

Meng-Jhang Fong

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| Education | Ph.D. in Social Science, Caltech | Oct 2018–Sep 2023 |
| | - Thesis: “Essays in Behavioral Economics and Game Theory” | |
| | - Advisor: Marina Agranov | |
| | M.A. in Economics, National Taiwan University | Sep 2014–June 2016 |
| | - Honor: Phi Tau Phi | |
| | - Advisor: Joseph Tao-yi Wang | |
| | B.B.A. in Finance, National Taiwan University | Sep 2010–June 2014 |
| | - Honor: Presidential Awards (5 times) | |

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| Full-time Employment | Postdoctoral Scientist, Amazon | Oct 2023– |
| | Research Assistant for Joseph Tao-yi Wang, NTU, Taiwan | Nov 2017–July 2018 |

**Research
Interests** Behavioral Economics, Experimental Economics, Game Theory

**Working
Papers** “Cursed Sequential Equilibrium,” 2023 (with Po-Hsuan Lin and Thomas R. Palfrey)
under revision for resubmission at American Economic Review

Abstract: This paper develops a framework to extend the strategic form analysis of cursed equilibrium (CE) developed by Eyster and Rabin (2005) to multi-stage games. The approach uses behavioral strategies rather than normal form mixed strategies, and imposes sequential rationality. We define cursed sequential equilibrium (CSE) and compare it to sequential equilibrium and standard normal-form CE. We provide a general characterization of CSE and establish its properties. We apply CSE to five applications in economics and political science. These applications illustrate a wide range of differences between CSE and Bayesian Nash equilibrium or CE: in signaling games; games with preplay communication; reputation building; sequential voting; and the dirty faces game where higher order beliefs play a key role. A common theme in several of these applications is showing how and why CSE implies systematically different behavior than Bayesian Nash equilibrium in dynamic games of incomplete information with private values, while CE coincides with Bayesian Nash equilibrium for such games.

“Measuring Higher-Order Rationality with Belief Control,” 2023 (with Wei James Chen and Po-Hsuan Lin) *under revision for resubmission at Experimental Economics*
- The recipient of John O. Ledyard Prize (best second-year paper) for Graduate Research in Social Science, Caltech, 2020

Abstract: Determining an individual’s strategic reasoning capability based solely on choice data is a complex task. This complexity arises because sophisticated players might have non-equilibrium beliefs about others, leading to non-equilibrium actions. In our study, we pair human participants with computer players known to be fully rational. This use of robot players allows us to disentangle limited reasoning capacity from belief formation and social biases. Our results show that, when paired with

robots, subjects consistently demonstrate higher levels of rationality and maintain stable rationality levels across different games compared to when paired with humans. This suggests that strategic reasoning might indeed be a consistent trait in individuals. Furthermore, the identified rationality limits could serve as a measure for evaluating an individual's strategic capacity when their beliefs about others are adequately controlled.

“A Note on Cursed Sequential Equilibrium and Sequential Cursed Equilibrium,” 2023 (with Po-Hsuan Lin and Thomas R. Palfrey)

Abstract: In this short note, we compare the cursed sequential equilibrium (CSE) by Fong et al. (2023) and the sequential cursed equilibrium (SCE) by Cohen and Li (2023). We identify eight main differences between CSE and SCE with respect to the following features: (1) the family of applicable games, (2) the number of free parameters, (3) the belief updating process, (4) the treatment of public histories, (5) effects in games of complete information, (6) violations of subgame perfection and sequential rationality, (7) re-labeling of actions, and (8) effects in one-stage simultaneous-move games.

