

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PsychTerms Graduate Research Award	<i>2022</i>
Psychonomic Society Graduate Conference Award	<i>2020</i>
Cognitive Science Society Computational Prize	<i>2020</i>

## FELLOWSHIPS & GRANTS

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NSF SBE Postdoctoral Research Fellowship	<i>2024-2026</i>
UCSD Academic Senate General Research Grant	<i>2022</i>
UCSD Anderson Graduate Research Fellowship	<i>2019</i>
UCSD Katzin Graduate Fellowship	<i>2018-2023</i>

## JOURNAL ARTICLES

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**Brockbank, E.,** Verma, A., Lloyd, H., Huey, H., Padilla, L., & Fan, J. E. (2025). Evaluating convergence between two data visualization literacy assessments. *Cognitive Research: Principles and Implications*.

**Brockbank, E.,** & Vul, E. (2024). Repeated rock, paper, scissors play reveals limits in adaptive sequential behavior. *Cognitive Psychology*.

**Brockbank, E.,** Lombrozo, T., Gopnik, A., & Walker, C. (2022). Ask me why, don't tell me why: Asking children for explanations facilitates relational thinking. *Developmental Science*.

**Brockbank, E.,** & Walker, C. (2022). Explanation Impacts Hypothesis Generation, but not Evaluation, During Learning. *Cognition*.

**Brockbank, E.,** Vul, E. & Barner, D. (2022). Ongoing dynamic calibration produces unstable number estimates. *Journal of Experimental Psychology: General*.

Schneider, R., **Brockbank, E.,** Feiman, R., & Barner, D. (2021). Counting and the ontogenetic origins of exact equality. *Cognition*.

**Brockbank, E.,** & Vul, E. (2021). Formalizing Opponent Modeling with the Rock, Paper, Scissors Game. *Games*.

Destefano, I., Oey, L.A., **Brockbank, E.,** & Vul, E. (2021). Integration by Parts: Collaboration and Topic Structure in the CogSci Community. *Topics in Cognitive Science*.

## CONFERENCE PROCEEDINGS

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\*Cross, L., \***Brockbank, E.**, Gerstenberg, T., Fan, J. E., Yamins, D. L. K., & Haber, N. (2025). Understanding Human Limits in Pattern Recognition: A Computational Model of Sequential Reasoning in Rock, Paper, Scissors. In *Proceedings of the 8th Annual Conference on Cognitive Computational Neuroscience*.

**Brockbank, E.**, Gerstenberg, T., Fan, J. E., & Hawkins, R. D. (2025). How do we get to know someone? Diagnostic questions for inferring personal traits. In *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.

Teo, V., Wu, S., **Brockbank, E.**, & Gerstenberg, T. (2025). Leave a trace: Recursive reasoning about deceptive behavior. In *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.

Zheng, K., **Brockbank, E.**, Schwartz, S., Yeager, D., Bryan, C., Dweck, C., & Fan, J. E. (2025). Linking student psychological orientation, engagement, and learning in college-level introductory data science. In *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.

Jin, E., Huang, Z., Fränken, J. P., Liu, W., Cha, H., **Brockbank, E.**, Wu, S., Zhang, R., Wu, J., & Gerstenberg, T. (2024). MARPLE: A Benchmark for Long-Horizon Inference. In *NeurIPS Datasets & Benchmarks Track*.

\***Brockbank, E.**, \*Yang, J., Govil, M., Fan, J. E., & Gerstenberg, T. (2024). Without his cookies, he's just a monster: A counterfactual simulation model of social explanation. In *Proceedings of the 46th Annual Conference of the Cognitive Science Society*.

\*Wu, S., \***Brockbank, E.**, Cha, H., Fränken, J. P., Jin, E., Huang, Z., Liu, W., Zhang, R., Wu, J., & Gerstenberg, T. (2024). Whodunnit? Inferring what happened from multimodal evidence. In *Proceedings of the 46th Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, Wang, H., Yang, J., Mirchandani, S., Bıyık, E., Sadigh, D., & Fan, J. (2022). How do people incorporate advice from artificial agents when making physical judgments? In *Proceedings of the 44th Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2021). Humans fail to outwit adaptive rock, paper, scissors opponents. In *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2020). Recursive Adversarial Reasoning in the Rock, Paper, Scissors Game. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Walker, C. (2020). Explanation Supports Hypothesis Generation in Learning. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*.

