

Syllabus for Experimental Economics (3 units)

Classroom and Time: Friday 9:10-12:10am, at Social Science 5 (社科 5 教室)

Class website: http://homepage.ntu.edu.tw/~josephw/experimental_13S.htm

Instructor: Joseph Tao-yi Wang (josephw@ntu.edu.tw) Office: 研究大樓 425 室

Office Hours: Friday 12:10-1:10pm (after class) or by email appointment

This is an upper division and graduate level course on experimental economics. 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 implement one proposal as a group. 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. States expected results and 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, write one (referee) review report for them, and present the article in class.

Textbooks:

1. Camerer (2003), *Behavioral Game Theory*, Princeton University Press (BGT).
2. Ariely (2012), *The Honest Truth About Dishonesty: How We Lie to Everyone—Especially Ourselves*, Harper (for classroom group presentation).

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.
4. Cassar and Friedman (2004), *Economics Lab: An Intensive Course in Experimental Economics*, Routledge (EL).
5. Holt (2007), *Markets, Games and Strategic Behavior*, Addison-Wesley.
6. Riley (2012), *Essential Microeconomics*, Cambridge University Press. (EM).

Assignments: Individual - Research proposal (<4 pages) (30%). Group – Term report (40%), oral presentation of Ariely (2012) and a journal article (30%).

Course outline:

Introduction

1. Experimental Economics and Behavioral Game Theory (BGT Ch.1)
 - a. Basic Principles of Experimental Design (BGT A1.2)
2. Risk and Time Preferences (Andreoni and Sprenger, AER, 2012a, b)
 - a. Theory of Risky Choice (EM 7.1) and Aversion to Risk (EM 7.2)

Strategic Behavior

3. Mixed-Strategy Equilibrium and Quantal Response Equilibrium (BGT, Ch. 3, New Palgrave chapter and Ostling et al., 2011)
 - a. Strategic Equilibrium (EM 9.1)
4. Level-k Model (Crawford et al., 2013) and Dominant Solvable Games (BGT, Ch. 5)
 - a. Games with History (EM 9.2)
5. Learning (BGT, Ch.6 and new Handbook chapter)
6. Coordination and Equilibrium Selection (BGT, Ch.7)
7. Auction Experiments (EL, Ch.9; new Handbook chapter)
 - a. Games of Incomplete Information (EM 10.1)
8. Signaling and Reputation (BGT, 8)
 - a. Refinements of Bayesian Nash Equilibrium (EM 10.2)

Topics in Experimental Economics

9. Cheap Talk Experiments (Cai and Wang, 2006, Wang et al., 2011; Lai et al., 2013)
10. Social Preferences (BGT, Ch.2, Oosterbeek/Engel reviews, new Handbook chapter)
11. Neuroeconomics: fMRI and Eyetracking ([Dean, mimeo 2012](#); Wang, chapter, 2011)
12. Market Design (Roth, new Handbook chapter) and Bargaining (BGT, 4)
13. Field Experiments (Harrison and List, JEL 2004, new Handbook chapter)
14. Political Economy and Macroeconomics in the Lab (new Handbook chapters)
 - a. Robinson Crusoe Economy (EM 5.1); Equilibrium & Efficiency (EM 5.2)
 - b. Equilibrium Future Prices (EM 5.5); Arrow-Debreu Equilibrium (EM 8.1)
15. Prediction Markets (Holt, Ch.34) and Asset Bubbles (Smith et al., ECMA 1988)
 - a. Security Market Equilibrium (EM 8.2)

Paper List:

