

# MERIEL DOYLE

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## EDUCATION

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### The University of Chicago

Oct. 2019 - Jun. 2023

B.A. in Psychology with Honors

B.A. in Neuroscience

Senior Thesis: *Motivational Influences on Intuitive Physical Judgments*

GPA: 3.68/4.00 (overall), 3.96/4.00 (Psychology)

## RESEARCH EXPERIENCE

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### Empirical Research Fellow

Aug. 2024 - Present

*Kellogg School of Management, Northwestern University*

PI: Dr. William J. Brady, Dr. Tessa Charlesworth

*Redesigning algorithms to intervene on social norm misperceptions during a national election*

- Created, optimized, and automated entire recruitment and data cleaning pipeline for a longitudinal study investigating how custom feed-ranking algorithms on Bluesky influenced social norm perceptions and partisan animosity during the 8 weeks before the 2024 U.S. presidential election
- Designed and administered dynamic weekly surveys to ~4000 participants; conducted ongoing network analyses (e.g., clique detection, Jaccard similarity) to identify and remove bots and fraudulent users throughout the study

*Engagement-based algorithms disrupt human social norm learning*

- Conducted three studies (N = 6107) finding that engagement-based algorithms systematically amplify ingroup-aligned, moral and emotional (IME) political content, skewing users' social norm perceptions
- Administered studies on the Yourfeed platform; contributions included data analysis, visualization, manuscript drafting, reviewing, and editing; developed customizable JsPsych integration with AWS for follow-up study
- Presented findings at the annual "New Directions in Research on the Psychology of Technology" conference, Boston University

*Patterns of Implicit and Explicit Attitudes V: Trends from 2021-2024*

- Analyzed ~10 million implicit and explicit attitude tests (from Project Implicit) to quantify long-term changes in social biases (race, sexuality, skin-tone, age, disability, body weight) among U.S. participants over an 18-year period
- Found significant deviations from forecasted trends of past data, revealing an increase in bias across all categories since 2020, particularly driven by backlash among young conservatives toward racial and sexual minority groups
- Main contributions included data cleaning, weighting (raking), imputation of missing data, analyses (ARIMA time series models), and visualization; manuscript in preparation

- Currently training word embedding (Word2vec) models on 30 years of Corpus of Contemporary American English (COCA) data to explore possible links between rhetoric and attitudes

**Lab Manager & Research Assistant**

Aug. 2023 - Jul. 2024

*Shenhav Lab, Brown University*

PI: Dr. Amitai Shenhav

- Collected and analyzed data for a project concerning age-related differences in cognitive control adjustment costs; fitted generalized linear mixed-effects (GLMM) models to data
- Optimized MATLAB task code for a novel probabilistic approach avoidance task; facilitated data collection across three fMRI sites for a Conte Center grant; synthesized task and analysis code into GitHub repository for more streamlined version control across data collection sites
- Managed IRB protocol amendments, NDA data & progress report submissions, subject recruitment, lab social events, social media, public tours, and finances

**Research Assistant**

Dec. 2021 - Jun. 2023

*Computational Affective and Social Neuroscience Lab, University of Chicago*

PI: Dr. Yuan Chang Leong

- Collected and analyzed data for a project that explored the influence of motivation on intuitive physical judgments, as well as the extent to which “intuitive physics engine” (IPE) computational models can be used to approximate human-like physical reasoning
- Programmed a novel psychophysics task from scratch using the JsPsych JavaScript framework; hosted study on Prolific through the Cognition.run platform; analyzed participant data in R; fitted GLMM models to data
- Administered local version of the task for in-person eye-tracking participants; calculated the intersubject correlation (ISC) for eye fixation pattern data in MATLAB, visualized averaged heatmap data using a Gaussian kernel density estimation function

**Collaborator (Lead Data Scientist)**

Jan. 2023 - Jul. 2023

*University of Pennsylvania, University of British Columbia, University of Toronto*

Team: Dr. Cory Clark, Dr. Azim Shariff, Dr. Brett Mercier

- Conducted exploratory analysis of a dataset (N = 1222) containing responses from subjects who were asked to evaluate a series of conditions (e.g., depression, drug addiction, schizophrenia, etc.) on a variety of factors relating to control, genetic causality, and moral culpability
- Analyzed and visualized data in Python; approach included correlation, multiple regression, mediation, and moderation
- Created detailed and informative visualizations of key findings for inclusion in the final publication (currently in review for publication)

**Research Assistant**

Oct. 2020 - Dec. 2021

*Human Nature and Potentials Lab, University of Chicago*

PI: Dr. Fan Yang

- Recruited research participants, administered developmental psychology experiments via Zoom

