Mayank Agrawal

Ph.D. Candidate
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Education

DEGREE-GRANTING

Princeton University, Princeton, NJ   2018–2023
Ph.D. Psychology and Neuroscience
Advisors: Jonathan D. Cohen and Thomas L. Griffiths

Swarthmore College, Swarthmore, PA   2014–2018
B.A. Computer Science and Philosophy
Thesis: *An Application of Computational Learning Theory to Moral Epistemology*
Advisor: Alan R. Baker

SUPPLEMENTARY

MIT Center for Brains, Minds, and Machines, Woods Hole, MA   2019
Summer Course

University of Oxford, Oxford, UK   2016–2017
Visiting Student, St. Anne's College
Computer Science and Philosophy

Publications

WORKING MANSUCRIPTS

1. **Agrawal M**, Peterson JC, Cohen JD, Griffiths TL (R&R). Stress, Intertemporal Choice, and Mitigation Behavior During the COVID-19 Pandemic. *Journal of Experimental Psychology: General.*

2. **Agrawal M**, Danks D (in prep). Maxim Consequentialism for Bounded Agents.

3. **Agrawal M**, Allan S, Mattar MG, Cohen JD, Daw ND (in progress). Opportunity Costs Modulate Hippocampal Experiential Activation.

4. **Agrawal M**, Peterson JC, Cohen JD, Griffiths TL (in progress). Large-Scale Evaluation of Intertemporal Choice Theory.

PEER-REVIEWED

5. Christian IR, **Agrawal M** (2022). A Computational Model of Unintentional Mind Wandering in Focused Attention Meditation. *Proceedings of the 43rd Annual Conference of the Cognitive Society.*

6. Peterson JC, Bourgin DD, **Agrawal M**, Reichman D, Griffiths TL (2021). Using Large-Scale Experiments and Machine Learning to Discover New Theories of Human Decision-Making. *Science.*

7. **Agrawal M**, Mattar MG, Cohen JD, Daw ND (2021). The Temporal Dynamics of Opportunity Costs: A Normative Account of Cognitive Fatigue and Boredom. *Psychological Review.*

8. **Agrawal M**, Peterson JC, Griffiths TL. (2020). Scaling up Psychology via Scientific Regret Minimization. *Proceedings of the National Academy of Sciences.*

9. Jas M, Achakulvisut T, Idrizović A, Acuna D, Antalek M, Marques V, Odland T, Garg RP, **Agrawal M**, Umegaki Y, Foley P, Fernandes H, Harris D, Li B, Pieters O, Otterson S, de Toni G, Rodgers C, Dyer E, Hamalainen M, Kording K, Ramkumar P (2020). Pyglmnet: Python implementation of elastic-net regularized generalized linear models. *Journal of Open Science Software.*

10. **Agrawal M**, Peterson JC, Griffiths TL (2019). Using Machine Learning to Guide Cognitive Modeling: A Case Study in Moral Reasoning. *Proceedings of the 41st Annual Conference of the Cognitive Society.*

11. Moraud, EM, Tinkhauser G, **Agrawal M**, Brown P, Bogacz R (2018). Predicting Beta Bursts From Local Field Potentials to Improve Closed-loop DBS Paradigms in Parkinson's Patients. *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*.

CONFERENCE / WORKSHOP ABSTRACTS

12. **Agrawal M** (2020). An Application of Computational Learning Theory to Moral Epistemology. *46th Annual Meeting of the Society for Philosophy and Psychology.* (Cancelled due to COVID-19.)

13. **Agrawal M**, Mattar MG, Daw ND, Cohen JD (2020). The Temporal Dynamics of Opportunity Costs: A Normative Account of Mental Fatigue and Boredom. *'Mental Effort: One Construct, Many Faces?' Workshop, 42nd Annual Conference of the Cognitive Society.*

14. **Agrawal M**, Mattar MG, Daw ND, Cohen JD (2019). Rational Arbitration of Hippocampal Replay. *2019 Conference on Cognitive Computational Neuroscience.*

15. **Agrawal M**, Peterson JC, TL Griffiths (2019). Understanding a Large Dataset of Moral Decisions Through Scientific Regret Minimization. *Moral Decision Making Workshop, 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making.*

Awards

Cognitive Science Graduate Student Fellow, *Princeton University*	2020
National Defense Science & Engineering Graduate Fellowship	2019
Computational Neuroscience Travel Grant, *Swarthmore College*	2017
John W. Nason Community Service Fellowship, *Swarthmore College*	2016
Philip Evans Scholar, *Swarthmore College*	2014

Invited Talks

1. Cushman/Greene Joint Lab Meeting, Harvard University	2022
2. NSF Prepare Rapid PI Meeting	2021
3. Feldman Barrett Lab, Northeastern University	2021
4. Apps Lab, University of Birmingham and University of Oxford	2021
5. Army Research Office Seminar Series on Pioneers in Life and Human Sciences	2021
6. MILA Neuro-AI Reading Group, Université de Montréal and McGill University	2020
7. Gershman Lab, Harvard University	2020

8. Workshop on Scaling Cognitive Science, Cognitive Science Conference   2020

9. Scaling Cognitive Science Workshop, Princeton University   2019

Press

[Are we witnessing the dawn of post-theory science?](#)
The Guardian, 2022

[Machine learning, big data reveal new theories of human-decision-making](#)
American Association for the Advancement of Science (AAAS), 2021

Teaching

PRINCETON UNIVERSITY

PSY / COS 360: Computational Models of Cognition, *Teaching Assistant*   2021

PSY / NEU 330: Computational Modeling of Psychological Function, *Teaching Assistant*   2021

PSY / COS 454: Probabilistic Models of Cognition, *Teaching Assistant*   2020

PRINCETON NEUROSCIENCE INSTITUTE

Introduction to Python, *Instructor*   2019

SWARTHMORE COLLEGE

PHIL 012: Logic, *Teaching Assistant*   2017

CPSC 021: Introduction to Computer Science, *Teaching Assistant*   2015

BREAKTHROUGH HOUSTON

8th Grade Algebra, *Teaching Fellow*   2014

7th Grade Algebra, *Teaching Fellow*   2013

Advising

GRADUATE STUDENTS

Isaac R. Christian, *Princeton University*   2021-

Tyler Giallanza, *Princeton University*   2020-2022

UNDERGRADUATE STUDENTS

Justin Curl, *Princeton University*   2020-2021

Taylor Jean-Jacques, *Princeton University*   2019-2020

Professional Service

AD HOC REVIEWING

Biological Psychiatry	Memory & Cognition
Cognitive Psychology	NeurIPS (Workshop)
Cognitive Science Conference	Neurons, Behavior, Data Analysis, and Theory

PLOS Computational Biology   topiCS

<small>DEPARTMENT</small>

Graduate Student Committee

Emerging Scholars of Psychological Science (ESPS) Talk Series