

Syllabus for Experimental Economics I: Behavioral Game Theory

Classroom and Time: Monday 2:20-5:20pm, at Social Sciences 305 (社科 305 教室)

Class website: http://homepage.ntu.edu.tw/~josephw/experimental_15F.htm

Instructor: Joseph Tao-yi Wang ([josephw "at" ntu.edu.tw](mailto:josephw@ntu.edu.tw)) Office: Social Sciences 754

Office Hours: Monday 5:20-6pm (after class) or by email appointment

This is an upper division and graduate level course on experimental economics, focusing on behavioral game theory. The purpose is to introduce experimental economics to students so they can start their own research in this field. You are expected to write individual research proposals and present them. Specific goals of this course include:

1. **Introduction to experimental economics:** After this class, students are expected to be able to name several experiments performed in each fields of economics, and describe how the results affirm (or differ from) economic theory and/or field data.
2. **Experimental design:** After this class, students are expected to understand how to design and run an experiment. Students will also write a research proposal that:
 - a. Describes a proposed experiment (with sample instructions for subjects),
 - b. Argues why should we care about this experiment and why the experiment is designed this way (compared to other possible designs), and,
 - c. Relates your experiment to existing literature (if any) and describes expected results and/or methods to analyze the data (or simulation results).
3. **Evaluate most current research:** After this class, students are expected to develop the ability to read recent journal articles in experimental economics, and evaluate the quality of the papers. During class, students are expected to read assigned journal articles and book chapters and present one article and/or one chapter in class.

Textbooks:

1. Camerer (2003), [*Behavioral Game Theory*](#), Princeton University Press (BGT).
2. Mullainathan and Shafir (2014), [*Scarcity: The New Science of Having Less and How It Defines Our Lives*](#), Picador. (For group presentation). ([free Intro](#); [blog](#))

Recommended Reading:

3. Kagel and Roth, ed. (1995, 2012), [*Handbook of Experimental Economics*](#), Vol.1 & 2, Princeton University Press (HEE). Vol.2 chapters available [online](#). (Handbook)
4. Holt (2007), [*Markets, Games and Strategic Behavior*](#), Pearson. (Undergrad)
5. Crawford, Costa-Gomes and Iriberri (2013), "[Structural Models of Nonequilibrium Strategic Thinking: Theory, Evidence, and Applications](#)," *Journal of Economic Literature*, 51(1), 5-62. (Level-k)
6. Jackson (2013), "[Economic Engineering and the Design of Matching Markets: The Contributions of Alvin E. Roth](#)," *Scandinavian Journal of Economics*, 115(3), 619–

639. (Market Design) or 坂井豐貴(2014), [《如何設計市場機制? : 從學生選校、相親配對、拍賣競標, 了解最新的實用經濟學》](#), 經濟新潮社。(Market Design)
7. Krajbich, Oud and Fehr (2014), "[Benefits of Neuroeconomic Modeling: New Policy Interventions and Predictors of Preference](#)," *American Economic Review Papers and Proceedings*, 104(5), 501-506. (Neuroeconomics)
 8. Riley (2012), [Essential Microeconomics](#), Cambridge University Press. (Theory).
 9. Mas-Colell, Whinston & Green (1995), *Microeconomic Theory*, Oxford University Press.

Assignments: Group – 20-minute oral presentations of book chapter (20%). Individual – Research proposal (<4 pages) (3-minute midterm presentation 20%, final proposal 20%), weekly feedback to other presenters (20%), and homework sets (midterm quiz 20%).

Note: Homework problem sets will be distributed each week in preparation for the midterm quiz. Feedback for other presenters should be uploaded to CEIBA and google documents, so the GA can compile them and send them to the presenters. Consult the "[Oral Presentation Evaluation Criteria and Checklist](#)" for elements of a good presentation and specific areas you should provide feedback, and Wei-jen Hsu's [關於 presentation 的一些想法 \(How to Prepare a 20-minute Presentation\)](#) for how I expect you to prepare the presentations.

Course Outline:

Experimental Economics I-A: Behavioral Game Theory

1. Experimental Economics and Behavioral Game Theory ([BGT Ch.1](#); [Wang notes](#))
2. Risk and Time Preferences (Holt, Ch.4, [Liu, Meng and Wang, 2014](#))
3. Basic Principles of Experimental Design (BGT A1.2)
4. Social Preferences: Ultimatum, Dictator and Trust Games (BGT, Ch.2; [new Handbook chapter](#), Review for [Ultimatum](#), [Dictator](#) and [Trust](#) Games)
5. Mixed-Strategy Equilibrium (BGT, Ch. 3; [Ostling et al., 2011](#))
6. Bargaining (BGT, 4)
7. Dominant Solvable Games (BGT, Ch. 5)
8. Level-k Model ([Crawford et al., JEL 2013](#))

