Mathew Hardy

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Education

Princeton University

September 2018 - Summer 2023 (expected)

PhD in Psychology

Advisors: Thomas L. Griffiths and Jonathan D. Cohen

University of Toronto

August 2017

Honours Bachelor of Science with High Distinction Majors in Economics and Statistics, minor in Mathematics

Fellowships & awards

DoD NDSEG Fellowship

September 2020 - present

Program on the Cognitive Foundations of Economic Behavior July 2019 Summer Institute on Bounded Rationality June 2019 Centennial Fellowship in the Natural Sciences September 2018

Journal articles

Hardy, M.*, Thompson, W.*, Krafft, P. & Griffiths T.L. (under revision). Bias amplification in experimental social networks is reduced by resampling.

Callaway, F.*, **Hardy, M.*** & Griffiths T.L. (under revision). Optimal nudging for cognitively bounded agents: A framework for modeling, predicting, and controlling the effects of choice architectures.

Vélez, N., Christian, B., **Hardy**, M., Bill D. Thompson, W., & Griffiths, T.L. (in press). How do humans overcome individual computational limitations by working together? *Cognitive Science*.

Hardy, M.*, Krafft, P.*, Thompson, W., & Griffiths T.L. (2022). Overcoming individual limitations through distributed computation: Rational information accumulation in multi-generational populations. *Topics in Cognitive Science*.

Articles in prep

Hardy, M., Hofman, J., Zhang, S., Hullman, J. & Goldstein, D. How useful is the wrong model? Improving out-of-domain prediction using local models.

Dubey, R., **Hardy**, M., Bhui, R. & Griffiths T.L. Using AI-Generated art to increase support for green infrastructure projects.

Garcia-Bernardo, J., Neu, Z., **Hardy, M.**, Santoro, A., Krafft, P.M., Morgan, A., Alorić, A. & Griffiths T.L. Collective processing of long-form text in multi-generational social networks.

Talks & posters

Hardy, M. (2022). Optimal nudging for cognitively bounded agents. Invited talk at the Concepts and Categories Seminar, New York University.

Garcia-Bernardo, J., Neu, Z., **Hardy, M.**, Santoro, A., Krafft, P.M., Morgan, A., Alorić, A. & Griffiths T.L. (2022). Collective information processing of long-form text in multi-generational social networks: An experimental investigation using Amazon Mechanical Turk. Poster presented at the Conference on Complex Systems CCS2022, Palma de Mallorca, Spain.

Hardy, M. (2022). Experimental evidence for bias amplification in social networks and a Bayesian solution. Invited talk at the University of California, Berkeley.

Hardy, M., Thompson, W., Krafft, P. & Griffiths T.L. (2020). Population-level amplification of perceptual bias. Talk presented at the 42nd Annual Conference of the Cognitive Science Society, virtual.

Hardy, M., Thompson, W., Krafft, P. & Griffiths T.L. (2020). Population-level amplification of perceptual bias. Poster presented at the 6th International Conference on Computational Social Science, virtual.

Callaway, F., **Hardy, M.** & Griffiths T.L. (2020). Optimal nudging. Poster presented at the 42nd Annual Conference of the Cognitive Science Society, virtual.

Hardy, M., Thompson, W., Krafft, P. & Griffiths T.L. (2019). Population-level amplification and suppression of individual biases. Talk presented at the 1st Symposium on Biases in Human Computation and Crowdsourcing, Sheffield, UK.

Hardy, M., Callaway, F. & Griffiths T.L. (2019). Optimal nudging. Poster presented at the Multi-disciplinary Conference on Reinforcement Learning and Decision Making, Montreal, Canada.

Hardy, M. & Griffiths T.L. (2019). Demonstrating the importance of prior knowledge in risky choice. Poster presented at the 41st Annual Conference of the Cognitive Science Society, Montreal, Canada.

Teaching PSY 2

PSY 251 - Quantitative Methods

Spring 2020 & 2021

Assistant Instructor Princeton University

Service and outreach

Co-organizer

April 2023 (expected)

Learning in networks conference

Princeton, NJ

Psychology Graduate Student Committee Member 2020-2021

Professional Development Subcommittee

Princeton University

Mentor and Tutor 2015-2018

Working Women Community Centre

Toronto, Canada

Industry Research Intern

experience

June - September 2022

Microsoft Research, Computational social science group

Interned with Dan Goldstein and Jake Hofman

Data Science Intern

June - August 2018

Via Transportation

Research Assistant

August - December 2017

University of Toronto, Department of Psychology

Professor Susanne Ferber

Research Assistant

May - September 2015 & 2016

Massachusetts Institute of Technology, Department of Economics

Professors Jerry Hausman and Whitney Newey

Selected skills Programming: Python, R, Javascript, Stan, HTML, CSS, Julia, MATLAB

Software & tools: LATEX, Git, Bash, Excel

Spoken languages: English, Slovenian