**Published
Papers**

“Extreme (and Non-Extreme) Punishments in Sender-Receiver Games with Judicial Error: An Experimental Investigation,” 2023, *Frontiers in Behavioral Economics*, 2: 4. (with Joseph Tao-yi Wang)

- The recipient of First Prize in Best Master Thesis Competition, Taiwan Economic Association, 2016

Abstract: In many real world situations, decision-makers have the opportunity to punish informed senders for their biased recommendations, while lie-detection is far from perfect. Hence, we conduct an experiment which incorporates ex post punishment and monitoring uncertainty into the discrete sender-receiver game first introduced by Crawford and Sobel, where a knowledgeable sender sends a cheap-talk message to a receiver who determines a policy action. After taking this action, the receiver observes a noisy signal of the true state and can impose a costly punishment on the sender. We vary the strength of punishment from mild (nominal), strong (deterrent) to extreme (potential of losing everything), and vary receiver's signal uncertainty when punishment is extreme. We find that receivers punish less as the strength of punishment increases, which suggests people care more about wrongly punishing innocent senders harsher than not being able to hand liars harsher punishments they deserve. More importantly, the opportunity of punishment encourages receivers to follow senders more and thus improves overall information transmission and utilization, even though senders need not exaggerate less.

**Other
Publications**

“Vendor Negotiation Experiment and Training Tool,” 2023 (with Jiaxuan Li, Linfeng Li, Dirk Bergemann, and Yan Chen) *Accepted at 2024 Consumer Science Summit (Amazon)*

**Work in
Progress**

“Belief Updating under an Ambiguous and Asymmetric Information Structure—An Experimental Study” (with En-Der Lai and Joseph Tao-yi Wang)

“An Experiment on Public Goods Games with Communication” (with Po-Hsuan Lin and Thomas R. Palfrey)

“Conformity and Confirmation Bias”

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| Professional Activities | <i>Research Assistant</i> | |
| | For Matthew Shum | Dec 2019–Mar 2020 |
| | For Joseph Tao-yi Wang (full-time RA) | Oct 2017–July 2018 |
| | For Joseph Tao-yi Wang (lab assistant at TASSEL) | Aug 2015–July 2016 |
| | <i>Teaching Assistant</i> | |
| | Behavioral Economics, Caltech | Jan 2023–Mar 2023 |
| | - Instructor: Charles D. Sprenger | |
| | Matching Market, Caltech | Apr 2022–June 2022 |
| | - Instructor: Luciano Pomatto | |
| | Game Theory, Caltech | Apr 2021–June 2021 |
| - Instructor: Omer Tamuz | | |
| Introduction to Finance, Caltech | Dec 2020–Mar 2021 | |
| - Instructor: Lawrence J. Jin | | |
| Microeconomic Theory I (Graduate), NTU | Nov 2015–Jan 2016 | |
| - Instructor: Pohan Fong | | |
| Honors and Awards | The Linde Institute CTESS Graduate Research Grant, Caltech | 2022 |
| | Davis Fellowship | 2022 |
| | Ministry of Education Taiwan-Caltech Scholarship | 2018–2022 |
| | John O. Ledyard Prize for Graduate Research in Social Science, Caltech | 2020 |
| | First Prize in Best Master Thesis Competition, Taiwan Economic Association | 2016 |
| | Honorary Member of the Phi Tau Phi Scholastic Honor Society | 2016 |
| | Ta-chung Liu Scholarship | 2015 |
| National Taiwan University Presidential Award ×5 | 2011–2014 | |
| Conference and Workshop Presentation | Los Angeles Experiments (LAX) Workshop (Poster session) | 2023 |
| | Behavioral and Experimental Economics Stanford-Caltech Student Workshop | 2022 |
| | Economic Science Association North American Meeting, Tucson | 2021 |
| | Economic Science Association Asia Pacific Meeting, Brisbane | 2018 |
| | Economic Science Association World Meeting, Jerusalem | 2016 |
| Other | <i>Computer Skills</i> | |
| | oTree, zTree, Stata, R, Python, L ^A T _E X | |
| | <i>Languages</i> | |
| | Chinese-Mandarin (native), English | |
| References | Marina Agranov (magranov@hss.caltech.edu) | |
| | Professor of Economics Division of the Humanities and Social Sciences, California Institute of Technology Caltech, 1200 E. California Blvd. MC 228-77, Pasadena, CA 91125 U.S.A. Tel: 1-626-395-3559 | |
| | Thomas R. Palfrey (trp@hss.caltech.edu) | |
| | Flintridge Foundation Professor of Economics and Political Science, Emeritus Division of the Humanities and Social Sciences, California Institute of Technology Caltech, 1200 E. California Blvd. MC 228-77, Pasadena, CA 91125 U.S.A. Tel: 1-626-395-4088 | |

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