Experimental Economics I-B: Markets and Strategic Behavior

9. Learning (BGT, Ch.6 and [new Handbook chapter](#))
10. Coordination and Equilibrium Selection (BGT, Ch.7)
11. Signaling, Reputation and Cheap Talk (BGT, 8; [Wang et al., 2010](#))
12. Neuroeconomics: fMRI and Eyetracking ([Krajbich et al., 2014](#); [Wang, chapter, 2011](#))
13. Field Experiments ([Harrison and List, JEL 2004](#), [Glennerster-Takavarasha, Ch.1](#))
14. Prediction Markets ([Holt, Ch.34](#)) and Asset Bubbles ([Smith et al., ECMA 1988](#))
15. Market Design ([坂井豐貴, 2014](#); [Jackson, 2013](#); [new Handbook chapter](#))

Paper List:

1. (Introduction) Bartling, Fehr and Herz (2014), "[The Intrinsic Value of Decision Rights](#)," *Econometrica*, 82(6), 2005–2039.
2. (Introduction) Gill and Prowse (2014), "[Gender Differences and Dynamics In Competition: The Role Of Luck](#)," *Quantitative Economics*, 5(2), 351–376.
3. (Risk) Deck and Schlesinger (2014), "[Consistency of Higher Order Risk Preferences](#)," *Econometrica*, 82(5), 1913–1943.
4. (Risk) Cohn, Engelmann, Fehr and Maréchal (2015), "[Evidence for Countercyclical Risk Aversion: An Experiment with Financial Professionals](#)," *American Economic Review*, 105(2), 860-885.
5. (Risk) Callen, Isaqzadeh, Long and Sprenger (2014), "[Violence and Risk Preference: Experimental Evidence from Afghanistan](#)," *American Economic Review*, 104(1), 123-148.
6. (Ambiguity) Ahn, Choi, Gale and Kariv (2014), "[Estimating Ambiguity Aversion in A Portfolio Choice Experiment](#)," *Quantitative Economics*, 5(2), 195–223.
7. (Time) Jackson and Yariv (2014), "[Present Bias and Collective Dynamic Choice in the Lab](#)," *American Economic Review*, 104(12), 4184-4204.
8. (Risk and Time Debate):
 - a. Cheung (2015), "[Risk Preferences Are Not Time Preferences: On the Elicitation of Time Preference under Conditions of Risk: Comment](#)," *American Economic Review*, 105(7), 2242-2260.
 - b. Epper and Fehr-Duda (2015), "[Risk Preferences Are Not Time Preferences: Balancing on a Budget Line: Comment](#)," *American Economic Review*, 105(7), 2261-2271.
 - c. Miao and Zhong (2015), "[Risk Preferences Are Not Time Preferences: Separating Risk and Time Preference: Comment](#)," *American Economic Review*, 105(7), 2272-2286.
 - d. Andreoni and Sprenger (2015), "[Risk Preferences Are Not Time Preferences: Reply](#)," *American Economic Review*, 105(7), 2287-2293.
9. (Experimental Design) Kaboski, Lipscomb and Midrigan (2014), "[The Aggregate Impact of Household Saving and Borrowing Constraints: Designing a Field Experiment in Uganda](#)," *American Economic Review*, 104(5), 171-176.
10. (Quasi-Experiment) Akbulut-Yuksel and Yuksel (2015), "[The Long-Term Direct and External Effects of Jewish Expulsions in Nazi Germany](#)," *American Economic Journal: Economic Policy*, 7(3): 58-85.
11. (Social Preferences) Kosfeld and Rustagi (2015), "[Leader Punishment and Cooperation in Groups: Experimental Field Evidence from Commons Management in Ethiopia](#)," *American Economic Review*, 105(2), 747-783.
12. (MSE) Martin, Bhui, Bossaerts, Matsuzawa and Camerer (2014), "[Chimpanzee Choice Rates in Competitive Games Match Equilibrium Game Theory Predictions](#)," *Scientific Reports*, 4, Article number: 5182.
13. (MSE) Kuo and Wang (2014), "[Use of Strategy Methods in Experimental Pivotal-Voting Game](#)," *Pacific Economic Review*, 19(3), 387-400.
14. (Level-k) Heap, Arjona and Sugden (2014), "[How Portable Is Level-0 Behavior? A Test of Level-k Theory in Games With Non-Neutral Frames](#)," *Econometrica*, 82(3), 1133-1151.
15. (Learning) Moulin, Östling and Wang (2014), "[Learning by Imitation in Games: Theory, Field and Lab](#)," *mimeo*.
16. (Coordination) Charness, Feri, Meléndez-Jiménez and Sutter (2014), "[Experimental Games](#)