Oey, L.A., Destefano, I., **Brockbank, E.**, & Vul, E. (2020). Formalizing interdisciplinary collaboration in the CogSci community. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2019). Mapping visual features onto numbers. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Smith, K. & Vul, E. (2019). When do people use containment heuristics for physical predictions? In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. (Retraction November, 2019).

## BOOK CHAPTERS

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**Brockbank, E.**, Holdaway, C., Acosta-Kane, D. & Vul, E. (2023). Sampling Data, Beliefs, and Actions. In Fiedler, K., Juslin, P., & Denrell, J. (Eds.), *Sampling in Judgment and Decision Making*. Cambridge University Press.

## CONFERENCE PRESENTATIONS

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\*Cross, L., \***Brockbank, E.**, Gerstenberg, T., Fan, J. E., Yamins, D. L. K., & Haber, N. (2025). Understanding Human Limits in Pattern Recognition: A Computational Model of Sequential Reasoning in Rock, Paper, Scissors. Presented at the *8th Annual Conference on Cognitive Computational Neuroscience*.

**Brockbank, E.**, Gerstenberg, T., Fan, J. E., & Hawkins, R. D. (2025). How do we get to know someone? Diagnostic questions for inferring personal traits. Poster presented at the *47th Annual Conference of the Cognitive Science Society*.

Teo, V., Wu, S., **Brockbank, E.**, & Gerstenberg, T. (2025). Leave a trace: Recursive reasoning about deceptive behavior. Poster presented at the *47th Annual Conference of the Cognitive Science Society*.

Zheng, K., **Brockbank, E.**, Schwartz, S., Yeager, D., Bryan, C., Dweck, C., & Fan, J. E. (2025). Linking student psychological orientation, engagement, and learning in college-level introductory data science. Poster presented at the *47th Annual Conference of the Cognitive Science Society*.

Hurwitz, E., **Brockbank, E.**, & Walker, C. M. (2025). Contexto: A New Approach to Measure Flexible Reasoning Under Dynamic Constraints. Poster presented at the *47th Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, Gerstenberg, T., Fan, J. E., & Hawkins, R. D. (2025). How do we get to know someone? Diagnostic questions for inferring personal traits. Poster presented at the *51st Annual Conference of the Society for Philosophy and Psychology*.

Jin, E., Huang, Z., Fränken, J. P., Liu, W., Cha, H., **Brockbank, E.**, Wu, S., Zhang, R., Wu, J., & Gerstenberg, T. (2024). MARPLE: A Benchmark for Long-Horizon Inference. Poster presented at *NeurIPS Datasets & Benchmarks Track*.

\***Brockbank, E.**, \*Yang, J., Govil, M., Fan, J. E., & Gerstenberg, T. (2024). Without his cookies, he's just a monster: A counterfactual simulation model of social explanation. Poster presented at the *46th Annual Conference of the Cognitive Science Society*.

\*Wu, S., \***Brockbank, E.**, Cha, H., Fränken, J. P., Jin, E., Huang, Z., Liu, W., Zhang, R., Wu, J., & Gerstenberg, T. (2024). Whodunnit? Inferring what happened from multimodal evidence. Poster presented at the *46th Annual Conference of the Cognitive Science Society*.

\***Brockbank, E.**, \*Yang, J., Govil, M., Fan, J. E., & Gerstenberg, T. (2024). Without his cookies, he's just a monster: A counterfactual simulation model of social explanation. Talk presented at the *50th Annual Conference of the Society for Philosophy and Psychology*.

Hurwitz, E., Dean, J., Farrell, B., Mckinty, A., **Brockbank, E.**, Gopnik, A., Walker, C. (2024). A Cognitive Development Model of the Effects of Psychedelics. Poster presented at the *50th Annual Conference of the Society for Philosophy and Psychology*.

Lloyd, H., Tait, Z., **Brockbank, E.**, Liao, S., & Fan, J. (2022). How well do student attitudes and engagement predict learning outcomes in introductory data science courses? Talk at the *PsychTerms Annual Meeting*.

**Brockbank, E.**, Wang, H., Yang, J., Mirchandani, S., Bıyık, E., Sadigh, D., & Fan, J. (2022). How do people incorporate advice from artificial agents when making physical judgments? Talk at the *44th Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2021). Rock, paper, scissors agents exploit patterns in human sequential behavior. Talk at the *62nd Annual Meeting of the Psychonomic Society*.

**Brockbank, E.**, & Vul, E. (2021). Humans fail to outwit adaptive rock, paper, scissors opponents. Poster presented at the *43rd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Walker, C. (2021). Explanation Impacts Hypothesis Generation, but not Evaluation, during Learning. Poster presented at the *47th Annual Conference of the Society for Philosophy and Psychology*.