- Coded qualitative interview and survey data; worked alongside graduate students and senior mentors to develop novel experimental paradigms and generate ideas for literature review

### **SISRM Fellow & Research Assistant**

Jun. 2020 - Sep. 2020

*Crown Family School of Social Work, Policy and Practice, University of Chicago*

Collaborators: Dr. Jennifer E. Mosley, Dr. Nicole P. Marwell

- Wrote a policy field analysis concerning the use of title IV-E funding for evidence-based practice (EBP) programs under the 2020 Family First Prevention Services Act (FFPSA)

## **WORK EXPERIENCE**

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### **UX Research Intern**

Jun. 2022 - Sep. 2022

*Gopuff*

- Spearheaded a variety of highly cross-functional user experience (UX) research initiatives to improve the Gopuff Driver app experience
- Research methods included large-scale (N = 3135) user surveys, user interviews, concept testing, and competitive analyses; ran ANOVAs and visualized data in R

### **Research Assistant**

Aug. 2021 - Jan. 2022

*Center for Decision Research, University of Chicago Booth School of Business*

- Facilitated data collection and visitor research participation at Mindworks, the first-ever combination working lab and behavioral science discovery center
- Educated hundreds of downtown Chicago visitors about the burgeoning field of behavioral science research

## **PUBLICATIONS**

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### **PUBLISHED ARTICLES**

Maheshka, C., **Doyle, M.**, Mercier, B., Clark, C.J., Shariff, A. (2024). "Perceived mental illness is associated with judgments of less agency, yet more moral wrongness". *Possibility Studies & Society*.

### **ARTICLES ACCEPTED FOR PUBLICATION**

Brady, W.J., **Doyle, M.**, Elnakouri, A., Finkel, E., Jackson, J.C., Kteily, N., Parker, V., Puryear, C., Spelman, T., Teeny, J., & Torres, M. (2025). (In Principle Acceptance; registered report). Redesigning algorithms to intervene on social norm misperceptions during a national election. *Nature*.

### **ARTICLES UNDER REVIEW AND IN PREPARATION**

Brady, W.J., **Doyle, M.**, Jackson, J.C., Baier, S. (2025). "Engagement-based algorithms disrupt human social norm learning". *Submitted for publication*.

Charlesworth, T.E.S., **Doyle, M.** & Banaji, M.R. (2025). "Patterns of Implicit and Explicit Attitudes V: Continuity and reversal of trends from 2020-2024". *In preparation*.

## CONFERENCE PROCEEDINGS

**Doyle, M.**, Baier, S., Jackson, J.C., & Brady, W.J. Engagement-based algorithms disrupt social norm learning. *New Directions in Research on the Psychology of Technology*. (Boston, MA, October 2024).

Calabro, R. **Doyle, M.**, Bhattacharyya, K., & Leong, Y.C. Eye-gaze patterns and motivational factors influence intuitive physical judgments. *Journal of Vision Abstract Issue*, 24(10), 1071.

Calabro, R., **Doyle, M.**, & Leong, Y.C. Motivational influences on intuitive physical judgments. *Social and Affective Neuroscience Society*. (Santa Barbara, CA, April 2023).

## HONORS AND AWARDS

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**Earl R. Franklin Research Fellowship**, Honorable Mention Apr. 2022  
*Department of Psychology, University of Chicago*

- Acknowledged for my original project proposal, *Strong Belief in Free Will: A Justification for Punitive Desires*

## TEACHING & LEADERSHIP EXPERIENCE

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**Lecture Teaching Assistant** Mar. 2022 - Jun. 2022  
*Department of Biology, University of Chicago*

- Held weekly office hours to review lecture material and answer student questions for a 200-person introductory biology course; graded homework, quizzes and tests

**First Chair Violin** Oct. 2019 - Jan. 2022  
*Department of Music, University of Chicago*

- Performed in four concerts per year with the university chamber orchestra; served as a member of the pit for UChicago's annual production with the Gilbert & Sullivan Opera Company

## SKILLS

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**Programming:** R, Python, MATLAB, JavaScript/HTML/CSS, shell scripting

**Software:** Amazon AWS (Compute, Storage, Database), Node.js, Qualtrics, mTurk, Git, NetLogo, LIWC, EyeLink, Adobe Illustrator, Google & Microsoft Office Suite

**Industry:** UX research, survey research, concept testing, Figma

**Languages:** English (native), French (proficient)

## ADDITIONAL INFORMATION

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**Citizenship:** United States, United Kingdom

**Extracurricular interests:** Meditation, yoga, backpacking, live music