- [on Networks: Underpinnings of Behavior and Equilibrium Selection](#),” *Econometrica*, 82(5), 1615–1670.
17. (Signaling, Reputation, and Cheap Talk) Eriksson and Rooth (2014), “[Do Employers Use Unemployment as a Sorting Criterion When Hiring? Evidence from a Field Experiment](#),” *American Economic Review*, 104(3), 1014-1039.
 18. (Neuroeconomics) Smith, Lohrenz, King, Montague and Camerer (2014), “[Irrational Exuberance and Neural Crash Warning Signals During Endogenous Experimental Market Bubbles](#),” *Proceedings of the National Academy of Sciences*, 111 (29) 10503-10508.
 19. (Market Design) Pathak and Sönmez (2013), “[School Admissions Reform in Chicago and England: Comparing Mechanisms by their Vulnerability to Manipulation](#),” *American Economic Review*, 103(1): 80-106.
 20. (Prediction Markets) Eckel and Füllbrunn (2015), “[Thar SHE Blows? Gender, Competition, and Bubbles in Experimental Asset Markets](#),” *American Economic Review*, 105(2), 906-920.
 21. (Political Economy) Abeler and Jäger (2015), “[Complex Tax Incentives](#),” *American Economic Journal: Economic Policy*, 7(3): 1-28.

Field Experiments:

22. Liu, Yang, Adamic and Chen (2014), “[Crowdsourcing with All-pay Auctions: A Field Experiment on Taskcn](#),” *Management Science*, 60(8), 2020-2037.
23. Cole, Stein and Tobacman (2014), “[Dynamics of Demand for Index Insurance: Evidence from a Long-Run Field Experiment](#),” *American Economic Review*, 104(5), 284-290.
24. Baicker, Finkelstein, Song and Taubman (2014), “[The Impact of Medicaid on Labor Market Activity and Program Participation: Evidence from the Oregon Health Insurance Experiment](#),” *American Economic Review*, 104(5), 322-328.
25. de Leon, Leite, and Rizzi (2014), “[A Test for the Rational Ignorance Hypothesis: Evidence from a Natural Experiment in Brazil](#),” *American Economic Journal: Economic Policy*, 6(4), 380-398.
26. Blake, Nosko and Tadelis (2015), “[Consumer Heterogeneity and Paid Search Effectiveness: A Large-Scale Field Experiment](#),” *Econometrica*, 83(1), 155–174.
27. Bursztyn, Ederer, Ferman and Yuchtman (2014), “[Understanding Mechanisms Underlying Peer Effects: Evidence From a Field Experiment on Financial Decisions](#),” *Econometrica*, 82(4), 1273–1301.
28. Dupas (2014), “[Short-Run Subsidies and Long-Run Adoption of New Health Products: Evidence From a Field Experiment](#),” *Econometrica*, 82(1), 197–228.
29. Cohen, Dupas and Schaner (2015), “[Price Subsidies, Diagnostic Tests, and Targeting of Malaria Treatment: Evidence from a Randomized Controlled Trial](#),” *American Economic Review*, 105(2): 609-45.
30. Tarozzi, Mahajan, Blackburn, Kopf, Krishnan and Yoong (2014), “[Micro-loans, Insecticide-Treated Bednets, and Malaria: Evidence from a Randomized Controlled Trial in Orissa, India](#),” *American Economic Review*, 104(7), 1909-1941.
31. Kendall, Nannicini and Trebbi (2015), “[How Do Voters Respond to Information? Evidence from a Randomized Campaign](#),” *American Economic Review*, 105(1), 322-353.
32. Behaghel, Crépon and Le Barbanchon (2015), “[Unintended Effects of Anonymous Résumés](#),” *American Economic Journal: Applied Economics*, 7(3), 1-27.
33. Royer, Stehr and Sydnor (2015), “[Incentives, Commitments, and Habit Formation in Exercise: Evidence from a Field Experiment with Workers at a Fortune-500 Company](#),” *American Economic Journal: Applied Economics*, 7(3), 51-84.

34. Benhassine, Devoto, Duflo, Dupas and Pouliquen (2015), "[Turning a Shove into a Nudge? A 'Labeled Cash Transfer' for Education](#)," *American Economic Journal: Economic Policy*, 7(3): 86-125.
35. Bryan, Karlan and Zinman (2015), "[Referrals: Peer Screening and Enforcement in a Consumer Credit Field Experiment](#)," *American Economic Journal: Microeconomics*, 7(3): 174-204.
36. Grether, Porter and Shum (2015), "[Cyber-Shilling in Automobile Auctions: Evidence from a Field Experiment](#)," *American Economic Journal: Microeconomics*, 7(3): 85-103.
37. Allcott and Taubinsky (2015), "[Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market](#)," *American Economic Review*, 105(8): 2501-2538.
38. Pomeranz (2015), "[No Taxation without Information: Deterrence and Self-Enforcement in the Value Added Tax](#)," *American Economic Review*, 105(8): 2539-69.

Book Chapter Presentation: Scarcity

Introduction

Chap. 1 – Focusing and Tunneling

Chap. 2 – The Bandwidth Tax

Chap. 3 – Packing and Slack

Chap. 4 – Expertise

Chap. 5 - Borrowing and Myopia

Chap. 6 – The Scarcity Trap

Chap. 7 – Poverty

Chap. 8 – Improving the Lives of the Poor

Chap. 9 – Managing Scarcity in Organizations

Chap. 10 – Scarcity in Everyday Life

Conclusion