**Brockbank, E.**, & Vul, E. (2020). Modeling Adaptive Reasoning in Rock, Paper, Scissors. Poster presented at the *61st Annual Meeting of the Psychonomic Society*.

**Brockbank, E.**, & Vul, E. (2020). Recursive Adversarial Reasoning in the Rock, Paper, Scissors Game. Talk at the *42nd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Walker, C. (2020). Explanation Supports Hypothesis Generation in Learning. Talk at the

*42nd Annual Conference of the Cognitive Science Society.*

Oey, L.A., Destefano, I., **Brockbank, E.**, & Vul, E. (2020). Formalizing interdisciplinary collaboration in the CogSci community. Talk at the *42nd Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2020). Adaptive Reasoning in Rock-Paper-Scissors. Talk at the *53rd Annual Conference of the Society for Mathematical Psychology*.

**Brockbank, E.**, & Vul, E. (2019). Mapping visual features onto numbers. Poster presented at the *41st Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, Smith, K., & Vul, E. (2019). When do people use containment heuristics for physical predictions? Poster presented at the *41st Annual Conference of the Cognitive Science Society*.

**Brockbank, E.**, & Vul, E. (2019). Mapping visual features onto numbers. Poster presented at the *45th Annual Conference of the Society for Philosophy and Psychology*.

## INVITED TALKS

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**2023, December.** Stanford Social and Language Technology Reading Group

**2022, October.** Naval Research Laboratory “Reasoning Lunch Series”

## TEACHING

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<b>Instructor of Record</b> Data & Model Programming for Comp. Social Science	<i>Mar.-Jun. 2022</i>
<b>Teaching Assistant</b> Research Methods in Psychology	<i>Jan.-Mar. 2023</i>
<b>Teaching Assistant</b> Research Methods in Psychology	<i>Sep.-Dec. 2022</i>
<b>Teaching Assistant</b> Research Methods in Psychology	<i>Sep.-Dec. 2021</i>
<b>Teaching Assistant</b> Computational Social Science Foundations (python)	<i>Aug.-Sep. 2021</i>
<b>Teaching Assistant</b> Psychology: Cognitive Foundations	<i>Mar.-Jun. 2021</i>
<b>Teaching Assistant</b> Introduction to Psychology	<i>Sep.-Dec. 2020</i>
<b>Teaching Assistant</b> Psychology of Parenting	<i>Mar.-Jun. 2020</i>
<b>Teaching Assistant</b> Introduction to Psychology	<i>Sep.-Dec. 2019</i>
<b>Teaching Assistant</b> Industrial & Organizational Psychology	<i>Jul.-Aug. 2019</i>
<b>Teaching Assistant</b> Developmental Psychology	<i>Jan.-Mar. 2019</i>

## MENTORSHIP

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Mishika Govil (Stanford Undergraduate Researcher)	<i>Nov. 2023-</i>
Alison Yu (UCSD Undergraduate Researcher)	<i>Apr. 2021-Mar. 2023</i>
MJ Mei (UCSD Undergraduate Researcher)	<i>Apr. 2021-Mar. 2023</i>
Ziling Gong (UCSD Undergraduate Researcher)	<i>Apr. 2021-Mar. 2023</i>
Annalea O'Halloran (UCSD Undergraduate Researcher)	<i>Apr. 2021-Dec. 2021</i>

## LEADERSHIP & OUTREACH

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<i>UCSD Graduate Student Association</i> Psychology Dept. Representative	<i>2022-2023</i>
<i>UCSD Psychology Department</i> Climate Committee Member	<i>2020-2023</i>
<i>UCSD Psychology Department</i> Graduate Statistics Advisor	<i>2019-2023</i>

<i>UCSD Psychology Student Speaker Series</i> Graduate Student Officer	<i>2019-2023</i>
<i>UCSD Graduate Students</i> GradAMP Mentor	<i>2020-2021</i>
<i>UCSD Psychology Data Science Club</i> Club Leader	<i>2019-2020</i>
<i>UCSD Psychology Colloquium Series</i> Graduate Student Officer	<i>2019-2020</i>

## PROFESSIONAL SERVICE

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**Ad hoc reviewer:** *Cognitive Science, Journal of Experimental Psychology: Learning, Memory, and Cognition, Thinking & Reasoning, Annual Meeting of the Cognitive Science Society, Annual Meeting of the Society for Philosophy and Psychology*