1. 王道一 (2013), “經濟學實驗設計與研究倫理”, mimeo. (Introduction/Design)
2. Andreoni and Sprenger (2012a), “[Estimating Time Preferences from Convex Budgets](#),” *American Economic Review*, 102(7), 3333-3356. (Risk/Time) [Presenter: 林政澤]
 - a. Andreoni and Sprenger (2012b), “Risk Preferences Are Not Time Preferences,” *American Economic Review*, 102(7), 3357-3376. (Risk/Time)
3. Östling, Wang, Chou and Camerer (2011), “[Testing Game Theory in the Field: Swedish LUPI Lottery Games](#),” *American Economic Journal: Microeconomics*, 3(3): 1-33. (MSE) [Presenter: 王道一]
 - a. (Review) Goeree, Holt and Pfafrey (2012), “Quantal Response Equilibrium,” *New Palgrave Dictionary of Economics*. (MSE) [Presenter: Ralf Couen]
4. Ho and Su (2013), “[A Dynamic Level-k Model in Sequential Games](#),” *Management Science*, [forthcoming](#). (Level-k)
 - a. (Review) Crawford, Costa-Gomes and Iriberri (2013), “[Structural Models of Nonequilibrium Strategic Thinking: Theory, Evidence, and Applications](#),” *Journal of Economic Literature*, 51, [in press](#). (Level-k)
5. Chen, Liu, Chen and Lee (2011), “[Bounded Memory, Inertia, Sampling and Weighting Model for Market Entry Games](#),” *Games*, 2(1), 187-199. (Learning) [Presenter: 葉明仁、李穆先、陳乃宣]
6. Cason, Savikhin and Sheremeta (2012), “[Behavioral Spillovers in Coordination Games](#),” *European Economic Review*, 56, 233-245. (Coordination) [Presenter: 劉郁辰、吳宗翰、陳端駿]
7. Kagel, Lien and Milgrom (2013), “[Ascending Prices and Package Bidding: Further Experimental Analysis](#),” *mimeo*. (Auctions) [Presenter: 彭陸洋、賴俞安、鍾幸辰]
8. Drouvelisa, Müller and Possajennikov (2012), “[Signaling Without a Common Prior: Results on Experimental Equilibrium Selection](#),” *Games and Economic Behavior*, 74(1), 102–119. (Signaling) [Presenter: 陳嘉瑋、陳正庭]
9. Vespa and Wilson (2012), “[Communication with Multiple Senders: An Experiment](#),” under revision for resubmission to *Econometrica*. (Cheap Talk) [Presenter: 林彥竹、林建勳、鄭庭安]
 - a. Lai, Lim and Wang (2011), “Experimental Implementations and Robustness of Fully Revealing Equilibria in Multidimensional Cheap Talk,” under revision for resubmission to *Econometrica*. (Cheap talk)
10. (Review) Johnson and Mislin (2011), “[Trust Games: A Meta-Analysis](#),” *Journal of Economic Psychology*, 32(5), 865-889. (Social Preferences) [Presenter: 王璽維]
 - a. (Review) Engel (2011), “[Dictator Games: a Meta Study](#),” *Experimental Economics*, 14(4), 583-610. (Social Preferences)
 - b. (Review) Oosterbeek, Sloof and Van de Kuilen (2004), “Cultural Differences in

- Ultimatum Game Experiments: Evidence from a Meta-Analysis,” *Experimental Economics*, 7(2), 171–188. (Social Preferences)
11. Dean (2012), “What Can Neuroeconomics Tell Us About Economics (and Vice Versa)?” *mimeo*. (Neuroeconomics)
 12. 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. (Market Design)
 - a. (Review) Chen and Goeree (2012), “[NOBEL 2012 Economics: Stable allocations and market design](#)”, *Nature*, 492, 54–55 (06 December 2012).
 - b. Budish and Cantillon (2012), “[The Multi-unit Assignment Problem: Theory and Evidence from Course Allocation at Harvard](#),” *American Economic Review*, 102(5): 2237-71. (Market Design)
 13. Balafoutas, Beck, Kerschbamer and Sutter (2013), “[What Drives Taxi Drivers? A Field Experiment on Fraud in a Market for Credence Goods](#),” *Review of Economic Studies*, forthcoming. (Field Experiment) [Presenter: 張凱杰]
 14. Bouton and Castanheira (2012), “One Person, Many Votes: Divided Majority and Information Aggregation,” *Econometrica*, 80(1), 43–87. (Political Economy)
 15. Hanson, Oprea and Porter (2006), “[Information aggregation and manipulation in an experimental market](#),” *Journal of Economic Behavior & Organization*, 60(4), 449-459. (Prediction Markets) [Presenter: 蘇孟謙、吳怡軒、謝富文]
 - a. Tung, Chou, Lin and Lin (2011), “Comparing the Forecasting Accuracy of Prediction Markets and Polls for Taiwan's Presidential and Mayoral Elections,” *Journal of Prediction Markets*, 5(3), 1-26. (Prediction Markets)