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UNIVERSITY OF PENNSYLVANIA

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Contact Information

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Personal Information

Birth Date: September 6, 1996
Citizenship: China
Languages: English (fluent), Mandarin (native)

Undergraduate Studies

B.A. in Economics, Peking University, with Honors, 2013-2017
B.Sc. in Mathematics, Peking University, 2014-2017

Graduate Studies

University of Pennsylvania, 2017 to present
Ph.D. Candidate in Economics
Thesis Title: "*Essays on Learning in Economic Theory*"
Expected Completion Date: May 2023

References:

George J. Mailath (Thesis committee chair)
Walter H. Annenberg Professor of Social Sciences
Professor of Economics
Department of Economics
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J. Aislinn Bohren (Thesis committee chair)
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Teaching and Research Fields

Research fields: Microeconomic Theory, Information Economics, Behavioral Economics
Teaching fields: Microeconomics, Game Theory

Teaching Experience

Teaching Assistant (TA) at University of Pennsylvania:

Fall, 2019	Game Theory, TA for Professor Annie Liang
Summer, 2019	Game Theory, Instructor
Spring, 2019	Econometrics, TA for Professor Francis X. Diebold
Fall, 2018	International Finance, TA for Professor Enrique G. Mendoza
Fall, 2018	Foundations for Market Economy, TA for Professor Jesus Fernandez-Villaverde

Research Experience and Other Employment

Research Assistant (RA):

2020-2022	RA for Professor J. Aislinn Bohren, University of Pennsylvania
2020-2022	RA for Professor Annie Liang, University of Pennsylvania
2016	RA for Professor Rujing Meng, Hong Kong University
2015	RA for Professor Qiao Liu, Peking University

Conference Presentations

2022	Conference on Web and Internet Economics (WINE; scheduled)
2022	Women in Economics Theory Student Conference (WiET)
2022	Economics Graduate Student Conference (ESGC)
2022	Young Economist Symposium (YES)
2022	Stony Brook International Conference on Game Theory
2022	Asian Meeting of the Econometric Society, China (AMES)
2022	Pennsylvania Economic Theory Conference (poster session)
2021	Midwest Trade and Theory Conference
2021	North American Summer Meetings of the Econometric Society
2021	briq Summer School in Behavioral Economics
2021	Pennsylvania Economic Theory Conference (poster session)
2020	Weorg Mentoring Workshop, Boston University
2020	Young Economist Symposium (YES)
2020	European Winter Meetings of the Econometric Society

Professional Activities

Refereeing: Games and Economic Behavior

Honors, Scholarships, and Fellowships

2022	The Maloof Family Dissertation Fellowship in Economics
2021	Sidney Weintraub Memorial Fellowship in Economics
2018	Distinction in Econometrics, University of Pennsylvania
2017	University Fellowship, University of Pennsylvania
2017	Graduate with Distinction, Peking University
2016	National Scholarship for Undergraduate Students, Chinese Ministry of Education
2014, 2015	Guanghua Scholarship, Peking University
2013	Freshman Scholarship, Peking University

Research Papers

Robust Misspecified Models and Paradigm Shifts **(Job Market Paper)**

Abstract: People use models to guide decisions, but many models are misspecified. This paper studies which misspecified models are likely to persist when an agent compares her model with competing models. I present a framework where the agent learns about how actions affect the distribution of outcomes and makes repeated decisions. Aware of potential model

misspecification, she uses a threshold rule to switch between models according to how well they fit the data. The main result provides a characterization of robust models based on their asymptotic accuracy at the induced equilibria and the tightness of the prior. Misspecified models can be robust against a wide range of competing models---including the true data-generating process---despite the agent having an infinite amount of data. Moreover, simple misspecified models with entrenched priors may have even better robustness properties than correctly specified models. I use these results to provide learning foundations for the persistence of systemic biases in two applications. First, in an effort-choice problem, I show that overconfidence in one's ability is more robust than underconfidence. Second, an oversimplified binary view in politics is more robust than the correct view when individuals consume media without fully recognizing the reporting bias.

A Multi-Agent Model of Misspecified learning with Overconfidence (with Alice Gindin)

Revise and Resubmit at Games and Economic Behavior

Abstract: This paper studies the long-term interaction between two overconfident agents who choose how much effort to exert while learning about their environment. Overconfidence causes agents to underestimate either a common fundamental, such as the underlying quality of their project, or their counterpart's ability, to justify their worse-than-expected performance. We show that in many settings, agents create informational externalities for each other. When informational externalities are positive, the agents' learning processes are mutually-reinforcing: one agent best responding to his own overconfidence causes the other agent to reach a more distorted belief and take more extreme actions, generating a positive feedback loop. The opposite pattern, mutually-limiting learning, arises when informational externalities are negative. We also show that in our multi-agent environment overconfidence can lead to Pareto improvement in welfare. Finally, we prove that under certain conditions, agents' beliefs and effort choices converge to a steady state that is a Berk-Nash equilibrium.

Under-and Overreaction to Information: A Unified Approach (with Aislinn Bohren and Alex Imas)

Abstract: Both over and underreaction to information are well-documented empirically across a variety of domains. For example, research on beliefs in financial markets typically finds evidence for overreaction, while laboratory studies predominantly find underreaction. This paper outlines a unified approach for exploring how key features of the learning environment determine whether over or underreaction emerges. We first develop a two-stage model of belief formation that incorporates an editing phase---where the agent uses the representativeness heuristic to simplify a potentially complex learning environment---and an evaluation phase---where the agent evaluates the signal subject to a noisy representation of the information structure. The model predicts underreaction when the state space is simple, signals are precise, and the prior is flat; it predicts overreaction when the state space is more complex, signals are noisy, and the prior is more concentrated. A series of experiments provide direct support for these predictions and show that both stages of belief updating are important as neither representativeness nor noisy cognition alone can explain our results. Our model and empirical findings can rationalize the discrepancy in prior work, predicting underreaction in laboratory studies---which typically use a binary state space, precise signals, and flat priors---and overreaction in financial markets---which feature a richer, more complex state space and noisier signals. The results highlight the importance of considering the interaction between multiple psychological mechanisms when studying behavioral phenomena.

Research Papers in Progress

A Reputational Theory of Influencer Marketing

Abstract: The rapidly growing industry of influencer marketing has attracted wide attention from regulators because of concerns for deceptive endorsements. This paper develops a reputation model in which social media influencers trade off profits from private paid endorsements and reputation about their honesty. I find that while reputation concerns are crucial in incentivizing truth-telling when the influencer are provided sponsorships, they also give rise to inefficient under-endorsement when the influencer does not have such an opportunity. Due to these two countervailing forces, as sponsorships become more abundant, the quality of information transmission decreases first but increases later. This implies that new technology that matches influencers with sponsors more efficiently may end up improving consumer welfare. I also show that the Federal Trade Commission's mandatory disclosure policy benefit consumers without necessarily hurting the influencers.